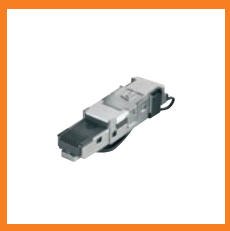
Version 2027



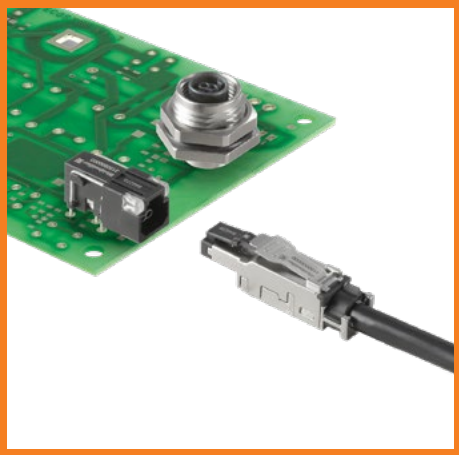








Ethernet from Sensor to Cloud
Industrial Ethernet



















Weidmüller

Industrial Ethernet – Active components
Catalogue 9

Active components

Introduction – Active components

Unmanaged Switches

Managed Switches

Industrial Security Router

u-link Remote Access Service

Media converter and protocol gateways

Industrial WLAN

Accessories – Active components

Industrial Ethernet – Passive components
Catalogue 9

Passive components	Introduction – Passive components	
	Single Pair Ethernet (SPE)	
	IP20 plug-in connectors and mounting rail outlets	
	FrontCom® IP65 service interfaces	
	IP67 plug-in connectors	
	IP65 connection components / FreeCon connecting components	
	Copper cabling solutions	
	Fibre-optic cabling solutions	
	Accessories – Passive components	
Appendix	**Service and support**	
	Index	Search according to type or order number

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Hydrogen
Shipbuilding
Water & Wastewater Treatment
Railway
Oil & Gas
Traditional Power
Power Transmission & Distribution
Cabinet Building

Active components
An overview of our portfolio

Unmanaged Switches
Fast Ethernet, Fast / Gigabit Ethernet, Gigabit Ethernet
Page B.4, B.18



Unmanaged Power over Ethernet Switches / Injectors – Fast Ethernet, Gigabit Ethernet
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Unmanaged SPE Switches
10BASE-T1L / Fast Ethernet
Page B.34



Managed Switches
Fast Ethernet, Fast / Gigabit Ethernet, Gigabit Ethernet
Page C.4



Managed Power over Ethernet Switches
Gigabit Ethernet
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Managed Switches IEC 61850-3
Fast / Gigabit Ethernet, Gigabit Ethernet
Page C.29



Modular Managed Switches IEC 61850-3
Fast / Gigabit Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet
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Media interface modules for modular switches
Fast Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet
Page C.39



Industrial Security Router
Page D.4



u-link Remote Access Service
Page E.6



Ethernet media converters (copper/fiber-optic)
Page F.4



Serial / Ethernet converters and Modbus TCP / RTU gateway
Page F.6



Active components
An overview of our portfolio

Industrial WLAN

Page G.4



SFP transceiver

Fast Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet

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Configuration backup and restore module

Page H.8



Antennas and antenna accessories

Page H.10



Mounting kit for 19“ rack

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Mounting kit for wall mounting

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Passive components
An overview of our portfolio

Single Pair Ethernet (SPE)
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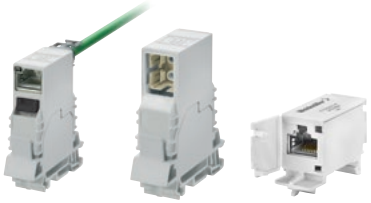
IP20 plug-in connectors
Page K.2



IP20 mounting rail outlets
Page K.13



IP65 service interface FrontCom® Vario
Page L.14



IP65 service interface FrontCom® Mirco
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IP67 plug-in connectors
Page M.2



IP65 connection components / connectivity components FreeCon
Page N.2



IP65 FreeCon Active PROFINET
Page N.8



Cabling solutions
An overview of our portfolio

Raw cable Single Pair Ethernet (SPE)
Page 0.6



Installation cables
Page 0.8



Connecting cables
Page 0.10



Dragline cables
Page 0.16



RJ45 patch cables
Page 0.20



System cables assembled
Page 0.33



FO connecting cables
Page P.3



FO patch cables
Page P.5



FO system cables
Page P.10



Passive components
Accessories from a single source

Cable connector
Page Q.3



Copper cabling tools
Page Q.4



Fibre-optic cabling tools
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General tools
Page Q.17



Cabtite
Page Q.18



Cable Bender
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Protective caps
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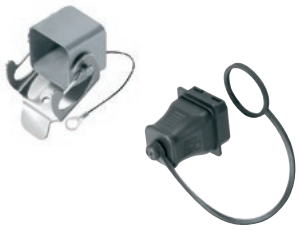


Inkjet printer
Page Q.30



Markers
Page Q.34



Service and support

Service connects – worldwide
Page V.2



- Service connects – worldwide
- Engineering services and customised products
- Support Center
- easyConnect – Your Industrial Service Platform
- Digitales Engineering
- Connectivity Consulting
- Additional support services

Weidmüller Configurator (WMC)
Page V.10



Software for digital cabinet building:
- Weidmüller Configurator (WMC)
- New: Online Weidmüller Configurator

Digital ordering options
Page V.12



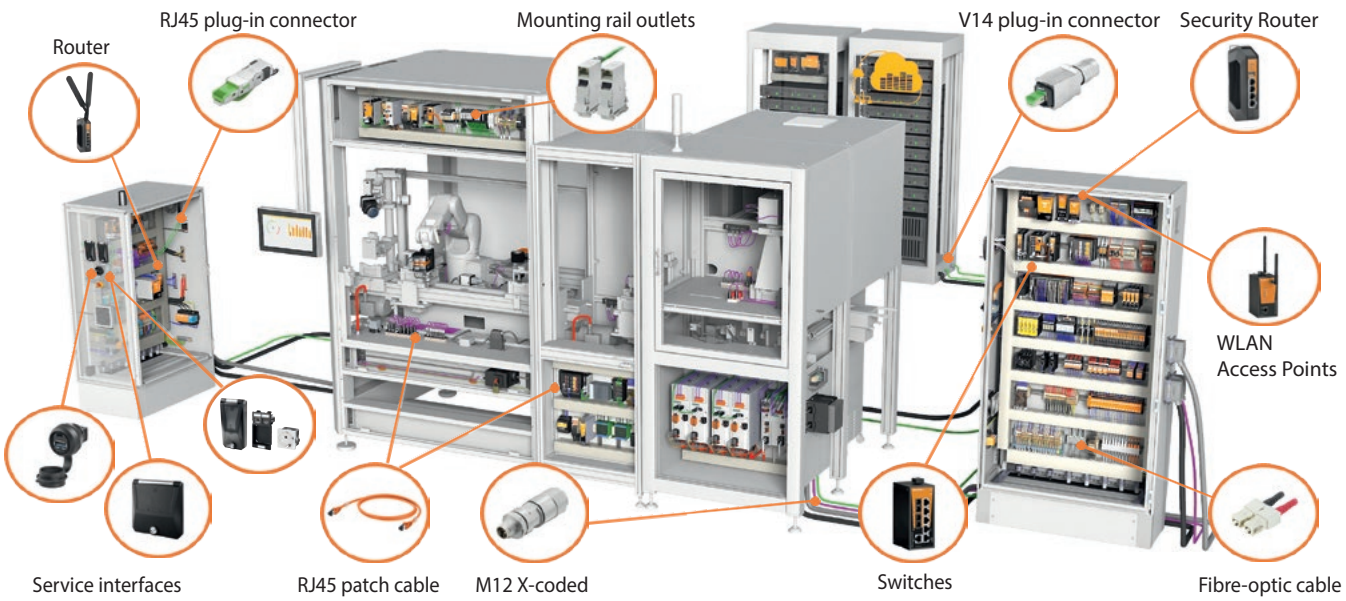
Purchasing made easy:
- Weidmüller onlineshop
- OCI interface
- EDI interface

Intended use for Industrial Ethernet

A complete range of products for industrial communications infrastructure

The trend to network industrial plant components using Ethernet protocols was already apparent several years ago. Ethernet communication is now well established in all market segments; including automotive, general machine construction, process industry, transportation, energy and even Maritime. The requirements of these differ in terms of protocols, environmental conditions, certifications and standards. As well as being a leading provider of industrial connection and network products, Weidmüller embraces solutions for these differing requirements with a comprehensive and highquality product range of active and passive components for Ethernet communications.

The basic requirements of these industrial markets are high reliability, availability and safeguarding against failure. These are met by extremely high MTBF times of our network components. Using Weidmüller's high-quality STEADYTEC® connector system means that maximum reliability and simple operation is ensured. Indeed, Weidmüller's network components create a complete communications infrastructure for industrial applications in machine construction, process and plant engineering and energy.





Automotive
The automotive manufacturers of AIDA (Automation Initiative of the German Automotive Industry) are the drivers behind the use of the Industrial Ethernet in manufacturing. Extremely harsh environmental conditions place high demands on the components used: Cabling must be torsion-resistant and there are increased EMC requirements for connectors and active devices. For these areas of application, Weidmüller offers a complete product range consisting of copper and fibre optic connectors that are designed to meet the special needs of robot cabling.



Machinery & Plant Engineering
Machinery has to stand out from the competition with special services and a stronger customer focus. This results in a dynamic change in machinery and plant construction, demanding greater economic efficiency, quality, flexibility and performance from machines. The networking of machine segments and plant parts and their connection to higher-level office networks is playing an increasingly important role in this. Our products are perfectly adapted to these requirements and offer not only robustness and reliability, but are also easy to configure.



Ships
The shipbuilding industry is also experiencing disruptive market development in the face of rapidly advancing technological developments. Autonomous shipping, sustainability, networking, digitalisation concepts and advanced data analytics are the key topics in this respect. To meet the requirements of this industry, the various products in our portfolio include variants with a marine approval according to DNV.



Transmission & Distribution
The energy market is booming – especially in the field of renewable energies. The products used here must often be able to withstand harsh environmental conditions. To ensure that power grids function reliably and stably, intelligent solutions are being integrated more and more in order to minimise downtimes and to reduce maintenance work. This requires uninterrupted communication. We support the energy sector with reliable components that are approved according to IEC 61850-3 and IEEE 1613 standards.



Process industry
In large-scale process plants, fibre optic media are often used for communication over long distances. However, for reliable data transmission in the field, the components used must be protected from harmful environmental influences. These include high temperature fluctuations, vibrations, dust exposure and electromagnetic influences. Our active and passive Ethernet components have ATEX approval and can reliably withstand these influences.

Active components
Introduction

Active components Introduction – Active components A.2

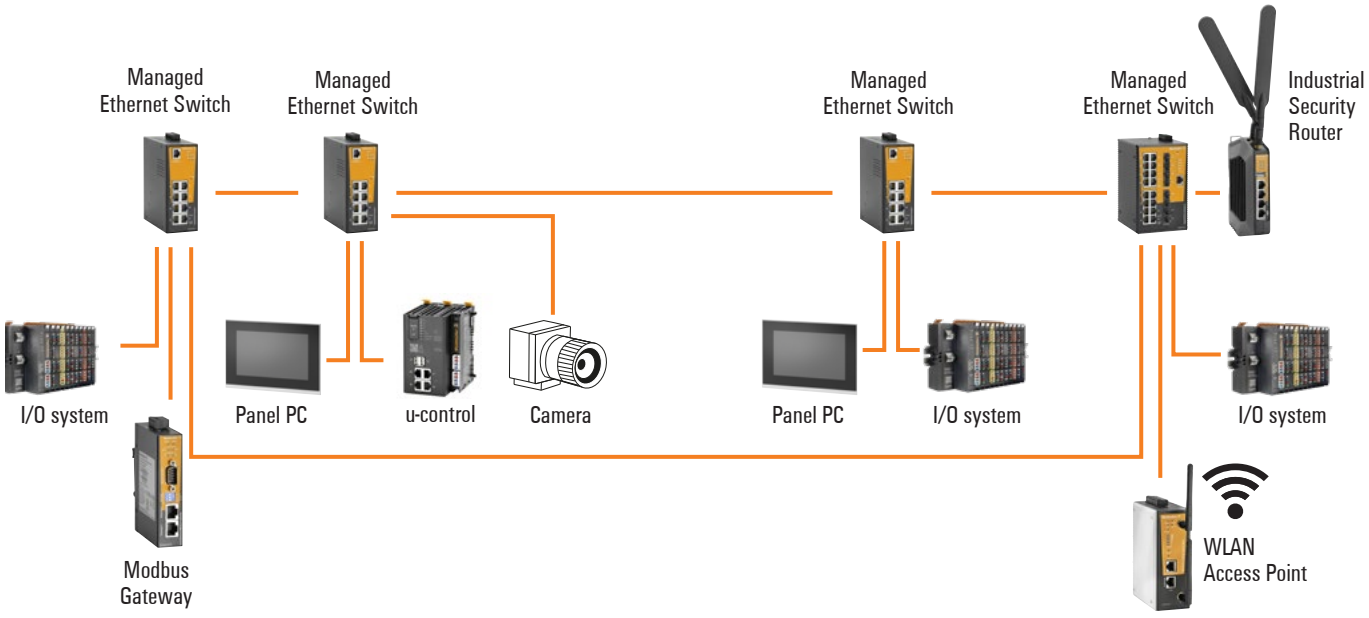
Transfer data between devices in the network flexibly and reliably

Active Industrial Ethernet – the perfect solution for countless applications

The Industrial Ethernet has proved itself in many areas of automation. With its high performance and flexibility, it opens up a multitude of design options for the network infrastructure. Our Industrial Ethernet components are the perfect connection solution for data communication between Ethernet-capable devices in industrial automation. They have various features and approvals, which is why they are ideally suited to many industrial applications.

As a complete supplier of industrial network infrastructures, we are active in machinery and plant engineering, shipbuilding, the process industry and energy, including traditional/renewable power generation, as well as transmission and distribution.
Our broad product range includes a variety of products with a wide range of approvals for individual requirements. These include Fast/Gigabit switches (unmanaged/managed including Power over Ethernet variants), routers, WLAN devices, media converters and protocol gateways, as well as u-link, our remote maintenance solution. All our Ethernet components meet the highest demands and enable reliable, flexible Ethernet communication.
Thanks to the highly differentiated Eco, Basic, Value, Advanced and SubstationLine product lines, our switches are suitable for meeting a wide range of requirements. This allows us to guarantee optimal data transmission at all times – from simple communication structures to the complex data meshes of extensive systems.

As an ideal complement to this, we offer you a comprehensive passive product portfolio of RJ45 and fibre optic connectors and cables. This makes Weidmüller your perfect partner for Industrial Ethernet solutions.



Love at first port

Our broad variety. Your perfect match.





Always the best choice for your requirements

Our switch product lines for all-round application-oriented solutions

Ethernet networks must allow the exchange of data packets between specific participants. For this purpose, the participants are connected to each other via Ethernet switches. Ethernet switches thus collect all data streams and distribute them to the respective participants to enable communication to take place. Since Ethernet switches have to meet very different requirements depending on the area of application, we offer a variety of product lines. They differ in terms of their properties, special features and technical highlights.



EcoLine:
Our unmanaged EcoLine switches are characterised by a rich variety of different models and high economic efficiency. They can be used in a uniquely wide temperature range of -40 to +75 °C, which enables them to be operated both inside production plants and in the field. The robust devices have 5 to 10 ports as well as a redundant voltage input. Their SFP ports allow especially flexible use, regardless of the available communication media and/or the required distance. Power over Ethernet switches are also available within the EcoLine in order to reduce the required cabling work.



EcoLine series B:
The best choice when it comes to simple and reliable communication. Compared to their predecessors, the switches are even more compact and can be accommodated in even the smallest of spaces thanks to their rotatable locking base. The product series includes the most frequently used switches in industry and building automation with 5 to 16 ports in Fast Ethernet and Gigabit or with flexible SFPs.



BasicLine series B:
Highly integrated and powerful. The BasicLine Series B sets new standards and surpasses the BasicLine in terms of ATEX, IECEx, CCCEx, DNV, ABS, BV, RINA and LR certifications. It also sets new standards in terms of handling thanks to the improved DIN clip and push-in connection technology. With up to 24 ports and SFP slots for a high degree of flexibility for every application.



ValueLine:
Our ValueLine managed switches support various industrial communication protocols, e.g. MODBUS/TCP, PROFINET and EtherNet/IP. This enables optimal integration into the most common automation networks. They also support a variety of helpful management functions, such as port mirroring and error messaging via e-mail or relay. All of these functions can be set up with ease via the web-based management interface. ValueLine switches also have numerous international approvals to ensure proper operation in a variety of industries (cULus, Class I Div. 2 / ATEX Zone 2, DNV).



AdvancedLine:
The managed switches of our AdvancedLine are characterised by a wide assortment of variants and economic efficiency. The different model variants designed for Fast Ethernet and Gigabit as well as integrating 5 to 24 ports and SFP slots ensure a high degree of flexibility. Their especially wide temperature range of -40 to +75 °C allows them to be used both in production plants and in the field. All switches in the series can be intuitively configured via a browser-based web interface. The comprehensive management tool can be used to set up various redundancy, monitoring, traffic filtering and security functions. The AdvancedLine ranges from full-managed switches for demanding applications to lite-managed switches for simpler requirements within a network and offers an excellent price-performance ratio. Power over Ethernet switches are also available in the AdvancedLine in order to reduce cabling work.



SubstationLine:
The SubstationLine comprises managed Ethernet switches that comply with the IEC 61850-3 standard, making them robust enough for operation in harsh environments. All switches include a redundant power supply, and the series also includes variants with Fast Ethernet, Gigabit, all the way up to 10 Gigabit Ethernet, as well as sophisticated features like PTPv2 time synchronisation. All devices were designed for use in substations and other energy (T&D) systems, where electromagnetic interference is higher than in other industries. To cope with the complexity of larger networks, the SubstationLine also offers switches with Layer 3 functionality.

Unmanaged Switches
Overview

Unmanaged Switches	Introduction – Unmanaged Switches	B.2
	Unmanaged Switches Fast Ethernet	B.4
	Unmanaged Power over Ethernet Switches Fast Ethernet	B.16
	Unmanaged Switches Fast/Gigabit Ethernet	B.18
	Unmanaged Switches Gigabit Ethernet	B.19
	Unmanaged Power over Ethernet Switches Gigabit Ethernet	B.29
	Power over Ethernet Injectors Gigabit Ethernet	B.32
	Unmanaged Single Pair Ethernet Switches	B.34

The proven standard for active network components
Unmanaged switches – adaptable and economical

Unmanaged switches require no configuration and are nevertheless adaptable. They use basic standardised protocols, such as autonegotiation, autocrossing and flow control, allowing them to adapt automatically to widely varying transmission speeds or connector assignments. In addition, the switches are protocol-transparent. Each port of a switch forms its own collision domain. All switches support the use of twisted pair cabling with RJ45 interface or fibre optic cable based on the interfaces specified in IEEE 802.3.

Our unmanaged switches are the simple and economical standard start-up solution for the Industrial Ethernet. We offer different versions with different features. In addition to the unmanaged switches of the EcoLine, BasicLine and ValueLine, we can also offer you Power over Ethernet variants within all lines that can significantly reduce your wiring work. This means you can also operate Ethernet devices in areas that are difficult to access – without a separate power supply cable.

Your special advantage:
- Wide variety of ports in terms of number and features to meet individual requirements
- Fast Ethernet and Gigabit versions available, including Power over Ethernet variants
- Rapid fault diagnosis thanks to the clearly visible LED display
- Robust housing for reliable long-term use in different environments

See chapter A for details about the product lines



Wide selection of models
Fast Ethernet | Gigabit and Power over Ethernet versions (up to 24 ports)

Economical assembly
Tool-free PUSH-IN connection technology & optimized DIN-rail clip

Flexible supply
AC/DC power supply inputs

Design advantage
Space-saving design for high economic efficiency



Versatile
Extensive international approvals such as cULus, KC, CID2, ATEX, IECEx, CCCEx, UKEx, DNV, BV, ABS, LR and RINA.

Maximum performance
Real-time capability for PROFINET and EtherNet/IP communication using Quality of Service

Robust
Wide operating temperature range from -40°C to +75°C

4-Port unmanaged Fast Ethernet Switches

- Designed specifically for use in meter cabinets
- Fully compatible with all smart meter gateways
- Ideal for connecting EEBUS and other Ethernet-based devices
- Compact design with a width of just 1 TE (17.5 mm)
- Plug-and-play with no configuration required

IE-SW-BI-04-4TX-LV



IE-SW-BI-04-4TX-HV



Technical data

Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	2 K	2 K
Packet buffer size	768 kbit	768 kbit
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45	4x RJ45
Fibre-optic ports		
Power supply		
Connection type	1 removable 2-pin terminal block	1 removable 2-pin terminal block
Voltage supply range	4.4...28.8VDC	196...264VAC
Supply voltage	12/24 V DC, 1 single input	230 V AC, 1 single input
Current consumption	41mA @ 24V	4.3mA @ 230V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Plastic	Plastic
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	70 / 17.5 / 72.9 mm (2.7559 / 0.689 / 2.8701 inch)	90 / 53.8 / 72.9 mm (3.5433 / 2.1181 / 2.8701 inch)
Net weight	50 GRM	112 GRM
Environmental conditions		
Operating temperature	-25 °C...55 °C	-25 °C...55 °C
Humidity	0...95 % (no condensation)	0...95 % (no condensation)
Operating altitude	2000m	2000m
EMC conformity and approvals		
EMC standards	EN 61000-6-2, EN 61000-6-3, EN 61000-3-3	EN 61000-6-2, EN 61000-6-3, EN 61000-3-3
Safety standard	IEC 61010-1, IEC 61010-2-201	IEC 61010-1, IEC 61010-2-201
Shock	according to IEC 61131-2	according to IEC 61131-2
Vibration	according to IEC 61131-2	according to IEC 61131-2
MTBF		
Operating time (hours), min.	4028199h	4030958h
According to Standard	SN 29500	SN 29500
Approvals		
Approvals	CE	CE
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-BI-04-4TX-LV	1	3195560000

Note

Type	Qty.	Order No.
IE-SW-BI-04-4TX-HV	1	3195570000

5 and 8-Port unmanaged Fast Ethernet Switches

- Compact design
- Wide temperature range
- AC/DC power supply input
- Redundant voltage inputs

	IE-SW-EL05-5TX	IE-SW-EL08-8TX
		

Technical data

Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	1 K	1 K
Packet buffer size	448 kbit	448 kbit
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45	8x RJ45
Fibre-optic ports		
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC / 18...36VAC	10.8...52.8VDC / 18...36VAC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.1A @ 24V	0.14A @ 24V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	95 / 26.1 / 70 mm (3.7402 / 1.0276 / 2.7559 inch)	95 / 41 / 90 mm (3.7402 / 1.6142 / 3.5433 inch)
Net weight	205 GRM	350 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
EMC conformity and approvals		
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	2638236h	1390019h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; KOREANCERT; UKCA	CE; CULUS; KOREANCERT; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-EL05-5TX	1	2682130000

Note

Type	Qty.	Order No.
IE-SW-EL08-8TX	1	2682140000

8-Port unmanaged Fast Ethernet Switches

- Compact design
- Wide temperature range

IE-SW-EL08-6TX-2SC



IE-SW-EL08-6TX-2SCS



Technical data

Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	1 K	1 K
Packet buffer size	448 kbit	448 kbit
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	6x RJ45, 2x SC Multi-mode	6x RJ45, 2x SC Single-mode
Fibre-optic ports	100BaseFX ports (SC connector), Multimode	100BaseFX ports (SC connector), Singlemode
Fibre optic transceiver characteristics		
Transmission rate	100 Mbps	100 Mbps
Connector type	SC-Duplex	SC-Duplex
Transceiver type	Multimode	Singlemode
Transmission distance, typ.	2 km	30 km
Wavelength	1310nm	1310nm
Receive power	-31...0dBm	-34...0dBm
Transmission power	-23.5...-14dBm	-15...-8dBm
Link-budget	7.5 dB	19 dB
Power supply		
Connection type	1 removable 3-pole terminal block	1 removable 3-pole terminal block
Voltage supply range	9...33VDC	9...33VDC
Supply voltage	12/24 V DC, 1 single input	12/24 V DC, 1 single input
Current consumption	0.14A @ 24V	0.14A @ 24V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	115 / 41 / 84 mm (4.5276 / 1.6142 / 3.3071 inch)	115 / 41 / 84 mm (4.5276 / 1.6142 / 3.3071 inch)
Net weight	350 GRM	350 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
EMC conformity and approvals		
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1218117h	1060513h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; KOREANCERT; UKCA	CE; CULUS; KOREANCERT; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-EL08-6TX-2SC	1	**2682170000**

Note

Type	Qty.	Order No.
IE-SW-EL08-6TX-2SCS	1	**2682180000**

5-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height

IE-SW-ELB-05-5TX



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	768 kbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45
Fibre-optic ports	
Power supply	
Connection type	1 removable 2-pin terminal block
Voltage supply range	9.6...60VDC / 18V...36VAC
Supply voltage	12/24/48 V DC, 24 V AC, 1 single input
Current consumption	0.12A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP40
Type of mounting	DIN rail
Dimensions H x W x D	103 / 26 / 64 mm (4.0551 / 1.0236 / 2.5197 inch)
Net weight	135 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8
Safety standard	UL 61010-1, UL 61010-2-201, EN IEC 62368-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	2124411h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA
Note	

Ordering data

	Type	**Qty.**	**Order No.**
	IE-SW-ELB-05-5TX	1	**2828540000**
Note			

8-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height

IE-SW-ELB-08-8TX



IE-SW-ELB-08-6TX-2FESFP



Technical data

Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	2 K	2 K
Packet buffer size	768 kbit	768 kbit
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45	6x RJ45, 2x 100BaseSFP slot
Fibre-optic ports		100BaseSFP-Slot
Power supply		
Connection type	1 removable 2-pin terminal block	1 removable 2-pin terminal block
Voltage supply range	9.6...60VDC / 18V...36VAC	9.6...60VDC / 18V...36VAC
Supply voltage	12/24/48 V DC, 24 V AC, 1 single input	12/24/48 V DC, 24 V AC, 1 single input
Current consumption	0.13A @ 24V	0.25A @ 24V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP40	IP40
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch)	103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch)
Net weight	195 GRM	200 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
EMC conformity and approvals		
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8, EN 61000-6-2, EN 61000-6-4	EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8
Safety standard	UL 61010-1, UL 61010-2-201, EN IEC 62368-1	UL 61010-1, UL 61010-2-201, EN IEC 62368-1
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1798754h	1852856h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; KOREANCERT; UKCA	CE; CULUS; KOREANCERT; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-ELB-08-8TX	1	2828550000

Note

Type	Qty.	Order No.
IE-SW-ELB-08-6TX-2FESFP	1	2828600000

16-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height

IE-SW-ELB-16-16TX



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	4 Mbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45
Fibre-optic ports	
Power supply	
Connection type	1 removable 2-pin terminal block
Voltage supply range	9.6...60VDC / 18V...36VAC
Supply voltage	12/24/48 V DC, 24 V AC, 1 single input
Current consumption	0.17A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP40
Type of mounting	DIN rail
Dimensions H x W x D	143 / 50 / 110 mm (5.6299 / 1.9685 / 4.3307 inch)
Net weight	526 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8
Safety standard	UL 61010-1, UL 61010-2-201, EN IEC 62368-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	1197919h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA
Note	

Ordering data

	Type	**Qty.**	**Order No.**
	IE-SW-ELB-16-16TX	1	**2828580000**
Note			

5-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

Technical data

	IE-SW-BLB-05-5TX	IE-SW-BLB-05-4TX-1FESFP
		
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	2 K	2 K
Packet buffer size	768 kbit	768 kbit
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45	4x RJ45, 1x 100BaseSFP slot
Fibre-optic ports		100BaseSFP-Slot
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 4-pin terminal block
Voltage supply range	9...60VDC / 18V...30VAC	9...60VDC / 9V...30VAC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.04A @ 24V	0.07A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes	Yes / Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch)	114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch)
Net weight	272 GRM	272 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
EMC conformity and approvals		
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1799620h	1920055h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note		

Ordering data

	Type	Qty.	Order No.
	IE-SW-BLB-05-5TX	1	2908030000
Note			

	Type	Qty.	Order No.
	IE-SW-BLB-05-4TX-1FESFP	1	2908140000

8-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

Technical data

	IE-SW-BLB-08-8TX	IE-SW-BLB-08-6TX-2FESFP
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	2 K	2 K
Packet buffer size	768 kbit	768 kbit
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45	6x RJ45, 2x 100BaseSFP slot
Fibre-optic ports		100BaseSFP-Slot
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 4-pin terminal block
Voltage supply range	9...60VDC / 18V...30VAC	9...60VDC / 18V...30VAC
Supply voltage	12/24/48 V DC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.06A @ 24V	0.1A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes	Yes / Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch)	114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch)
Net weight	353 GRM	359 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
EMC conformity and approvals		
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1314643h	1448944h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note		

Ordering data

	Type	Qty.	Order No.
	IE-SW-BLB-08-8TX	1	2908040000
Note			

	Type	Qty.	Order No.
	IE-SW-BLB-08-6TX-2FESFP	1	2908160000

8-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

IE-SW-BLB-08-7TX-1FESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	768 kbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	7x RJ45, 1x 100BaseSFP slot
Fibre-optic ports	100BaseSFP-Slot
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	9...60VDC / 18V...30VAC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.1A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch)
Net weight	355 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	1379287h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-08-7TX-1FESFP	1	2908150000

Note

16-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

IE-SW-BLB-16-16TX



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	4 Mbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	18...30VAC / 9V...60VDC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.16A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch)
Net weight	526 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	841302h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

	Type	Qty.	Order No.
	IE-SW-BLB-16-16TX	1	**2908050000**
Note			

24-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

IE-SW-BLB-24-24TX



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	4 Mbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	24x RJ45
Function DIP switch	QoS (on/off), MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9...60VDC / 18V...30VAC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.21A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch)
Net weight	690 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	581976h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-24-24TX	1	2908060000

Note

8-Port IP67 unmanaged Fast Ethernet Switches

- M12 connection system and IP67 protected housing
- 10/100BaseT (X), 4-pin M12 (D-coded)
- Full/half duplex mode and auto MDI/MDI-X
- Input voltage 24/48/110 V DC

IE-SW-IP67-8FEM12



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	768 kbit
Priority queues	4
Management features	
Network traffic filter	Quality of Service (QoS)
Industrial protocol support	PROFINET device acc. to conformance class A
Interfaces	
M12-Ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X connection, D-coded, 4-pole
Number of ports	8x M12 D-coded 4 pin female connector
Power supply	
Supply voltage	24/48/110 V DC, 1 single input
Current consumption	0.06A @ 24V DC; 0.03A @ 48V DC; 0.02A @ 110V DC
Overload current protection	Yes
Connection type	1x M12 A-coded 4 pin male connector
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Aluminum
Protection degree	IP67 encapsulated
Type of mounting	Wall mounting
Dimensions H x W x D	200 / 62 / 30 mm (7.874 / 2.4409 / 1.1811 inch)
Net weight	759 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V
Safety standard	EN IEC 62368-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Railway	EN 50121-1, EN 50121-4, EN 50121-3-2, EN 50155, EN 61373 Body mounted Class B
MTBF	
Operating time (hours), min.	869332h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-IP67-8FEM12	1	3130670000

Note

5-Port unmanaged Fast Ethernet PoE++ Switches

- 4x IEEE 802.3af/at/bt-compliant PoE ports (up to 60 watts output power per PoE port) with a total output of up to 144 watts
- Integrated DC/DC converter for supplying PoE voltage to PDs across the entire PSE input voltage range from 12 to 57 V DC
- Reliable operation thanks to redundant voltage inputs and LED diagnostics

IE-SW-BLB-05-1TX-4POE



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3at/af/bt for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	768 kbit
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	1x RJ45, 4x RJ45 PoE++
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply	
Supply voltage	2 redundant inputs
Voltage supply range	12...57VDC
Connection type	1 removable 4-pin terminal block
Current consumption with Powered Device (PD)	6.56A @ 12V DC; 5.67A @ 24V DC; 3.26A @ 48V DC
Current consumption without Powered Device (PD)	210mA @ 12V DC; 140mA @ 24V DC; 60mA @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X / Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
Total PoE power budget	60W @ 12...23.9VDC; 120W @ 24...47.9VDC; 144W @ 48V...57VDC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch)
Net weight	490 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	841841h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-05-1TX-4POE	1	2908200000

Note

8-Port unmanaged Fast Ethernet PoE++ Switches

- 8x IEEE 802.3af/at/bt-compliant PoE ports (up to 60 watts output power per PoE port) with a total output of up to 144 watts
- Integrated DC/DC converter for supplying PoE voltage to PDs across the entire PSE input voltage range from 12 to 57 V DC
- Reliable operation thanks to redundant voltage inputs, fault relays and LED diagnostics

IE-SW-BLB-08-8POE



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3at/af/bt for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	768 kbit
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 PoE++
Signalling contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply	
Supply voltage	2 redundant inputs
Voltage supply range	12...57VDC
Connection type	1 removable 6-pin terminal block
Current consumption with Powered Device (PD)	6.63A @ 12V DC; 5.79A @ 24V DC; 3.28A @ 48V DC
Current consumption without Powered Device (PD)	380mA @ 12V DC; 220mA @ 24V DC; 100mA @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X / Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
Total PoE power budget	60W @ 12...23.9VDC; 120W @ 24...47.9VDC; 144W @ 48V...57VDC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch)
Net weight	674 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	626652h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-08-8POE	1	2908220000

Note

18-Port unmanaged Fast/Gigabit Ethernet Switch

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

IE-SW-BLB-18-16TX-2GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BaseX
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	4 Mbit
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45, 2x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9...60VDC / 18V...30VAC
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.23A @ 24V
Overload current protection / Reverse polarity protection	Yes / Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch)
Net weight	636 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	759792h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-18-16TX-2GESFP	1	2908170000

Note

5-Port unmanaged Gigabit Ethernet Switches

- Compact design
- Wide temperature range
- Redundant voltage inputs

IE-SW-EL05-5GT



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1 Mbit
Jumbo frame support	up to 9.72 KB
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45
Signalling contact	
Function DIP switch	
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.14A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	95 / 26.1 / 70 mm (3.7402 / 1.0276 / 2.7559 inch)
Net weight	235 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	2556319h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA
Note	

Ordering data

Type		**Qty.**	**Order No.**
IE-SW-EL05-5GT		1	**2682210000**
Note			

8-Port unmanaged Gigabit Ethernet Switches

- Compact design
- Wide temperature range
- Redundant voltage inputs

IE-SW-EL08-8GT-MINI



IE-SW-EL08-8GT



Technical data

	IE-SW-EL08-8GT-MINI	IE-SW-EL08-8GT
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	4 K	4 K
Packet buffer size	1.5 Mbit	1.5 Mbit
Jumbo frame support	up to 9 KB	up to 9216 Bytes
Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45	8x RJ45
Fibre-optic ports		
Signalling contact		1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch		2x for enabling/disabling power fault alarm via relay
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs	12/24/48 V DC, 2 redundant inputs
Current consumption	0.42A @ 12V	0.2A @ 24V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	95 / 41 / 90 mm (3.7402 / 1.6142 / 3.5433 inch)	144.3 / 26.1 / 94.9 mm (5.6811 / 1.0276 / 3.7362 inch)
Net weight	365 GRM	425 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
EMC conformity and approvals		
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 10 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 4 kV, IEC 61000-4-6 CS: 3 Vrms	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1742238h	926332h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; KOREANCERT; UKCA	CE; CULUS; KOREANCERT; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-EL08-8GT-MINI	1	2705000000

Note

Type	Qty.	Order No.
IE-SW-EL08-8GT	1	2682230000

10-Port unmanaged Gigabit Ethernet Switch

- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

IE-SW-EL10-8GT-2GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1.5 Mbit
Jumbo frame support	up to 9 KB
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45, 2x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Signalling contact	
Function DIP switch	
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.41A @ 12V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	127 / 41 / 90 mm (5 / 1.6142 / 3.5433 inch)
Net weight	451 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	1056516h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA
Note	

Ordering data

Type	**Qty.**	**Order No.**
IE-SW-EL10-8GT-2GESFP	1	**2682240000**
Note		

5 and 8-Port unmanaged Fast Ethernet Switches

- Support of real-time communication with Quality of Service functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height
- Very compact design for space-critical applications

Technical data

	IE-SW-ELB-05-5GT	IE-SW-ELB-08-8GT
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	2 K	4 K
Packet buffer size	1 Mbit	1.5 Mbit
Jumbo frame support	up to 9 KB	up to 9 KB
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), MAC frame filtering (LLDP frame blocking), Type of Service (ToS), Differentiated Services Code Point (DSCP), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, CC-Link IE Field, CC-Link IE TSN CC-A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, CC-Link IE Field, CC-Link IE TSN CC-A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45	8x RJ45
Fibre-optic ports		
Function DIP switch	Broadcast storm protection enable/disable, QoS (on/off), MAC frame filtering (on/off)	Broadcast storm protection enable/disable, QoS (on/off), MAC frame filtering (on/off)
Power supply		
Connection type	1 removable 2-pin terminal block	1 removable 2-pin terminal block
Voltage supply range	9.6...60VDC / 18V...36VAC	9.6...60VDC / 18V...30VAC
Supply voltage	12/24/48 V DC, 24 V AC, 1 single input	12/24/48 V DC, 24 V AC, 1 single input
Current consumption	0.17A @ 24V	0.21A @ 24V
Overload current protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Protection degree	IP40	IP40
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	103 / 26 / 64 mm (4.0551 / 1.0236 / 2.5197 inch)	103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch)
Net weight	135 GRM	195 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
EMC conformity and approvals		
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8, EN 61000-6-2, EN 61000-6-4	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8, EN 61000-6-2, EN 61000-6-4
Safety standard	UL 61010-1, UL 61010-2-201, EN IEC 62368-1	UL 61010-1, UL 61010-2-201, EN IEC 62368-1
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	2815267h	1567427h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; KOREANCERT; UKCA	CE; CULUS; KOREANCERT; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-ELB-05-5GT	1	2828560000

Type	Qty.	Order No.
IE-SW-ELB-08-8GT	1	2828570000

Note

5-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)

Technical data

	IE-SW-BLB-05-5GT	IE-SW-BLB-05-5GT-C
		
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	4 K	2 K
Packet buffer size	1 Mbit	1 Mbit
Jumbo frame support	up to 9 KB	up to 9 KB
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45	5x RJ45
Fibre-optic ports		
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 4-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.1A @ 24V	0.1A @ 24V
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Surface protection PCB		Conformal coating
Protection degree	IP30	IP30
Type of mounting	DIN rail	DIN rail
Dimensions H x W x D	114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch)	114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch)
Net weight	272 GRM	272 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
EMC conformity and approvals		
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	DNV, LR, RINA	DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1404396h	1404396h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA	CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-05-5GT	1	2908070000

Note

Type	Qty.	Order No.
IE-SW-BLB-05-5GT-C	1	2908100000

5-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments

IE-SW-BLB-05-4GT-1GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1.5 Mbit
Jumbo frame support	up to 9 KB
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45, 1x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply	
Connection type	1 removable 4-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.13A @ 24V
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	114 / 26 / 85 mm (4.4882 / 1.0236 / 3.3465 inch)
Net weight	426 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	1266084h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-05-4GT-1GESFP	1	2908180000

Note

8-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)

Technical data

	IE-SW-BLB-08-8GT	IE-SW-BLB-08-8GT-C
		
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	4 K	4 K
Packet buffer size	1.5 Mbit	1.5 Mbit
Jumbo frame support	up to 9 KB	up to 9 KB
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45	8x RJ45
Fibre-optic ports		
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply		
Connection type	1 removable 4-pin terminal block	1 removable 4-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.15A @ 24V	0.15A @ 24V
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Surface protection PCB		Conformal coating
Protection degree	IP30	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch)	114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch)
Net weight	337 GRM	430 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
EMC conformity and approvals		
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc
Maritime approval	ABS, BV, DNV, LR, RINA	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min.	1004373h	1004373h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	ABS; BURVER; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA	ABS; BURVER; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-08-8GT	1	2908080000

Note

Type	Qty.	Order No.
IE-SW-BLB-08-8GT-C	1	2908110000

10-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)

IE-SW-BLB-10-8GT-2GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1.5 Mbit
Jumbo frame support	up to 9 KB
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45, 2x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply	
Connection type	1 removable 4-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.29A @ 24V
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch)
Net weight	412 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D
Maritime approval	ABS, BV, DNV, LR, RINA
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	952155h
According to Standard	Telcordia SR-332
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD; KOREANCERT; LLOYDSREG; RINA; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-10-8GT-2GESFP	1	2908190000

Note

16-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)

Technical data

	IE-SW-BLB-16-16GT	IE-SW-BLB-16-16GT-C
		
Technology		
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS)
Data switching	Store and Forward	Store and Forward
Flow control	IEEE 802.3x flow control	IEEE 802.3x flow control
Switch characteristics		
MAC table size	8 K	8 K
Packet buffer size	4.1 Mbit	4.1 Mbit
Jumbo frame support	up to 9 KB	up to 9 KB
Management features		
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45	16x RJ45
Fibre-optic ports		
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply		
Connection type	1 removable 6-pin terminal block	1 removable 6-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.42A @ 24V	0.42A @ 24V
Reverse polarity protection	Yes	Yes
Physical characteristics		
Housing main material	Metal	Metal
Surface protection PCB		Conformal coating
Protection degree	IP30	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch)	144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch)
Net weight	647 GRM	651 GRM
Environmental conditions		
Operating temperature	-40 °C...75 °C	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
EMC conformity and approvals		
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc
Maritime approval		
Safety standard	UL 61010-1, UL 61010-2-201	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6	according to IEC 60068-2-6
MTBF		
Operating time (hours), min. / According to Standard	541611h / Telcordia SR-332	541611h / Telcordia SR-332
Approvals		
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA	CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note		

Ordering data

	IE-SW-BLB-16-16GT	IE-SW-BLB-16-16GT-C
Type	IE-SW-BLB-16-16GT	IE-SW-BLB-16-16GT-C
Qty.	1	1
Order No.	**2908090000**	**2908120000**
Note		

16-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)

IE-SW-BLB-16-14GT-2GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	4.1 Mbit
Jumbo frame support	up to 9 KB
Management features	
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), MAC frame filtering (LLDP frame blocking), Specific prioritization of PROFINET and EtherNet/IP network traffic
Industrial protocol support	PROFINET device acc. to conformance class A, EtherNet/IP traffic prioritization (QoS / DSCP)
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	14x RJ45, 2x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply	
Connection type	1 removable 6-pin terminal block
Supply voltage	12/24/48 V DC, 24 V AC, 2 redundant inputs
Current consumption	0.43A @ 24V
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Surface protection PCB	
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch)
Net weight	746 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Explosive risk zone	EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc
Maritime approval	
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min. / According to Standard	532312h / Telcordia SR-332
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-16-14GT-2GESFP	1	2908130000

Note

10-Port unmanaged PoE+ Gigabit Ethernet Switches

- IEEE 802.3af/at compliant PoE ports
- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

IE-SW-EL10-8GTPoE-2GESFP



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000Base-T, IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3at/af for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100/1000 BaseT(X) PoE+, 2x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Signalling contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	2x for enabling/disabling power fault alarm via relay, 2x for switching between 100BaseSFP and 1000BaseSFP on SFP port
Power supply	
Connection type	1 removable 6-pin terminal block
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	5.43A @ 12V; 6.01A @ 24V; 2.88A @ 48V
Overload current protection / Reverse polarity protection	Yes / Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	60W @ 12...23.9V; 120W @ 24...57V
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch)
Net weight	969 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, EN 55035
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	537330h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-EL10-8GTPOE-2GESFP	1	2682410000

Note

5-Port unmanaged Gigabit Ethernet PoE++ Switches

- 4x IEEE 802.3af/at/bt-compliant PoE ports (up to 60 watts output power per PoE port) with a total power of up to 144 watts
- Integrated DC/DC converter for providing PoE voltage to PDs across the entire PSE input voltage range of 12 to 57 V DC

IE-SW-BLB-05-1GT-4GTPOE



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3at/af/bt for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1.5 Mbit
Jumbo frame support	up to 9 KB
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	1x RJ45, 4x RJ45 PoE++
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet
Power supply	
Supply voltage	2 redundant inputs
Voltage supply range	12...57VDC
Connection type	1 removable 4-pin terminal block
Current consumption with Powered Device (PD)	6.41A @ 12V DC; 5.76A @ 24V DC; 3.3A @ 48V DC
Current consumption without Powered Device (PD)	310mA @ 12V DC; 180mA @ 24V DC; 83mA @ 48V DC
Overload current protection / Reverse polarity protection	Yes / Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X / Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
Total PoE power budget	60W @ 12...23.9VDC; 120W @ 24...47.9VDC; 144W @ 48V...57VDC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch)
Net weight	484 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	776841h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note	

Ordering data

Type	Qty.	Order No.
IE-SW-BLB-05-1GT-4GTPOE	1	**2908210000**

Note

8-Port unmanaged Gigabit Ethernet PoE++ Switches

- 8x IEEE 802.3af/at/bt-compliant PoE ports (up to 60 watts output power per PoE port) with a total power of up to 144 watts
- Integrated DC/DC converter for providing PoE voltage to PDs across the entire PSE input voltage range of 12 to 57 V DC

IE-SW-BLB-08-8GTPOE



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3at/af/bt for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	4 K
Packet buffer size	1.5 Mbit
Jumbo frame support	up to 9 KB
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 PoE++
Signalling contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay
Power supply	
Supply voltage	2 redundant inputs
Voltage supply range	12...57VDC
Connection type	1 removable 6-pin terminal block
Current consumption with Powered Device (PD)	6.88A @ 12V DC; 5.89A @ 24V DC; 3.32A @ 48V DC
Current consumption without Powered Device (PD)	540mA @ 12V DC; 600mA @ 24V DC; 140mA @ 48V DC
Overload current protection / Reverse polarity protection	Yes / Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X / Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
Total PoE power budget	60W @ 12...23.9VDC; 120W @ 24...47.9VDC; 144W @ 48V...57VDC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch)
Net weight	674 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 Ghz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	565005h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKEX; UKCA
Note	

Ordering data

Type	**Qty.**	**Order No.**
IE-SW-BLB-08-8GTPOE	1	**2908230000**

Note

PoE+ Gigabit Ethernet Injector

IE-INJ-EL02-2GTPoE

- IEEE 802.3af/at compliant PoE ports
- Compact design
- Wide temperature range



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3at/af for Power-over-Ethernet
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, MDI-X
Number of ports	2x RJ45 10/100/1000BaseT(X), 2x RJ45 10/100/1000 BaseT(X) PoE+
Power supply	
Supply voltage	12/24/48 V DC, 1 single input
Voltage supply range	12...57VDC
Connection type	1 removable 4-pin terminal block
Current consumption	3.12A @ 12V; 2.81A @ 24V; 1.3A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	30W @ 12...23.9V DC; 60W @ 24...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	70 / 41 / 95 mm (2.7559 / 1.6142 / 3.7402 inch)
Net weight	400 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	3165390h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA
Note	

Ordering data

Note	

Type	Qty.	Order No.
IE-INJ-EL02-2GTPOE	1	**2682440000**

PoE++ Gigabit Ethernet Injector

- IEEE 802.3af/at/bt-compliant PoE port (up to 90 watts output power)
- Integrated DC/DC converter for providing PoE voltage to PDs across the entire PSE input voltage range from 12 to 57 V DC
- Compact design
- Wide temperature range

IE-INJ-EL01-1GTPOE++



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BASE-T, IEEE 802.3at/af/bt for Power-over-Ethernet
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	1x RJ45 10/100/1000BaseT(X), 1x RJ45 10/100/1000BaseT(X) PoE++
Power supply	
Supply voltage	12/24/48 V DC, 1 single input
Voltage supply range	12...57VDC
Connection type	1 removable 4-pin terminal block
Current consumption with Powered Device (PD)	2.54A @ 12V DC; 3.82A @ 24V DC; 1.9A @ 48V DC
Current consumption without Powered Device (PD)	0.11A @ 12V DC; 0.07A @ 24V DC; 0.01A @ 48V DC;
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X / Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
Total PoE power budget	30W @ 12...23.9V DC; 90W @ 24...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	95 / 41 / 70 mm (3.7402 / 1.6142 / 2.7559 inch)
Net weight	329 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	1834973h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA
Note	

Ordering data

Type	**Qty.**	**Order No.**
IE-INJ-EL01-1GTPOE++	1	**3174750000**
Note		

5-Port unmanaged SPE-Switch

- 1x 10/100Base-T(X) RJ45 port and 4x 10Base-T1L SPE port
- 4x IEEE 802.3cg-compliant PoDL ports with up to 50 watts output power per port
- SCCP support
- Up to 1 km transmission length via two-wire copper cable
- SPE interface in accordance with IEC 63171-2

IE-SW-SPE05-4T1LMPODL-1TX



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3cg for 10Base-T1L
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	1 K
Packet buffer size	128 kbit
Management features	
Network traffic filter	Quality of Service (QoS)
Industrial protocol support	PROFINET device acc. to conformance class A
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	1x RJ45, 4x SPE port acc. to IEC 63171-2
Power supply	
Connection type	1 removable 2-pin terminal block
Voltage supply range	20...30VDC
Supply voltage	1 single input
Current consumption	@ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 28 / 108.3 mm (5.7126 / 1.1024 / 4.2638 inch)
Net weight	530 GRM
Environmental conditions	
Operating temperature	-40 °C...70 °C
Humidity	5 to 98% (non-condensing)
Operating altitude	2000m
EMC conformity and approvals	
EMC standards	EN 61000-6-2, EN 61000-6-4
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	692776h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA
Note	

Ordering data

Type		**Qty.**	**Order No.**
IE-SW-SPE05-4T1LMPODL-1TX		1	**3012120000**
Note			

Managed Switches
Overview

Managed Switches	Introduction – Managed Switches	C.2
	Managed Switches Fast Ethernet	C.4
	Managed Switches Fast / Gigabit Ethernet	C.16
	Managed Switches Gigabit Ethernet	C.19
	Managed Power over Ethernet Switches Gigabit Ethernet	C.24
	Managed Switches, IEC 61850-3, DIN-rail mounting Fast / Gigabit Ethernet	C.29
	Managed Switches, IEC 61850-3, DIN-rail mounting Gigabit Ethernet	C.31
	Managed Switches, IEC 61850-3, 19" rack mounting Fast / Gigabit Ethernet	C.33
	Managed Switches, IEC 61850-3, 19" rack mounting, modular, Fast / Gigabit / 10-Gigabit Ethernet	C.35
	Media interface modules for modular switch Fast / Gigabit Ethernet	C.39
	Media interface modules for modular switch Gigabit / 10-Gigabit Ethernet	C.43

Increased productivity through uninterrupted operation

Managed Switches – Secure communication with monitoring and redundancies

In order to coordinate the different requirements of communication participants within an industrial network, managed switches feature extensive control mechanisms for data distribution and bandwidth management. Different configuration options are supported, e.g. web-based configuration, SNMP, Telnet console, command-line interface (CLI) and serial console connection.

In the industrial Ethernet infrastructures of today, system availability must be ensured through network redundancy. This prevents machine downtimes and production losses due to connection errors in the highly integrated systems. Weidmüller managed switches feature high-performance redundancy mechanisms in order to increase the availability of managed Ethernet networks.

In order to satisfy all the requirements of industrial networks, our managed switches are available in four different lines: ValueLine, AdvancedLine and SubstationLine. This selection ensures the availability of the right product regardless of application-specific and industrial requirements. The lines offer both DIN rail and 19" rack models, Fast, Gigabit and up to 10 Gigabit interfaces, a broad selection of port numbers and types, Power over Ethernet variants, support for the most important industrial automation protocols and the necessary approvals for use in such demanding sectors as the process industry, transmission and distribution, and shipbuilding.

Your special advantage:

- Wide variety of ports in terms of number and features to meet individual requirements
- Models available with Fast Ethernet, Gigabit and up to 10 Gigabit interfaces
- Lite- to full-managed models, including Power over Ethernet variants
- Support of industrial protocols for optimal integration into the most common automation networks

See chapter A for details about the product lines



Wide Model Selection
From Fast Ethernet to 10-Gigabit Ethernet with up to 28 ports for DIN-rail or 19" rack mounting, available as Layer 2 or Layer 3 versions.

Support of a variety of communication protocols
Industrial Ethernet protocols, such as PROFINET, Ethernet/IP and Modbus/TCP

Increase network security
Functions such as Port Lock, MirrorPort, Access Control List and others increase the security of your network



Comprehensive Management Functions
For configuring various redundancy, monitoring, traffic filtering, and security features.

Robust
Models with IEC 61850-3/ IEEE 1613 certification for use in the most demanding applications.

Seamless Redundancy
PRP/HSR RedBox media interface module for networks with zero packet loss, even in the event of failures.

5-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery
Network traffic filter	Port based VLAN
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH)
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	1x for enabling/disabling power fault alarm via relay, 3x for ring redundancy settings
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.29A @ 12V; 0.14A @ 24V; 0.08A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144.3 / 26.1 / 95 mm (5.6811 / 1.0276 / 3.7402 inch)
Net weight	396 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	1796601h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL05LM-5TX	1	**2682250000**

6-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery
Network traffic filter	Port based VLAN
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH)
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4 x RJ45, 2 * SC Multi-mode
Fibre-optic ports	100BaseFX ports (SC connector), Multimode
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Fibre optic transceiver characteristics	
Transmission rate	100 MBit/s
Connector type	SC-Duplex
Transceiver type	Multimode
Transmission distance, typ.	2 km
Wavelength	1310nm
Receive power	-31...0dBm
Transmission power	-23.5...-14dBm
Link-budget	7.5 dB
Power supply	
Connection type	1 removable 7-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.4 / 54.2 / 107.1 mm (5.7244 / 2.1339 / 4.2165 inch)
Net weight	799 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	595597h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL06LM-4TX-2SC	1	**2682260000**

6-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	2 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery
Network traffic filter	Port based VLAN
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH)
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4 x RJ45, 2 * SC Single-mode
Fibre-optic ports	100BaseFX ports (SC connector), Singlemode
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Fibre optic transceiver characteristics	
Transmission rate	100 MBit/s
Connector type	SC-Duplex
Transceiver type	Singlemode
Transmission distance, typ.	30 km
Wavelength	1310nm
Receive power	-34...0dBm
Transmission power	-15...-8dBm
Link-budget	19 dB
Power supply	
Connection type	1 removable 7-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.4 / 54.2 / 107.1 mm (5.7244 / 2.1339 / 4.2165 inch)
Net weight	799 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	609551h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL06LM-4TX-2SCS	1	**2682270000**

8-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Note	

Power supply	
Connection type	1 removable 7-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144.3 / 52 / 107.1 mm (5.6811 / 2.0472 / 4.2165 inch)
Net weight	812 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	841599h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL08M-8TX	1	2682280000

16-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Note	

Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	153.6 / 74.3 / 107.5 mm (6.0472 / 2.9252 / 4.2323 inch)
Net weight	1188 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	886987h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL16M-16TX	1	2682310000

24-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	24x RJ45
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Note	

Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch)
Net weight	1369 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	731289h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL24M-24TX	1	2682320000

5-Port managed Fast Ethernet Switches

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
MIB	MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9
Switch characteristics	
MAC table size	2 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.29A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	metal
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	650 GRM
Environmental conditions	
Operating temperature	IE-SW-VL05M-5TX: -10 °C...60 °C IE-SW-VL05MT-5TX: -40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1547941h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; CULUSEX; DETNORVER; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL05M-5TX	1	**1504280000**
IE-SW-VL05MT-5TX	1	**1504310000**

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
MIB	MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.26A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	metal
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	890 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1339439h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL08MT-8TX	1	**1240940000**

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	6x RJ45, 2 * SC Multi-mode
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Fibre optic transceiver characteristics	
Transmission rate	100 Mbps
Connector type	SC-Duplex
Transceiver type	Multimode
Transmission distance, typ.	5 km
Wavelength	1300nm
Receive power	-32...-3dBm
Transmission power	-20...-10dBm
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.35A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	890 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1277138h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL08MT-6TX-2SC	1	1344770000

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	6x RJ45, 2 * ST Multi-mode
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Fibre optic transceiver characteristics	
Transmission rate	100 Mbps
Connector type	ST-Duplex
Transceiver type	Multimode
Transmission distance, typ.	5 km
Wavelength	1300nm
Receive power	-32...-3dBm
Transmission power	-20...-10dBm
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.35A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	metal
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	890 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1277138h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL08MT-6TX-2ST	1	1240990000

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	6x RJ45, 2 * SC Single-mode
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Fibre optic transceiver characteristics	
Transmission rate	100 Mbps
Connector type	SC-Duplex
Transceiver type	Singlemode
Transmission distance, typ.	40 km
Wavelength	1310nm
Receive power	-34...-3dBm
Transmission power	-5...0dBm
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.35A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	890 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1294561h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL08MT-6TX-2SCS	1	1241020000

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control, Back pressure flow control
Switch characteristics	
MAC table size	8 K
Packet buffer size	1 Mbit
Priority queues	4
Max. number of available VLANs	64
IGMP-Groups	256
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting
IP-address management	Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent)
Security functions	VLAN segmentation, Enable/disable ports, Loop protection
Time synchronization management	SNTP client, NTP client
Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	5x RJ45, 1 * SC Multi-mode, 2 * SC Single-mode
Console port interface	RS-232
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function DIP switch	Turbo-Ring, Master, Coupler, Reserve
Fibre optic transceiver characteristics	
Transmission rate	100 Mbps
Connector type	SC-Duplex
Transceiver type	Multimode, Singlemode
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	9.6...60VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.32A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Note	

Physical characteristics	
Housing main material	metal
Protection degree	IP30
Type of mounting	DIN rail, Panel (with optional mounting kit)
Dimensions H x W x D	135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch)
Net weight	890 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Safety standard	UL508, UL 60950-1, EN 60950-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-32
MTBF	
Operating time (hours), min.	1253072h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-VL08MT-5TX-1SC-2SCS	1	1345240000

8-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
MAC table size	8 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	6x RJ45 10/100BaseT(X), 2x RJ45 10/100/1000BaseT(X)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Note	

Power supply	
Connection type	1 removable 7-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.83A @ 12V; 0.41A @ 24V; 0.19A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	144.3 / 52 / 107.1 mm (5.6811 / 2.0472 / 4.2165 inch)
Net weight	817 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	798350h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL08M-6TX-2GT	1	2682290000

10-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
MAC table size	8 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100BaseT(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.9A @ 12V; 0.45A @ 24V; 0.2A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	153.6 / 74.3 / 107.5 mm (6.0472 / 2.9252 / 4.2323 inch)
Net weight	1159 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	366529h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL10M-8TX-2GC	1	2740420000

18-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
MAC table size	8 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)

Note

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45 10/100BaseT(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch)
Net weight	1363 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	600504h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL18M-16TX-2GC	1	**2682330000**

8-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.55A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch)
Net weight	800 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	508672h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL08M-8GT	1	2682350000

12-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45, 4x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.54A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch)
Net weight	822 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	551478h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL12M-8GT-4GESFP	1	2682340000

14-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	12x RJ45, 2 * Slots 100/1000BaseSFP
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.53A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	153.6 / 74.3 / 109.2 mm (6.0472 / 2.9252 / 4.2992 inch)
Net weight	1090 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 compliant
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	713154h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL14M-12GT-2GESFP	1	2682360000

24-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	16x RJ45, 8x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.84A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch)
Net weight	1290 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 compliant
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	507660h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL24M-16GT-8GESFP	1	**2682370000**

20-Port managed Layer 3 Gigabit Ethernet Switch

- Extensive management functions enable the configuration of various redundancy, monitoring, filtering and security functions
- Suitable for use in harsh industrial environments thanks to its robust design and wide operating temperature range from -40 °C to 75 °C
- SFP ports for long-distance fibre optic transmission
- Routing between up to 20 IP subnets



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	128
MAC table size	8 K
Packet buffer size	32 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Differentiated Services Code Point (DSCP), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)
Layer 3 support	Static or dynamic routing according to RIP v2, VRRP (Virtual Router Redundancy Protocol)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100/1000BaseT(X), 12x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC
Current consumption	2.32A @ 12V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 145.5 mm (6.063 / 3.7953 / 5.7283 inch)
Net weight	1624 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	6000m for restrictions, see the manufacturer's declaration for operating altitude in section downloads
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 compliant
Safety standard	EN IEC 62368-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	490861h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-L3-AL20M-8GT-12GESFP	1	3109750000

6-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at compliant PoE ports
- Integrated DC/DC converter for powering PoE devices over the entire PSE input voltage range of 12 to 57 V DC
- Advanced PoE management features, including PD Alive Check with auto reboot function and PoE scheduling
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.3at/af for Power-over-Ethernet, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4 * RJ45 10/100/1000BaseT(X) PoE+, 2x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	12...57VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption with Powered Device (PD)	6.6A @ 12V DC; 5.68A @ 24V DC; 2.76A @ 48V DC
Current consumption without Powered Device (PD)	0.71A @ 12V DC; 0.37A @ 24V DC; 0.2A @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	60W @ 12...23.9V DC; 120W @ 24...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 120 mm (5.7126 / 2.1378 / 4.7244 inch)
Net weight	910 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V, IEC 61000-4-8
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	495624h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL06M-4GTPOE-2GESFP	1	2682430000

Note

8-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at compliant PoE ports
- Integrated DC/DC converter for powering PoE devices over the entire PSE input voltage range of 12 to 57 V DC
- Advanced PoE management features, including PD Alive Check with auto reboot function and PoE scheduling



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 802.3at/af for Power-over-Ethernet
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4096
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100/1000 BaseT(X) PoE+
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	12...57VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption with Powered Device (PD)	6.53A @ 12V DC; 5.49A @ 24V DC; 2.68A @ 48V DC
Current consumption without Powered Device (PD)	0.71A @ 12V DC; 0.36A @ 24V DC; 0.19A @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	60W @ 12...23.9V DC; 120W @ 24...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 120 mm (5.7126 / 2.1378 / 4.7244 inch)
Net weight	915 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V, IEC 61000-4-8
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	495670h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; KOREANCERT; UKCA

Note

Ordering data

Type	Qty.	Order No.
IE-SW-AL08M-8GTPOE	1	2682420000

12-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at-compliant PoE ports
- Integrated DC/DC converter for powering PoE devices across theentire PSE input voltage range from 12 to 57 V DC
- Advanced PoE management features, including PD Alive Check with auto-reboot function and PoE scheduling
- SFP ports for long-distance fibre optic transmission



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.3at/af for Power-over-Ethernet, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)

Note

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100/1000 BaseT(X) PoE+, 4x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	12...57VDC
Supply voltage	2 redundant inputs
Current consumption with Powered Device (PD)	6.97A @ 12V DC; 5.82A @ 24V DC; 2.83A @ 48V DC
Current consumption without Powered Device (PD)	0.93A @ 12V DC; 0.47A @ 24V DC; 0.24A @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	60W @ 12...23.9V DC; 120W @ 24...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 120 mm (5.7126 / 2.1378 / 4.7244 inch)
Net weight	937 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V, IEC 61000-4-8
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	487579h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL12M-8GTPOE-4GESFP-120W	1	3109760000

12-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at-compliant PoE ports
- 240 watts PoE power budget
- Advanced PoE management features, including PD Alive Check with auto-reboot function and PoE scheduling
- SFP ports for long-distance fibre optic transmission



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45 10/100/1000 BaseT(X) PoE+, 4x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports	100/1000Base SFP Slot
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1 removable 6-pin terminal block
Voltage supply range	50...57VDC
Supply voltage	2 redundant inputs
Current consumption with Powered Device (PD)	5.03A @ 50V DC; 4.42A @ 57V DC
Current consumption without Powered Device (PD)	0.23A @ 50V DC; 0.21A @ 57V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI
Total PoE power budget	240W @ 50...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch)
Net weight	810 GRM
Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8
Security standard	IEC 62443-4-2 certified
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	516416h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; IEC62443; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL12M-8GTPOE-4GESFP-240W	1	3109770000

Note

26-Port managed PoE+ Gigabit Ethernet Switch

- 24x IEEE 802.3af/at-compliant PoE ports
- 720 watts PoE power budget
- Advanced PoE management features, including PD Alive Check with auto-reboot function and PoE scheduling
- SFP ports for long-distance fibre optic transmission



Technical data

Technology	
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.3at/af for Power-over-Ethernet, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Jumbo frame support	up to 9.6 KB
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via DB-9 port), Upload of a configuration file via web-interface or TFTP-Server, Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Syslog, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Differentiated Services Code Point (DSCP), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, EtherNet/IP device integration (CIP Stack / EDS)

Note

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	22x RJ45 10/100/1000BASE-T(X) PoE+, 2x combo-ports (10/100/1000BASE-T(X) PoE+ or 100/1000BaseSFP), 2x 100/1000BaseSFP Slot
Console port interface	RS-232 (DB-9 connector)
Fibre-optic ports	100/1000Base SFP Slot
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Power supply	
Connection type	1x 6-pin fork/ring lug connection
Voltage supply range	50...57VDC
Supply voltage	1 single input
Current consumption with Powered Device (PD)	14.71A @ 50V DC; 12.92A @ 57V DC
Current consumption without Powered Device (PD)	0.51A @ 50V DC; 0.46A @ 57V DC
Overload current protection	Yes
Reverse polarity protection	No
Power over Ethernet (PoE)	
PoE pin assignment	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X
Total PoE power budget	720W @ 50...57V DC
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44.45 / 433 / 343 mm (1.75 / 17.0472 / 13.5039 inch)
Net weight	4205 GRM
Environmental conditions	
Operating temperature	-40 °C...70 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	6000m for restrictions, see the manufacturer's declaration for operating altitude in section downloads
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Security standard	IEC 62443-4-2 compliant
Safety standard	
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	409753h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-AL26M-22GTPOE-2GCPOE-2GESFP	1	3109780000

10-Port managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



IEC 61850-3 IEEE 1613 PROFINET ModbusTCP

Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004), IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
MAC table size	8 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	7x RJ45 10/100BASE-T(X), 3x combo-ports (10/100/1000BASE-T(X) or 100/1000BaseSFP)
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	2x 3-pin fork/ring lug connection
Voltage supply range	88...373VDC / 85V...264VAC
Supply voltage	110/220 V DC, 110/220 V AC, 2 redundant isolated inputs
Current consumption	0.18A @ 110V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 148.5 mm (6.063 / 3.7953 / 5.8464 inch)
Net weight	2000 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	599113h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL10M-7TX-3GC-HV	1	2778950000

10-Port managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004), IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	4
Max. number of available VLANs	4095
IGMP-Groups	1024
MAC table size	8 K
Packet buffer size	1 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery
Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection
Time synchronization management	NTP server, SNTP client
Industrial protocol support	Modbus/TCP slave, PROFINET device acc. to conformance class A, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	7x RJ45 10/100BASE-T(X), 3x combo-ports (10/100/1000BASE-T(X) or 100/1000BaseSFP)
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	2 removable 2-pin terminal blocks
Voltage supply range	12...52VDC
Supply voltage	48 V DC, 2 redundant inputs
Current consumption	0.8A @ 12V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 96.4 / 148.5 mm (6.063 / 3.7953 / 5.8464 inch)
Net weight	1450 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	528570h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL10M-7TX-3GC-LV	1	2778960000

20-Port managed Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)

Note

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45, 12x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	2x 3-pin fork/ring lug connection
Voltage supply range	88...373VDC / 85V...264VAC
Supply voltage	110/220 V DC, 110/220 V AC, 2 redundant isolated inputs
Current consumption	0.37A @ 110V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 115 / 159 mm (6.063 / 4.5276 / 6.2598 inch)
Net weight	1900 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF, IEC 61000-4-11
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	421961h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL20M-8GT-12GESFP-HV	1	2778970000

20-Port managed Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	8x RJ45, 12x 100/1000BaseSFP Slot
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	2x 3-pin fork/ring lug connection
Voltage supply range	12...52VDC
Supply voltage	24 V DC, 48 V DC, 2 redundant isolated inputs
Current consumption	1.88A @ 12V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	154 / 115 / 159 mm (6.063 / 4.5276 / 6.2598 inch)
Net weight	1550 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	273551h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL20M-8GT-12GESFP-LV	1	2778980000

26-Port 19" managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)

Note

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	24x RJ45 10/100BASE-T(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	100...370VDC / 100V...240VAC
Supply voltage	110/220 V DC, 110/220 V AC, 2 redundant isolated inputs
Current consumption	0.17A @ 110V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 443.7 / 262.5 mm (1.7323 / 17.4685 / 10.3346 inch)
Net weight	4070 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF, IEC 61000-4-11
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	according to IEC 60255-21-1
Vibration	according to IEC 60255-21-1
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	262968h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL26M-24TX-2GC-HV	1	2778990000

26-Port 19" managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	256
MAC table size	8 K
Packet buffer size	4 Mbit
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
RJ45 ports	10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	24x RJ45 10/100BASE-T(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)
Console port interface	RS-232 (RJ45 connector)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	20...72VDC
Supply voltage	24 V DC, 48 V DC, 2 redundant isolated inputs
Current consumption	0.96A @ 24V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 443.7 / 262.5 mm (1.7323 / 17.4685 / 10.3346 inch)
Net weight	3600 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	according to IEC 60255-21-1
Vibration	according to IEC 60255-21-1
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	297924h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL26M-24TX-2GC-LV	1	2779000000

Modular 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	32 K
Packet buffer size	32 Mbit
Memory (Flash)	16 MB
Memory (RAM)	128 MB
Jumbo frame support	up to 10 KB
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	128
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
Supported media interface modules	M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+
Number of ports	up to 28 (depending on used media interface modules)
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	100...370VDC; 100V...240VAC
Supply voltage	110/220 V DC, 110/220 V AC, 2 redundant isolated inputs
Current consumption	0.36A @ 110V; 0.18A @ 220V; 0.67A @ 110V; 0.43A @ 220V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch)
Net weight	6450 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF, IEC 61000-4-11
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	647420h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL28M-HV	1	2779010000

Modular 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	32 K
Packet buffer size	32 Mbit
Memory (Flash)	16 MB
Memory (RAM)	128 MB
Jumbo frame support	up to 10 KB
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	128
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Note	

Interfaces	
Supported media interface modules	M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+
Number of ports	up to 28 (depending on used media interface modules)
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	20...72VDC
Supply voltage	24 V DC, 48 V DC, 2 redundant isolated inputs
Current consumption	1.64A @ 24V; 0.82A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch)
Net weight	6105 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	608907h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-SL28M-LV	1	2779020000

Modular Layer 3 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances
- Routing between up to 28 IP subnets



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	32 K
Packet buffer size	32 Mbit
Memory (Flash)	16 MB
Memory (RAM)	128 MB
Jumbo frame support	up to 10 KB
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	128
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2

Note

Management features	Management features
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Layer 3 support	Static or dynamic routing according to RIP v2, VRRP (Virtual Router Redundancy Protocol)
Interfaces	
Supported media interface modules	M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+
Number of ports	up to 28 (depending on used media interface modules)
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	100...370VDC; 100V...240VAC
Supply voltage	110/220 V DC, 110/220 V AC, 2 redundant isolated inputs
Current consumption	0.36A @ 110V; 0.18A @ 220V; 0.67A @ 110V; 0.43A @ 220V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch)
Net weight	6450 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	647420h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-L3-SL28M-HV	1	2875580000

Modular Layer 3 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances
- Routing between up to 28 IP subnets



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization
Data switching	Store and Forward
Flow control	IEEE 802.3x flow control
Switch characteristics	
MAC table size	32 K
Packet buffer size	32 Mbit
Memory (Flash)	16 MB
Memory (RAM)	128 MB
Jumbo frame support	up to 10 KB
Priority queues	8
Max. number of available VLANs	4095
Number of IGMP-Groups per VLAN	128
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH), Weidmüller Network Management Software
Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports, Weidmüller Network Management Software
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-manager/client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required)
Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages, IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6
Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client, PTPv2

Note

Management features	Management features
Industrial protocol support	PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server, EtherNet/IP traffic optimization (IGMP / QoS)
Layer 3 support	Static or dynamic routing according to RIP v2, VRRP (Virtual Router Redundancy Protocol)
Interfaces	
Supported media interface modules	M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+
Number of ports	up to 28 (depending on used media interface modules)
Console port interface	RS-232 (RJ45 connector)
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Power supply	
Connection type	1x 10-pin fork/ring lug connection
Voltage supply range	20...72VDC
Supply voltage	24 V DC, 48 V DC, 2 redundant isolated inputs
Current consumption	1.64A @ 24V; 0.82A @ 48V
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	19" rack mounting
Dimensions H x W x D	44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch)
Net weight	6105 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-5 Surge: Power: 4 kV ; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF, IEC 61000-4-11
Security standard	IEC 62443-4-2 compliant
Power Transmission & Distribution Systems acc. to standard	IEEE 1613, IEC 61850-3
Safety standard	SELV according to EN 62368-1
Shock	IEC 60870-2-2 class Cm
Vibration	IEC 60870-2-2 class Cm and class Bm
Free fall	IEC 60870-2-2 class Cm
MTBF	
Operating time (hours), min.	608907h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA

Ordering data

Type	Qty.	Order No.
IE-SW-L3-SL28M-LV	1	2875590000

Media interface modules for modular switch – Fast Ethernet

- Modular design provides wide variety of media interface types (RJ-45, SFP, SC/ST-Duplex)

IE-SWM-SL04-4SC



IE-SWM-SL04-4SCS



Technical data

Interfaces		
Number of ports	4x SC Multi-mode	4x SC Single-mode
Fibre-optic ports	100BaseFX ports (SC connector), Multimode	100BaseFX ports (SC connector), Singlemode
Fibre optic transceiver characteristics		
Transmission rate	100 MBit/s	100 MBit/s
Connector type	SC-Duplex	SC-Duplex
Transceiver type	Multimode	Singlemode
Transmission distance, typ.	2 km	30 km
Wavelength	1310nm	1310nm
Receive power	-31...0dBm	-34...0dBm
Transmission power	-23.5...-14dBm	-15...-8dBm
Link-budget	7.5 dB	19 dB
Power supply		
Supply voltage	via Ethernet switch	via Ethernet switch
Physical characteristics		
Housing main material	Metal	Metal
Type of mounting	Insert in module slot M1,M2,M3	Insert in module slot M1,M2,M3
Dimensions H x W x D	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
Net weight	348 GRM	348 GRM
Environmental conditions		
Operating temperature	-40 °C...85 °C	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
MTBF		
Operating time (hours), min.	315658h	401287h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; UKCA	CE; UKCA
Note		

Ordering data

	Type	Qty.	Order No.
	IE-SWM-SL04-4SC	1	2779170000
Note			

	Type	Qty.	Order No.
	IE-SWM-SL04-4SCS	1	2779160000

Media interface modules for modular switch – Fast Ethernet

- Modular design provides wide variety of media interface types (RJ-45, SFP, SC/ST-Duplex)

IE-SWM-SL04-4ST



IE-SWM-SL04-4STS



Technical data

	IE-SWM-SL04-4ST	IE-SWM-SL04-4STS
Interfaces		
Number of ports	4x ST Multi-mode	4x ST Single-mode
Fibre-optic ports	100BaseFX ports (ST connector), Multimode	100BaseFX ports (ST connector), Singlemode
Fibre optic transceiver characteristics		
Transmission rate	100 MBit/s	100 MBit/s
Connector type	ST-Duplex	ST-Duplex
Transceiver type	Multimode	Singlemode
Transmission distance, typ.	2 km	30 km
Wavelength	1310nm	1310nm
Receive power	-31...0dBm	-34...0dBm
Transmission power	-23.5...-14dBm	-15...-8dBm
Link-budget	7.5 dB	19 dB
Power supply		
Supply voltage	via Ethernet switch	via Ethernet switch
Physical characteristics		
Housing main material	Metal	Metal
Type of mounting	Insert in module slot M1,M2,M3	Insert in module slot M1,M2,M3
Dimensions H x W x D	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
Net weight	348 GRM	209 GRM
Environmental conditions		
Operating temperature	-40 °C...85 °C	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
MTBF		
Operating time (hours), min.	314863h	401287h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; UKCA	CE; UKCA
Note		

Ordering data

	Type	Qty.	Order No.
	IE-SWM-SL04-4ST	1	2779190000
Note			

	Type	Qty.	Order No.
	IE-SWM-SL04-4STS	1	2779180000

Media interface modules for modular switch – Fast/Gigabit Ethernet

- Seamless redundancy thanks to PRP/HSR RedBox functionality

IE-SWM-SL02-2GC-PRP/HSR



Technical data

Interfaces	
Number of ports	2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)
Fibre-optic ports	100/1000Base SFP Slot
Power supply	
Supply voltage	via Ethernet switch
Physical characteristics	
Housing main material	Metal
Type of mounting	Insert in module slot M1,M2,M3
Dimensions H x W x D	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
Net weight	380 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
MTBF	
Operating time (hours), min.	577067h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA
Note	

Ordering data

	Type	**Qty.**	**Order No.**
	IE-SWM-SL02-2GC-PRP/HSR	1	**2985050000**
Note			

Media interface modules for modular switch – Fast/Gigabit Ethernet

- Modular design provides wide variety of media interface types (RJ-45, SFP, SC/ST-Duplex)

IE-SWM-SL08-8GT



IE-SWM-SL08-8GESFP



Technical data

Interfaces		
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port	
Number of ports	8x RJ45	8x 100/1000BaseSFP Slot
Power supply		
Supply voltage	via Ethernet switch	via Ethernet switch
Physical characteristics		
Housing main material	Metal	Metal
Type of mounting	Insert in module slot M1,M2,M3	Insert in module slot M1,M2,M3
Dimensions H x W x D	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)	40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
Net weight	348 GRM	348 GRM
Environmental conditions		
Operating temperature	-40 °C...85 °C	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
MTBF		
Operating time (hours), min.	1303990h	3712062h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; CULUS; UKCA	CE; CULUS; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SWM-SL08-8GT	1	2779140000

Type	Qty.	Order No.
IE-SWM-SL08-8GESFP	1	2779150000

Note

Media interface modules for modular switch – Gigabit Ethernet

IE-SWM-SL04-4GESFP



Technical data

Interfaces	
Fibre-optic ports	1000BaseSFP-Slot
Number of ports	4x 1000BaseSFP slot
Power supply	
Supply voltage	via Ethernet switch
Physical characteristics	
Housing main material	Metal
Type of mounting	Insert in module slot M4
Dimensions H x W x D	40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch)
Net weight	348 GRM
Environmental conditions	
Operating temperature	-40 °C...85 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
MTBF	
Operating time (hours), min.	4419625h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; UKCA
Note	

Ordering data

Type	**Qty.**	**Order No.**
IE-SWM-SL04-4GESFP	1	**2779200000**
Note		

Media interface modules for modular switch – 10-Gigabit Ethernet

IE-SWM-SL02-2GESFP+



IE-SWM-SL04-4GESFP+



Technical data

Interfaces		
Fibre-optic ports	1000BaseSFP/10GBaseSFP+ slot	1000BaseSFP/10GBaseSFP+ slot
Number of ports	2x 1000BaseSFP/10GBaseSFP+ slot	4x 1000BaseSFP/10GBaseSFP+ slot
Power supply		
Supply voltage	via Ethernet switch	via Ethernet switch
Physical characteristics		
Housing main material	Metal	Metal
Type of mounting	Insert in module slot M4	Insert in module slot M4
Dimensions H x W x D	40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch)	40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch)
Net weight	348 GRM	348 GRM
Environmental conditions		
Operating temperature	-20 °C...60 °C	-20 °C...60 °C
Humidity	5 to 95 % (non-condensing)	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL	2000m in acc. with UL
MTBF		
Operating time (hours), min.	3814097h	1871812h
According to Standard	Telcordia SR-332	Telcordia SR-332
Approvals		
Approvals	CE; UKCA	CE; CULUS; UKCA
Note		

Ordering data

Type	Qty.	Order No.
IE-SWM-SL02-2GESFP+	1	**2779210000**

Type	Qty.	Order No.
IE-SWM-SL04-4GESFP+	1	**2779220000**

Note

Industrial Security Router
Overview

Industrial Security Router	Introduction – Industrial Security Router	D.2
	Industrial Security Router	D.4

Secure data communication with integrated VPN technology

Industrial security routers – versatile, reliable and flexible

The advantages of Ethernet-based communication have also made Ethernet the standard in industrial applications. Due to the number of network participants and the importance of communication, the requirements are increasing. Today, networks must be secure against cyber attacks, flexible and modularly expandable, and easy to connect to higher-level production networks.

In order to provide optimal support for meeting the many different requirements, we offer different versions of industrial security routers. These routers enable secure, reliable and location-independent communication between machines and systems, as well as reliable user authentication to protect the network.

Our routers with powerful stateful packet inspection firewall on layers 2, 3 and 4 and integrated VPN technology are ideally suited for secure remote access to components and systems in remote networks. They are available with either wired or mobile Internet connectivity and support the u-link Remote Access Service. This allows remote access systems to be set up quickly and easily, with no special IT knowledge required.

Your special advantage:

- Increased network security thanks to stateful inspection firewall, IP/port forwarding and network segmentation
- Easy integration of subnets with identical IP address ranges through 1:1 NAT
- Secure and easy remote maintenance via Weidmüller u-link Remote Access Service
- Future-proof network connection with static and dynamic routing
- Full flexibility thanks to Fast Ethernet and Gigabit Ethernet interfaces with up to 4 separate subnets and ports



Reliable Internet connection
Reliable Internet connection thanks to integrated 4G/LTE mobile modem

WLAN interface
Also for use as a service access point

Stateful Packet Inspection
Integrated layer 2, 3 and 4 firewall with extensive filter rules



Configuration
Extensive configuration options for IP address mapping

Internet communication
Secure Internet communication thanks to IPsec and OpenVPN

2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- WLAN interface – also for use as a service access point



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface
Monitoring function	SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay
Security functions	Access Control List (MAC-based) for WLAN Access Point mode
Time synchronization management	NTP server, NTP client
Operating modes	WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Number of ports	2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485
Digital outputs	1x, with a current capacity of 0.2 A at 30 V DC
Digital inputs	1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0"
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Connector for external antennas	1x RP-SMA female
Serial communication parameters	
Baud rate	110 bit/s to 460800 bit/s
Data bits	7, 8
Parity	none, odd, even, Mark, Space
Stop bits	1, 2
WLAN interface	
Data security	64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission rate WLAN	IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s

Note

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af)
Current consumption	0.22A @ 12V; 0.11A @ 24V; 0.07A @ 48V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail, Wall mounting
Dimensions H x W x D	95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch)
Net weight	411 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	381084h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-2TX-WL	1	**2682590000**

2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- Integrated 4G/LTE modem with dual SIM option
- WLAN interface – also for use as a service access point



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface, SMS control commands
Monitoring function	SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Event based warning via SMS, Device information and mobile radio status via SMS request
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay
Security functions	Access Control List (MAC-based) for WLAN Access Point mode
Time synchronization management	NTP server, NTP client
Operating modes	WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Number of ports	2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485
Digital outputs	1x, with a current capacity of 0.2 A at 30 V DC
Digital inputs	1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0"
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Number of SIM-Card slots	2
SIM-Card slot type	Mini-SIM (ID-000 format)
Connector for external antennas	2x SMA female, 1x RP-SMA female
Serial communication parameters	
Baud rate	110 bit/s to 460800 bit/s
Data bits	7, 8
Parity	none, odd, even, Mark, Space
Stop bits	1, 2
WLAN interface	
Data security	64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission rate WLAN	IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s

Note

Mobile radio interface	
Wireless module	multi-band modem (4G/3G/2G), Region:, EMEA
Transmission rate mobile radio	LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s
Frequency band	LTE-FDD:, B1, B3, B7, B8, B20, B28A, LTE-TDD:, B38, B40, B41, WCDMA: B1,B8, GSM: B3,B8
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af)
Current consumption	0.46A @ 12V; 0.22A @ 24V; 0.11A @ 48V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail, Wall mounting
Dimensions H x W x D	95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch)
Net weight	437 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	355921h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-2TX-WL-4G-EU	1	**2682560000**

2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- Integrated 4G/LTE modem with dual SIM option
- WLAN interface – also for use as a service access point



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface, SMS control commands
Monitoring function	SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Event based warning via SMS, Device information and mobile radio status via SMS request
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay
Security functions	Access Control List (MAC-based) for WLAN Access Point mode
Time synchronization management	NTP server, NTP client
Operating modes	WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Number of ports	2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485
Digital outputs	1x, with a current capacity of 0.2 A at 30 V DC
Digital inputs	1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0"
Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default
Number of SIM-Card slots	2
SIM-Card slot type	Mini-SIM (ID-000 format)
Connector for external antennas	2x SMA female, 1x RP-SMA female
Serial communication parameters	
Baud rate	110 bit/s to 460800 bit/s
Data bits	7, 8
Parity	none, odd, even, Mark, Space
Stop bits	1, 2
WLAN interface	
Data security	64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission rate WLAN	IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s

Note

Mobile radio interface	
Wireless module	multi-band modem (4G/3G), Region:, North America
Transmission rate mobile radio	LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s
Frequency band	LTE-FDD:, B2, B4, B5, B12, B13, B14, B66, B71, WCDMA: B2,B4,B5
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af)
Current consumption	0.46A @ 12V; 0.22A @ 24V; 0.11A @ 48V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail, Wall mounting
Dimensions H x W x D	95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch)
Net weight	437 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Safety standard	SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Free fall	According to IEC 60068-2-31
MTBF	
Operating time (hours), min.	353679h
According to Standard	Telcordia SR-332
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-2TX-WL-4G-US-V	1	**2682580000**

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1: 1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via SNMP trap
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP client, NTP server
Industrial protocol support	Modbus/TCP slave
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100BaseT(X)
Number of SCM-Card slots	1
Digital inputs	1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port)
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	0.8A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Plastic
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch)
Net weight	175 GRM
Environmental conditions	
Operating temperature	-30 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; KOREANCERT; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4TX	1	**2751270000**

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1: 1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation
- Reliable internet connection, even without on-site internet access, thanks to integrated 4G/LTE cellular modem



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via SNMP trap
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP client, NTP server
Industrial protocol support	Modbus/TCP slave
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100BaseT(X)
Number of SCM-Card slots	1
Number of SIM-Card slots	1
Digital inputs	1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
SIM-Card slot type	Mini-SIM (ID-000 format)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port)
Connector for external antennas	1x SMA female
Mobile radio interface	
Mode of operation	Permanent connection, Manual connection control via web interface, Fallback
Wireless module	multi-band modem (4G/3G/2G)
Transmission rate mobile radio	LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s
Frequency band	LTE-FDD: B1,B3,B7,B8,B20,B28, LTE-TDD:, B38, B40, B41, WCDMA: B1,B5,B8, GSM/GPRS/EDGE: 850,900,1800 MHz
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	0.8A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Plastic
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch)
Net weight	213 GRM
Environmental conditions	
Operating temperature	-30 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4
Safety standard	UL 61010-1, UL 61010-2-201, EN 62368-1, EN 62311
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4TX-LTE/4G-EU	1	**2751280000**

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1: 1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation
- Reliable internet connection, even without on-site internet access, thanks to integrated 4G/LTE cellular modem



Technical data

Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via SNMP trap, Event based warning via SMS
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP client, NTP server
Industrial protocol support	Modbus/TCP slave
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100BaseT(X)
Number of SCM-Card slots	1
Number of SIM-Card slots	1
Digital inputs	1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
SIM-Card slot type	Mini-SIM (ID-000 format)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port)
Connector for external antennas	1x SMA female
Mobile radio interface	
Mode of operation	Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, Fallback
Wireless module	multi-band modem (4G/3G)
Transmission rate mobile radio	LTE category: CAT 13 Download rate, max.: 400Mbit/s Upload rate, max.: 150Mbit/s
Frequency band	Region: Global, 4G LTE: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B29, B32, B38, B39, B40, B41, B42, B43, B48, B66, B71, 3G UMTS/HSPA+: B1, B2, B4, B5, B6, B8, B9, B19
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	0.8A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Plastic
Protection degree	IP30
Type of mounting	DIN rail
Dimensions H x W x D	134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch)
Net weight	213 GRM
Environmental conditions	
Operating temperature	-30 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4, FCC Part 15B Class B
Safety standard	UL 61010-1, UL 61010-2-201, EN 62368-1, EN 62311
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4TX-LTE/4G-USEMEA	1	2739630000

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via E-Mail, Event based warning via relay
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP server, NTP client
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100/1000BaseT(X)
Number of SCM-Card slots	1
Digital inputs	2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Digital outputs	Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port)
USB port	USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	1.3A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Aluminium
Speed	Gigabit Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch)
Net weight	560 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 61000-6-4, EN 61000-6-2
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4GT	1	**2873910000**

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP server, NTP client
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Connector for external antennas	2x SMA female
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100/1000BaseT(X)
Number of SCM-Card slots	1
Number of SIM-Card slots	1
Digital inputs	2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Digital outputs	Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
SIM-Card slot type	Mini-SIM (ID-000 format)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port)
USB port	USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive
Mobile radio interface	
Mode of operation	Permanent connection, Manual connection control via web interface, Fallback
Wireless module	multi-band modem (4G/3G/2G)
Transmission rate mobile radio	LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s
Frequency band	LTE-FDD: B1,B3,B7,B8,B20,B28, LTE-TDD:, B38, B40, B41, WCDMA: B1,B5,B8, GSM/GPRS/EDGE: 850,900,1800 MHz
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	1.5A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Aluminium
Speed	Gigabit Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch)
Net weight	632 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 61000-6-4, EN 61000-6-2
Safety standard	EN 62368-1, EN 62311, UL 61010-1, UL 61010-2-201
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4GT-LTE/4G-EU	1	**2873920000**

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP server, NTP client
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Connector for external antennas	2x SMA female
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100/1000BaseT(X)
Number of SCM-Card slots	1
Number of SIM-Card slots	1
Digital inputs	2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in)
Digital outputs	Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
SIM-Card slot type	Mini-SIM (ID-000 format)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port)
USB port	USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive
Mobile radio interface	
Mode of operation	Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, Fallback
Wireless module	multi-band modem (4G/3G)
Transmission rate mobile radio	LTE category: CAT 6 Download rate, max.: 300Mbit/s Upload rate, max.: 50Mbit/s
Frequency band	EMEA / Americas, LTE: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B7 (2600), B12 (700ac), B13 (700c), B20 (800DD), B25 (1900), B26 (US 850 Ext), B29 (US 700de Lower), B30 (2300 WCS), B41 (TDD 2500), UMTS: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B8 (900)
Note	

Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	24 V DC, 1 single input
Current consumption	1.5A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Aluminium
Speed	Gigabit Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch)
Net weight	632 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 - 90 %, no condensation
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 61000-6-4, EN 61000-6-2, FCC Part 15B Class B
Safety standard	EN 62368-1, EN 62311, UL 61010-1, UL 61010-2-201
Security standard	EN 18031-1
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4GT-LTE/4G-USEMEA	1	**2873930000**

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- DNV approval for use in a maritime environment



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via E-Mail, Event based warning via relay
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP server, NTP client
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Connector for external antennas	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100/1000BaseT(X)
Number of SCM-Card slots	1
Digital inputs	VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in), galvanically isolated
Digital outputs	VPN-active: indicates an active VPN connection (24 V out), Alarm: indicates a configurable network state or fault (24 V out)
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pin terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port)
USB port	USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive
Note	

Power supply	
Connection type	1 removable 3-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	Galvanically isolated, 24 V DC
Current consumption	1.3A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Aluminium
Speed	Gigabit Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	150 / 55 / 115 mm (5.9055 / 2.1654 / 4.5276 inch)
Net weight	560 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 - 90 %, no condensation
EMC conformity and approvals	
EMC standards	EN 61000-6-4, EN 61000-6-2
Ship use	DNV
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; DETNORVER; UKCA

Ordering data

Type	Qty.	Order No.
IE-SR-4GT-M	1	**2990450000**

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem
- DNV approval for use in a maritime environment



Technical data

Technology	
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T
Management features	
Device configuration	Webbrowser (HTTP/HTTPS), SNMP v3, Windows tool
Monitoring function	SNMP v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS
IP-address management	Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay
Time synchronization management	NTP server, NTP client
Routing Features	
Firewall functions	Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter)
NAT functions	Source / Destination NAT (Port / Host / Network)
Routing functions	IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF
VPN functions	u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder)
Interfaces	
Connector for external antennas	2x SMA female
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	4x RJ45 10/100/1000BaseT(X)
Number of SCM-Card slots	1
Number of SIM-Card slots	1
Digital inputs	galvanically isolated, Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in), VPN-initiate: establishes a pre-configured VPN connection (24 V in)
Digital outputs	VPN-active: indicates an active VPN connection (24 V out), Alarm: indicates a configurable network state or fault (24 V out)
Serial port	1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pin terminal block
Function reset button	Restoration of factory settings
SCM-Card slot type	Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip)
SIM-Card slot type	Mini-SIM (ID-000 format)
LED indicator	Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port)
USB port	USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive
Mobile radio interface	
Mode of operation	Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, Fallback
Wireless module	multi-band modem (4G/3G)
Transmission rate mobile radio	LTE category: CAT 13 Download rate, max.: 400Mbit/s Upload rate, max.: 150Mbit/s
Frequency band	Region: Global, 4G LTE: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B29, B32, B38, B39, B40, B41, B42, B43, B48, B66, B71, 3G UMTS/HSPA+: B1, B2, B4, B5, B6, B8, B9, B19
Note	

Power supply	
Connection type	1 removable 3-pin terminal block
Voltage supply range	19.2...28.8VDC
Supply voltage	Galvanically isolated, 24 V DC
Current consumption	1.5A @ 24V
Reverse polarity protection	Yes
Overload current protection	Yes
Physical characteristics	
Housing main material	Aluminium
Speed	Gigabit Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	150 / 55 / 115 mm (5.9055 / 2.1654 / 4.5276 inch)
Net weight	660 GRM
Environmental conditions	
Operating temperature	-25 °C...70 °C
Humidity	5 - 90 %, no condensation
EMC conformity and approvals	
EMC standards	EN 61000-6-4, EN 61000-6-2, FCC Part 15 Class B
Safety standard	EN 62368-1, EN 62311
Security standard	EN 18031-1
Ship use	DNV
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
Approvals	
Approvals	CE; DETNORVER

Ordering data

Type	Qty.	Order No.
IE-SR-4GT-LTE/4G-USEMEA-M	1	**2990440000**

u-link Remote Access Service
Overview

u-link Remote Access Service	Introduction – u-link Remote Access Service	E.2
	u-link Remote Access Service	E.6

u-link Remote Access Service – A tool for all purposes

Advanced features for convenient remote access management

The remote maintenance of machines and systems is often a complex and time-consuming task. On top of that is the demand for a targeted and secure functional connection to the associated IT systems. For many users, these two challenges constitute a major obstacle to the global connection of systems.

u-link guarantees a quick and secure access to machines and plants and, at the same time, allows the efficient management of production plants, user clients, access rights and firmware versions. The intuitive u-link web portal are quick and easy to configure without expert knowledge and can be adapted to specific processes. Secure servers in Europe provide an online platform that ensures conformity between different IT systems when carrying out remote maintenance.





Individual system management
u-link can manage users and groups as well as their access rights according to individual specifications. This includes group assignments and access rights to production systems.



Little configuration effort
Thanks to the intuitive user interface, the devices and clients can be connected easily and without detailed IT knowledge. Thus u-link allows you to quickly network multiple systems.

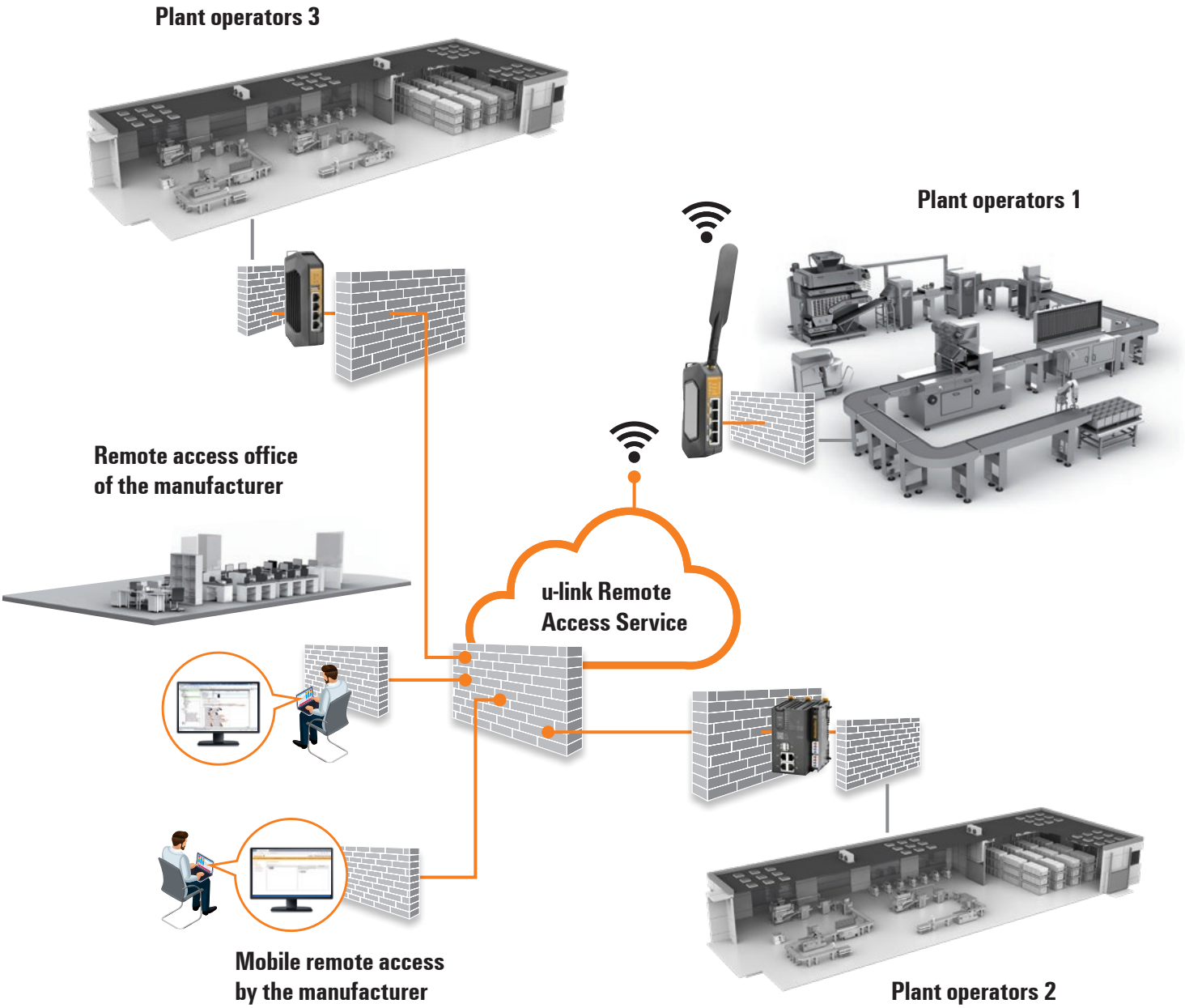


Secure remote access and remote diagnostics
Remote access to machines and systems takes place via a secure VPN connection – worldwide and regardless of location. You have secure access to your systems at all times via the highly available servers.



Condition monitoring and status reporting
Weidmüller Heartbeat can be used to report the availability of a router to u-link. This makes condition monitoring easier and enables status messages of the installed router.

u-link.weidmueller.com


Plant operators 3
Plant operators 1
Remote access office
of the manufacturer
u-link Remote
Access Service
Mobile remote access
by the manufacturer
Plant operators 2

Simple – secure – u-link

The integrated security concept for your networks



The growing number of network-capable devices together with the increasing networking of manufacturing through the Internet provides ample opportunities for cyber attacks. To protect your systems, u-link offers state-of-the-art functions without increasing complexity.

The development and operation of u-link are ISO 27001 certified. ISO 27001 specifies the requirements for establishing, implementing, maintaining and continually improving a documented information security management system

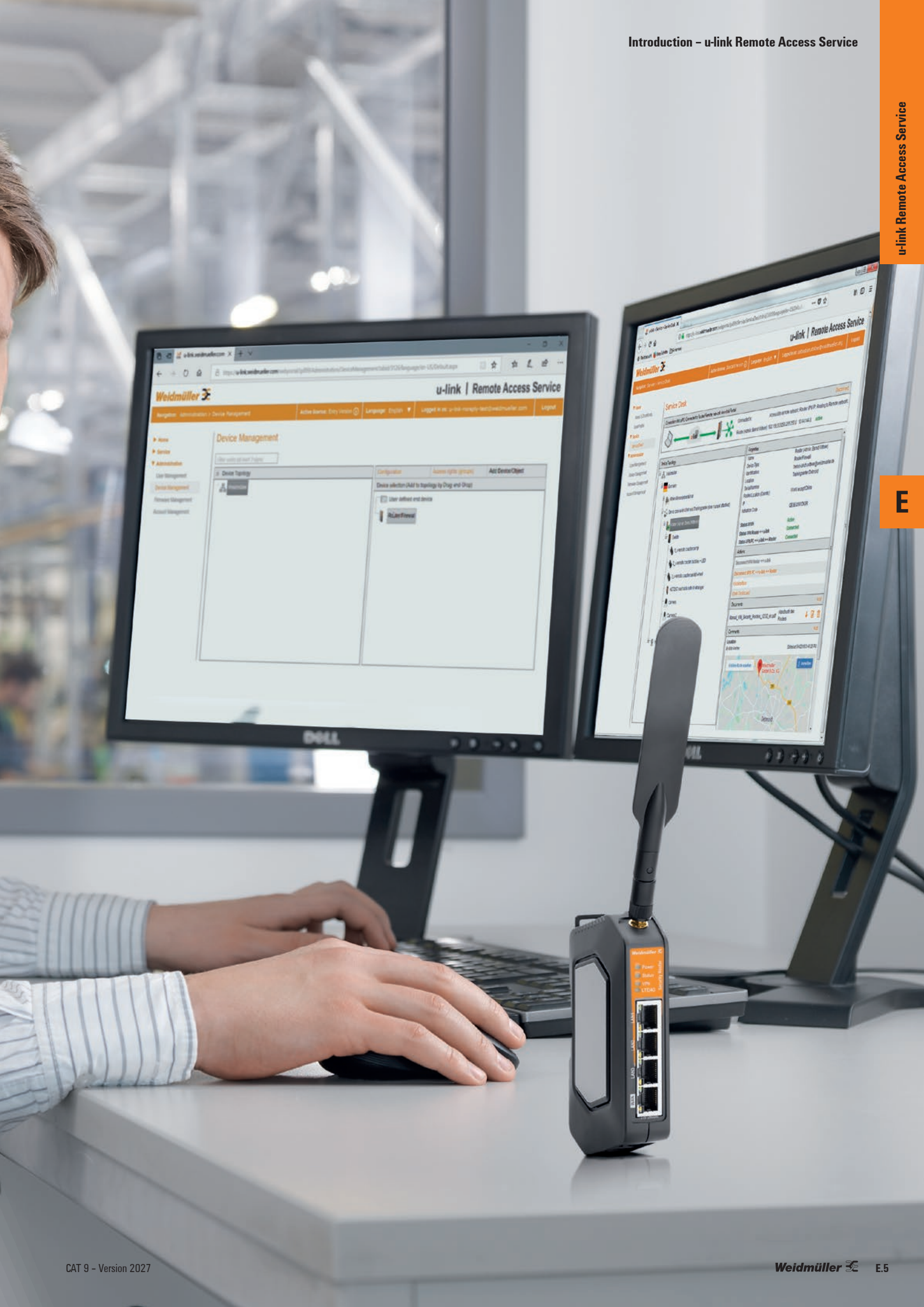
Your security features:

- X.509 certificates for authentication
- 2048 bit key length

- TLS/SSL encryption
- 2-factor authentication
- Custom password policy

- Outgoing connections only
- Port 443 exclusively used for remote access
- User and rights management

- Firewall integrated in u-link for remote access
- Option of enabling remote access on site
- Remote firmware update
- High-performance firewall


Weidmüller
u-link | Remote Access Service
Device Management
Device Topology
Service Desk
DELL

u-link device licenses

- 1-click VPN remote access for service PC's
- easyAccess: web, vnc, rdp or ssh-connections to remote hosts fully browser based for use with tablet or smartphone
- Organization and Group Management
- Topologies including 3rd party end-devices
- Firmware management: Display of firmware status of all routers and the option of a time-controlled, automated firmware update
- Individual access rights: granular configuration of access rights to devices in the target network
- Extensive event log: Presentation of all activities in the u-link portal with extensive filter and export functions
- Password policy: Increased security through configurable specification of minimum requirements for password quality and validity period
- Development and operation ISO27001 certified



Technical data

Version	
Version	License code for u-link Remote Access Service., Extends the period of the basic license by 1 year.
Function and performance features	
Number of configurable user objects (service PC)	Unrestricted
Number of configurable u-link clients on Weidmüller hardware (access points remote network)	U-LINK-BASIC-EXTENSION-1Y: 51 U-LINK-50-DEVICES-1Y: 100 U-LINK-100-DEVICES-1Y: 150 U-LINK-250-DEVICES-1Y: 300 U-LINK-500-DEVICES-1Y: 550 U-LINK-1000-DEVICES-1Y: 1050
Type of 2-factor authentication	E-mail, Google-Authenticator APP, Microsoft Authenticator APP
Type of web-based access (easyAccess)	Local web-server
VPN channel bandwidth	100 Mbit/s
User organisation	Organisation of service users in groups, assignment of selective access rights to device topology, group-dependent assignment of rights re. device configuration and user administration, Self-management of organizations within the framework of organizational rights
Firmware management	Display of the firmware version of all u-link clients and optional, time-controlled, automatic firmware updates (for selected device classes)
Functionality of integrated cloud firewall	Group-based rules for accessing remote networks based on IP, port and protocol
Device management	Illustration of the device infrastructure (remote access objects) in a clearly defined tree structure via location, group and device objects
Simultaneously usable pass-through VPN connections	1 (expandable by booking further pass-through VPN connections)
Period	1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation.
Monthly data volume and bandwidth	Unlimited (subject to normal market usage)
Usage information	Extended reporting and statistical information (connection reports, usage duration, data volume)
Password guideline	Increased security through configurable specification of minimum requirements for the password quality and validity period
System availability	≥ 99.6%
Note	

System requirements	
Hardware (service PC)	PC with operating system Windows 10 or 11
Hardware, remote target network	Weidmüller hardware with u-link VPN client
Portal administration (user/device configuration)	via Webbrowser (HTTPS), login via username and password
VPN software (service PC)	u-link VPN-client (installation on PC)
Miscellaneous	
Activation	Client account administrator enters the licence key in the u-link portal (functions immediately available)
Included in delivery	Email with license key

Ordering data

Type	Qty.	Order No.
U-LINK-BASIC-EXTENSION-1Y	1	**3024610000**
U-LINK-50-DEVICES-1Y	1	**2870090000**
U-LINK-100-DEVICES-1Y	1	**2870100000**
U-LINK-250-DEVICES-1Y	1	**2870110000**
U-LINK-500-DEVICES-1Y	1	**2870120000**
U-LINK-1000-DEVICES-1Y	1	**2924220000**

u-link VPN license extension

- Additional simultaneous VPN connections



Technical data

Version	
Version	"VPN connection" licence code for u-link Remote Access Service. Can be used as an additional VPN connection or to extend the period of a VPN connection that has already been activated
Function and performance features	
Number of additional VPN connections (per licence code)	1 (pass-through VPN connection for service PC <-> u-link <-> router/target network or easyAccess connection)
VPN channel bandwidth	100 Mbit/s
Period	1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation.
Usage	Use as additional VPN channel or to extend period of a VPN channel
System requirements	
Hardware (service PC)	PC with operating system Windows 10 or 11
Hardware, remote target network	Weidmüller hardware with u-link VPN client
Portal administration (user/device configuration)	via Webbrowser (HTTPS), login via username and password
VPN software (service PC)	u-link VPN-client (installation on PC)
Note	

Miscellaneous	
Activation	Client account administrator enters the licence key in the u-link portal (functions immediately available)
Included in delivery	Email with license key

Ordering data

Type	Qty.	Order No.
U-LINK-1-CONNECTION-1Y	1	2870130000

u-link feature extension

- Secure and reliable VPN connection to and from China



Technical data

Version	
Version	License code for u-link Remote Access Service., Allows the use of the server in China for a secure and reliable VPN connection to and from China.
Function and performance features	
China-VPN	Reliable VPN connection to and from China
Period	1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation.
System requirements	
Hardware (service PC)	PC with operating system Windows 10 or 11
Hardware, remote target network	Weidmüller hardware with u-link VPN client
Portal administration (user/device configuration)	via Webbrowser (HTTPS), login via username and password
VPN software (service PC)	u-link VPN-client (installation on PC)
Note	

Miscellaneous	
Activation	Client account administrator enters the licence key in the u-link portal (functions immediately available)
Included in delivery	Email with license key

Ordering data

Type	Qty.	Order No.
U-LINK-CNSERVER-1Y	1	2870140000

Media converter and protocol gateways
Overview

Media converter and protocol gateways	Introduction – Media converter and protocol gateways	F.2
	Ethernet media converter (copper/fiber optic)	F.4
	Serial/Ethernet converter	F.6
	Serial/Ethernet converter and Modbus TCP/RTU gateway	F.7

Transmit data without interference

Media converters and protocol gateways – convenient and economical

A goal of industrial automation is to achieve the continuous networking of all system components. This also requires the interconnection of devices and network segments that use different transmission technologies or are very far away from each other. Our media converters and protocol gateways ensure smooth communication between all network participants and are also especially convenient and economical.

Serial/Ethernet converters for integrating existing devices
In many systems, serial devices with RS232, RS422 or RS485 interfaces are still widely used. These may include control systems, sensors, measuring instruments, motors, drives, barcode readers and operating displays. Our serial/Ethernet converters allow you to integrate such serial components quickly and easily into your existing Ethernet network structure. For this purpose, the converters support a variety of operating modes, such as TCP server, TCP client, UDP, Real COM, RFC2217, reverse Telnet, pair connection and Ethernet modem.

Media converters for easy and economical glass fibre utilisation
In case of high requirements on interference immunity or long transmission distances, optical fibres are an expedient solution – in the process industry, for example. With fibre optics, transmission distances ranging between 5 km (multi-mode fibres) and 40 km (single-mode fibres) can be achieved without the use of intermediate generators. Our media converters convert Ethernet signals on an RJ45 port to fibre optic signals for SC or ST cables. In the process, the collision domain of both participants is retained so as to ensure the greatest possible port transparency.

Seamless integration of Ethernet and serial Modbus devices
Modbus is one of the most popular automation protocols in the world and supports traditional RS-232/422/485 devices and Ethernet devices. However, the Ethernet-based Modbus protocol is different from the original serial-based protocols. In order to integrate Modbus networks, the Modbus TCP/RTU Gateway includes two Ethernet interfaces and one serial interface that supports RS-232, RS-422 and RS-485 communication. It automatically and intelligently translates between Modbus TCP (Ethernet) and Modbus ASCII/RTU (serial) protocols.



Simple warning system
Warning in case of power failure and port errors

Surge protection
Improved surge protection for serial ports, LAN and power supply connections

Power supply
Redundant power supply inputs



Extensive approvals
Developed and approved for EX areas (Class 1 Div. 2/ Atex Zone 2)

EcoLine media converter

- Supports 100/1000BaseT(X) and 100/1000BaseSFP
- Jumbo Frame Support: up to 10 KB, ideal for high-throughput applications
- Link Fault Pass-Through (LFPT): Ensures network reliability by forwarding connection failures
- Wide operating temperature range: from -40 °C to +75 °C
- Very small form factor: perfect for space-constrained installations
- Dual power inputs: improves reliability and uptime
- Compatible with a wide range of SFP transceivers: single-mode/multi-mode, Fast Ethernet/Gigabit Ethernet



Technical data

Technology	
Standard	IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X
Data switching	Store and Forward
Switch characteristics	
Jumbo frame support	up to 10 KB
Interfaces	
RJ45 ports	100/1000 BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Number of ports	1x RJ45 100/1000 BaseT(X), 1x 100/1000BaseSFP Slot
Fibre-optic ports	100/1000Base SFP Slot
Function DIP switch	1x for switching between 100BaseSFP and 1000BaseSFP on SFP port, 1x for enabling/disabling Link Fault Pass-through (LFPT)
Power supply	
Connection type	1 removable 4-pin terminal block
Voltage supply range	10.8...52.8VDC
Supply voltage	12/24/48 V DC, 2 redundant inputs
Current consumption	0.23A @ 12V DC; 0.12A @ 24V DC;0.07A @ 48V DC
Overload current protection	Yes
Reverse polarity protection	Yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail, Wall mounting
Dimensions H x W x D	95 / 26.1 / 70 mm (3.7402 / 1.0276 / 2.7559 inch)
Net weight	208 GRM
Note	

Environmental conditions	
Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	2000m in acc. with UL
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V, IEC 61000-4-8
Safety standard	UL 61010-1, UL 61010-2-201
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
MTBF	
Operating time (hours), min.	2268268h
According to Standard	Telcordia (Bellcore), GB
Approvals	
Approvals	CE; CULUS; UKCA

Ordering data

Type	Qty.	Order No.
IE-MC-EL-1GT-1GESFP	1	**3109790000**

Industrial Media Converter (10/100BaseT (X) to 100BaseFX)

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Link Fault Pass-Through (LFP)
- Power failure, port break alarm by relay output
- Redundant power inputs
- Designed for hazardous locations (Zone 2)



Technical data

Technology				
Standards		IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT (X) and 100BaseFX		
Interfaces				
Fibre Ports		100BaseFX (SC/ST-duplex connection)		
RJ45 ports		10/100BaseT(X)		
DIP Switches		100BaseFX Full/Half duplex selection, Port fault alarm		
Alarm Contact		One relay output with current carrying capacity of 1 A at 24 V DC		
Specification optical fiber				
Transceiver Type		100Base FX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz*km	G.652
Typical Distance		4 km	5 km	40 km
Wave-length	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link-Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

Power Requirements	
Input Voltage	24 V DC (12 to 48 V DC), two redundant inputs
Current consumption	0.16 A at 24 V
Connection	1 removable 6-pole terminal block
Overload Current Protection	1.1 A
Reverse Polarity Protection	Present
Technical data	
Housing	Metal, IP30 protection
Dimensions (W x H x D)	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight	630 g
Installation	DIN-Rail
Environmental Limits	
Operating temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)
Operating Humidity	5 to 95 % (non-condensing)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)

Approvals	
Security	UL 508
EMC	EN 55032/24 CISPR 32, FCC Part 15B Class A IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8
Hazardous Location	UL/cUL Class1, Division 2, Groups A, B, C, and D, ATEX Zone 2 Ex nA nC IIC T4 Gc
Maritime	DNV
Freefall	IEC60068-2-32
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
MTBF (mean time between failures)	
Time	401,000 hrs
Database	MIL-HDBK-217F: GB 25 °C
Warranty	
Warranty Period	5 years

Ordering data

Version	Type	Operating Temperature	Order No.
1 * RJ45, 1 * SC-Multimode	IE-MC-VL-1TX-1SC	0 to +60 °C	**1241400000**
	IE-MC-VLT-1TX-1SC	-40 to +75 °C	**1286880000**
1 * RJ45, 1 * ST-Multimode	IE-MC-VL-1TX-1ST	0 to +60 °C	**1241410000**
	IE-MC-VLT-1TX-1ST	-40 to +75 °C	**1286890000**
1 * RJ45, 1 * SC-Singlemode	IE-MC-VL-1TX-1SCS	0 to +60 °C	**1241420000**
	IE-MC-VLT-1TX-1SCS	-40 to +75 °C	**1286900000**

Accessories

	Type	Order No.
19" Rack Mounting Kit	RM-KIT	**1241440000**

1 and 2- port Serial/Ethernet Converter for industrial automation

- High surge protection for the serial ports, LAN ports and power supply connection
- Rugged screw-type terminal blocks for power and serial connectors
- Cascading Ethernet ports for easy wiring
- Redundant DC power inputs
- Warning by relay output and email
- Low power consumption



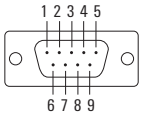
Technical data

Ethernet Interface	
Number of Ports	2
Speed	10/100 MBit/s, auto MDI/MDIX
Connection	8-pin RJ45
Magnetic Isolation Protection	1.5 KV built-in
Ethernet Line Protection	1 KV (level 2) surge protection
Serial Interface	
Number of ports that can be used simultaneously	IE-CS-2TX-1RS232/485: 1 IE-CS-2TX-2RS232/485: 2
Serial Standards	RS 232/422/485
Connection	IE-CS-2TX-1RS232/485: DB9 for RS 232, terminal block for RS 422/485 IE-CS-2TX-2RS232/485: DB9 for RS 232/422/485
Serial Line Protection	• 15 KV ESD protection for all signals • 1 KV (level 2) surge protection
RS 485 Data Direction Control	ADDC® (automatic data direction control)
Serial Communication Parameters	
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS and DTR/DSR (RS 232 only), XON/XOFF
Baud rate	50 bit/s to 921.6 kbit/s
Serial Signals	
RS 232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS 422	Tx+, Tx-, Rx+, Rx-, GND
RS 485 4w	Tx+, Tx-, Rx+, Rx-, GND
RS 485 2w	Data+, Data-, GND
Software	
Network Protocols	ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, Rtelnet, DNS, SNMP, HTTP, SMTP, SNTP, IGMP
Configuration Options	Web Console, Serial Console, Telnet Console, Windows Utility
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 x64
Technical data	
Housing	Metal, IP30 protection
Weight	IE-CS-2TX-1RS232/485: 475 g IE-CS-2TX-2RS232/485: 485 g
Dimensions (W x H x D)	36 x 105 x 140 mm (1.42 x 4.13 x 5.51 in)
Environmental Limits	
Operating temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)
Ambient Relative Humidity	5 to 95 % RH
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Power Requirements	
Input Voltage	12 to 48 V DC
Current consumption	IE-CS(T)-2TX-1RS232/485: 0.22 A at 12 V IE-CS(T)-2TX-2RS232/485: 0.25 A at 12 V

Approvals	
EMC	EN 55032/24 CISPR 32, FCC Part 15B Class A IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8
Security	UL 508
Hazardous Location	UL/cUL Class 1 Division 2 Groups A, B, C and D ATEX Zone 2 Ex nA nC IIC T3 Gc
Shock	IEC60068-2-27
Freefall	IEC60068-2-32
Vibration	IEC60068-2-6
Reliability	
Alert Tools	Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger	Built-in WDT (watchdog timer)
MTBF (mean time between failures)	
Time	262,805 hrs
Database	Telcordia (Bellcore), GB
Warranty	
Warranty Period	5 years

Pin assignment

RS 232/422/485 (Male DB9)



PIN	RS 232	RS 422/RS 485-4w	RS 485-2W
1	DCD	TxD-(A)	-
2	RXD	TxD+(B)	-
3	TXD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-

Pin Assignment

RS 422/485 Terminal block



PIN	RS 422/RS 485-4w	RS 485-2w
1	TxD+(B)	-
2	TxD-(A)	-
3	RxD+(B)	Data+(B)
4	RxD-(A)	Data-(A)
5	GND	GND

Ordering data

Version	Type	Operating Temperature	Order No.
2 * RJ45; 1 * serial (RS232: Sub-DB9,	IE-CS-2TX-1RS232/485	0 to +60 °C	**1242080000**
RS422/485: terminal block)	IE-CST-2TX-1RS232/485	-40 to +75 °C	**1285830000**
2 * RJ45; 2 * serial (RS232/422/485:	IE-CS-2TX-2RS232/485	0 to +60 °C	**1242090000**
2 * SubDB9)	IE-CST-2TX-2RS232/485	-40 to +75 °C	**1285840000**

Accessories

	Type	Order No.
19" Rack Mounting Kit	RM-KIT	**1241440000**

Serial/Ethernet converter and Modbus TCP/RTU protocol gateway

- Integrated 2-port switch for line topology without need for additional switch
- Device server and modbus protocol gateway in one device
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 70°C

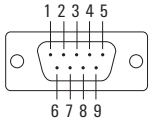


Technical data

Technology	
Standards	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX
Processing type	Store and Forward
Management features	
Device configuration	Webbrowser (HTTP/HTTPS) SSH Upload of a configuration file via web-interface
Monitoring function	Modbus traffic monitor Syslog Event based warning via E-Mail Event based warning via SNMP trap
IP-address management	Static DHCP-Client BootP
Security functions	Enable/disable ports Management access security via secure IP-list and configuration of allowed access methods (web-interface, SSH)
Time synchronization management	SNTP client
Operating modes	Virtual COM mode TCP Server mode TCP Client mode UDP Server/Client mode Modbus RTU/ASCII Master to Modbus TCP Slave Gateway Modbus TCP Master to Modbus RTU/ASCII Slave Gateway
Interfaces	
RJ45 ports	2x 10/100BASE-T(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
DB9	1x DB9 male for RS-232/422/485
DIP switches	1x for pull low resistor setting (1 kΩ, 150 kΩ) 1x for pull high resistor setting (1 kΩ, 150 kΩ) 1x for termination resistor setting (120 Ω)
Reset button	< 5 sec: System reboot ; > 5 sec: Factory default
Serial interface characteristics	
Standard	RS-232/422/485
Baud rate	50 bit/s to 460.8 kbit/s
Data Bits	7, 8
Stop Bits	1, 2
Parity	odd, even, none, mark, space
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR

Pin assignment

RS 232/422/485
(Male DB9)



Pin #	RS-232 (DTE Device)	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	RX-	RX-	DATA-
2	RXD	RX+	RX+	DATA+
3	TXD	TX+	TX+	–
4	DTR	TX-	TX-	–
5	GND	GND	GND	GND
6	DSR	–	–	–
7	RTS	–	–	–
8	CTS	–	–	–
9	RI	–	–	–

Power supply	
Connection type	1 removable 4-pin terminal block
Input voltage	24 V DC (12 - 48 V), 2 redundant inputs
Current consumption at 24 V	0.20 A
Overload current protection	yes
Reverse polarity protection	yes
Physical characteristics	
Housing main material	Metal
Protection degree	IP30
Type of mounting	DIN rail
Dimensions (W x H x D)	26.1 x 110 x 75.2 mm (1.02 x 4.33 x 2.95 in)
Weight	251 g
Environmental conditions	
Operating temperature	-40 to 70°C (-40 to 158°F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Humidity	5 to 95 % (non-condensing)
Operating altitude	≤ 2000 m
EMC conformity and approvals	
EMC	EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 Vrms
Safety	UL 61010-1, UL 61010-2-201
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Free fall	IEC 60068-2-31
MTBF	
Time	1,479,078 hrs
Database	Telcordia SR332
Guarantee	
Time interval	5 years

Ordering Information

Version	Model Type	Order No.
2x RJ45 10/100 Mbit/s, 1x DB9 for RS-232/422/485	IE-CS-MBGW-2TX-1COM	2682600000

Accessories

	Model Type	Order No.
19" Rack Mounting Kit	RM-KIT	1241440000

Industrial WLAN
Overview

Industrial WLAN	Introduction – Industrial WLAN	G.2
	Industrial WLAN	G.4

Industrial WLAN
Wireless communication solutions

In many mobile applications and industrial environments that are difficult to access, cabling does not usually make sense. Instead, WLAN-based wireless communication solutions are employed. In logistics, for example, WLAN is used to connect AGVs (Automatic Guided Vehicles). Roaming between several radio cells is important in this case in order to enable individually configurable radio coverage.

Our WLAN module can be used flexibly as an access point (AP), bridge or client. The alternative Power over Ethernet supply makes integration into an existing infrastructure especially easy. Maximum data integrity is guaranteed through integration into a RADIUS service and secure encryption with WPA2 in the radio field. Several radio fields can be flexibly spread out. Within these fields, the clients can move between the radio cells thanks to fast roaming. Several areas can be assigned for each radio cell (Multi-SSID) and allocated to different VLANs. This way, the wired infrastructure is continued 1:1 in the radio range.

Your special advantage:
- Compliant access point / client according to IEEE 802.11a/b/g/n
- MIMO technology for data rates up to 300 Mbit/s
- Fast roaming for interruption-free connection changes between access points
- DFS support in 5 Ghz band
- Power supply with PoE according to IEEE 802.3af possible
- Integrated DIs/DOs for monitoring and alarms



Turbo roaming for interruption-free connections
Roaming technology ensures a seamless wireless connection and allows you to switch quickly between different wireless access points without the risk of discontinued data communication.



Various wireless modes of operation
The most important modes of operation for wireless networks are AP Client mode and Bridge mode. AP mode can be used to create a new WLAN or to connect an existing WLAN to a wired network. Bridge mode allows two Ethernet devices to be connected wirelessly using a point-to-point connection.

Integrated digital inputs/outputs
Weidmüller WLAN access points have integrated digital inputs/outputs that can be used to send alarm notifications in real time via the network to the responsible maintenance personnel.

BasicLine WLAN Access Point/Client

- IEEE 802.11a/b/g/n conform access point/client
- MIMO technology for data rates up to 300Mbit/s
- Fast roaming for interruption-free connection change between access points
- DFS support in 5GHz bandwidth



Technical data

WLAN Interface	
Standards	IEEE 802.11a/b/g/n for Wireless LAN IEEE 802.11i for Wireless Security IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT
Spread Spectrum and Modulation (typically)	• DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK at 11/5.5 Mbps, DQPSK at 2 Mbps, DBPSK at 1 Mbps • 802.11a/g: 64QAM at 54/48 Mbps, 16QAM at 36/24 Mbps, QPSK at 18/12 Mbps, BPSK at 9/6 Mbps • 802.11n: 64QAM at 300 Mbps to BPSK at 6.5 Mbps
Operating Channels (central frequency)	US model: 2.412 to 2.462 GHz (11 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* /5.500 to 5.700 GHz (8 channels, excluding 5.600 to 5.640 GHz)* / 5.745 to 5.825 GHz (5 channels) EU model: 2.412 to 2.472 GHz (13 channels) /5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* /5.500 to 5.700 GHz (11 channels)*
*DFS (Dynamic Frequency Selection): If the device is operated in access point mode on these channels, the device automatically switches to another channel once a radar signal is detected. After switching to another channel, a 60-second availability check is carried out in accordance with the specification, before communication can take place on the channel.	
Security	• SSID Broadcast enable/disable • Firewall for MAC/IP/protocol/port-based filtering • 64-bit and 128-bit WEP encryption, WPA/WPA2 personnel and enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 to 300 Mbps
Transmit Power	802.11b: Type 26±1.5 dBm at 1 Mbps, Type 26±1.5 dBm at 2 Mbps Type 26±1.5 dBm at 5.5 Mbps, Type 25±1.5 dBm at 11 Mbps 802.11g: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 19±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz, (2.4 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz 802.11a: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 20±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz (5 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz

Note: In accordance with regional regulations, the maximum permissible transmit power is limited on the UNII bandwidths via the device firmware. The corresponding values are contained in the following tables:

	US model	EU model
2.4 GHz	26 dBm	18 dBm
5 GHz (UNII-1)	23 dBm	21 dBm
5 GHz (UNII-2)	23 dBm	21 dBm
5 GHz (UNII-2e)	23 dBm	23 dBm
5 GHz (UNII-3)	23 dBm	-

Receive Sensitivity	802.11b: • 93 dBm at 1 Mbps, -93 dBm at 2 Mbps • 93 dBm at 5.5 Mbps, -88 dBm at 11 Mbps 802.11g: • 88 dBm at 6 Mbps, -86 dBm at 9 Mbps • 85 dBm at 12 Mbps, -85 dBm at 18 Mbps • 85 dBm at 24 Mbps, -82 dBm at 36 Mbps • 78 dBm at 48 Mbps, -74 dBm at 54 Mbps 802.11n: • 70 dBm at MCS7 20 MHz, -69 dBm at MCS15 20 MHz (2.4 GHz) • 67 dBm at MCS7 40 MHz, -67 dBm at MCS15 40 MHz 802.11a: • 90 dBm at 6 Mbps, -88 dBm at 9 Mbps • 88 dBm at 12 Mbps, -85 dBm at 18 Mbps • 81 dBm at 24 Mbps, -78 dBm at 36 Mbps • 74 dBm at 48 Mbps, -72 dBm at 54 Mbps 802.11n: • 69 dBm at MCS7 20 MHz, -71 dBm at MCS15 20 MHz (5 GHz) • 63 dBm at MCS7 40 MHz, -68 dBm at MCS15 40 MHz
Protocol Support	
General Protocols	Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, DHCP, LLDP
Interfaces	
Supplied antenna	2x omni-directional dual-band antenna, 2 dBi, RP-SMA (male)
Connector for External Antennas	RP-SMA (female), 500 V insulation
RJ45 port	1x 10/100/1000BaseT (X) auto negotiation, full/half duplex mode and auto MDI/MDI-X connection
Console Port	RS 232 (RJ45-type)

Technical data

Technical data	
Housing	Metal, IP30 protection
Weight	307 g
Dimensions (W x H x D)	58 x 115 x 70 mm (2.29 x 4.53 x 2.76 in)
Installation	DIN-Rail
Environmental Limits	
Operating temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 % to 95 % (non-condensing)
Power Requirements	
Input Voltage	24 V DC (12 to 48 V DC), two redundant inputs
Connection	1 removable 4-pin terminal block, 500 V insulation
Power Consumption	0.56 A at 12 VDC 0.14 A at 48 VDC
Power consumption	6.96 W
Reverse Polarity Protection	Present
Approvals	
Safety	EN62368-1, UL 60950-1
Security standard	EN 18031-1
Radio	EN 301 489-1/17, EN 300 328, EN 301 893, TELEC, FCC ID: SLE-WAPN008, KC
EMC	EN 55032/24 CISPR 32, FCC Part 15B Class B IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8
MTBF (mean time between failures)	
Time	749,476 hrs
Database	Telcordia (Bellcore), GB
Warranty	
Warranty Period	5 years

Ordering data

Version	Type	Operating Temperature	Order No.
WLAN Access Point/Client, IEEE 802.11 a/b/g/n, EU-Modell	IE-WL-BL-AP-CL-EU	0 to +60 °C	**2536600000**
	IE-WLT-BL-AP-CL-EU	-40 to +75 °C	**2536650000**
WLAN Access Point/Client, IEEE 802.11 a/b/g/n, US-Modell	IE-WL-BL-AP-CL-US	0 to +60 °C	**2536660000**
	IE-WLT-BL-AP-CL-US	-40 to +75 °C	**2536670000**

Accessories

	Type	Order No.
External Backup and Restore Module	EBR-Modul RS232	**1241430000**
19" Rack Mounting Kit	RM-KIT	**1241440000**

WLAN antennas and connection cables, see chapter H.

ValueLine WLAN Access Point/Bridge/Client

- IEEE 802.11a/b/g/n conform Access Point/Client/Bridge
- MIMO technology for data rates up to 300Mbit/s
- Fast roaming for interruption-free connection change between access points
- DFS support in 5GHz bandwidth
- Power can be supplied via PoE in accordance with IEEE 802.3af
- Integrated DI/DOs for monitoring and alarms



Technical data

WLAN-Interface	
Standards	IEEE 802.11a/b/g/n for wireless LAN IEEE 802.11i for wireless security IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT IEEE 802.3af for Power-over-Ethernet IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN
Spreading code process and modulation (typical)	• DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK at 11/5.5 Mbps, DQPSK at 2 Mbps, DBPSK at 1 Mbps • 802.11a/g: 64QAM at 54/48 Mbps, 16QAM at 36/24 Mbps, QPSK at 18/12 Mbps, BPSK at 9/6 Mbps • 802.11n: 64QAM at 300 Mbps to BPSK at 6.5 Mbps
Operating Channels (central frequency)	US model: 2.412 to 2.462 GHz (11 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (8 channels, excluding 5.600 to 5.640 GHz)* / 5.745 to 5.825 GHz (5 channels) EU model: 2.412 to 2.472 GHz (13 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (11 channels)*
*DFS (Dynamic Frequency Selection): If the device is operated in access point mode on these channels, the device automatically switches to another channel once a radar signal is detected. After switching to another channel, a 60-second availability check is first carried out in accordance with the specification, before communication can take place on the channel.	
Security	• SSID Broadcast enable/disable • Firewall for MAC/IP/protocol/port-based filtering • 64-bit and 128-bit WEP encryption, WPA/WPA2 personnel and enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 to 300 Mbps
Transmit power	802.11b: Type 26±1.5 dBm at 1 Mbps, Type 26±1.5 dBm at 2 Mbps Type 26±1.5 dBm at 5.5 Mbps, Type 25±1.5 dBm at 11 Mbps 802.11g: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 19±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz, (2.4 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz 802.11a: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 20±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz (5 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz

Note: In accordance with regional regulations, the maximum permissible transmit power is limited on the UNII bandwidths via the device firmware. The corresponding values are contained in the following tables:

	US model	EU model
2.4 GHz	26 dBm	18 dBm
5 GHz (UNII-1)	23 dBm	21 dBm
5 GHz (UNII-2)	23 dBm	21 dBm
5 GHz (UNII-2e)	23 dBm	23 dBm
5 GHz (UNII-3)	23 dBm	-

Receive sensitivity	802.11b: • 93 dBm at 1 Mbps, -93 dBm at 2 Mbps • 93 dBm at 5.5 Mbps, -88 dBm at 11 Mbp 802.11g: • 88 dBm at 6 Mbps, -86 dBm at 9 Mbps • 85 dBm at 12 Mbps, -85 dBm at 18 Mbps • 85 dBm at 24 Mbps, -82 dBm at 36 Mbps • 78 dBm at 48 Mbps, -74 dBm at 54 Mbps 802.11n: • 70 dBm at MCS7 20 MHz, -69 dBm at MCS15 20 MHz (2.4 GHz) • 67 dBm at MCS7 40 MHz, -67 dBm at MCS15 40 MHz 802.11a: • 90 dBm at 6 Mbps, -88 dBm at 9 Mbps • 88 dBm at 12 Mbps, -85 dBm at 18 Mbps • 81 dBm at 24 Mbps, -78 dBm at 36 Mbps • 74 dBm at 48 Mbps, -72 dBm at 54 Mbps 802.11n: • 69 dBm at MCS7 20 MHz, -71 dBm at MCS15 20 MHz (5 GHz) • 63 dBm at MCS7 40 MHz, -68 dBm at MCS15 40 MHz
Supported protocols	
General protocols	Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNTP, TCP, UDP, RADIUS, SNMP, DHCP, LLDP, VLAN, STP/RSTP
Interfaces	
Supplied antenna	2x omni-directional dual-band antenna, 2 dBi, RP-SMA (male)
Connection for external antennas	RP-SMA (female), 500 V insulation
RJ45 port	1x 10/100/1000BaseT (X) auto negotiation, full/half duplex mode and auto MDI/MDI-X connection
Console port	RS 232 (RJ45 connection)
Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Digital inputs	2 galvanically separated inputs • +13 to +30 V for the state "1" • +3 to -30 V for the state "0" • max. Current consumption: 8 mA

Technical data

Technical data	
Housing	Metal, IP30 protection class
Weight	860 g
Dimensions (W x H x D)	52.7 x 135 x 105 mm (2.08 x 5.32 x 4.13 in)
Installation	DIN-Rail
Environmental conditions	
Operating temperature	Standard models: -25 to 60°C (-13 to 140°F) Models with extended temperature range: -40 to 75 °C (-40 to 167 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Relative ambient air humidity	5% to 95% (non-condensing)
Power supply	
Input voltage	24 V DC (12 to 48 V DC), two redundant inputs or 48 V DC PoE (IEEE802.3af)
Connection	1 removable 10-pin terminal block, 500 V insulation
Current consumption	0.6 A at 12 VDC 0.15 A at 48 VDC
Power consumption	7.2 W
Reverse polarity protection	Present
Approvals	
Safety	EN62368-1, UL 60950-1
Security standard	EN 18031-1
Wireless	EN 301 489-1/17, EN 300 328, EN 301 893, TELEC, FCC ID: SLE-WAPN008, KC
EMC	EN 61000-6-2/6-4 CISPR 32, FCC Part 15B Class B IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V/m IEC 61000-4-8 PFMF: 1 A/m
Explosive risk zones	UL / cUL Class I, Division 2; ATEX Zone 2 Ex nA IIC T4 Gc
MTBF (mean time between failures)	
Time	570,854 hrs
Database	Telcordia (Bellcore), GB
Warranty	
Period	5 Years

Ordering data

Version	Type	Operating Temperature	Order No.
WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, EU-Modell	IE-WL-VL-AP-BR-CL-EU	-25 to +60 °C	**2536680000**
	IE-WLT-VL-AP-BR-CL-EU	-40 to +75 °C	**2536690000**
WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, US-Modell	IE-WL-VL-AP-BR-CL-US	-25 to +60 °C	**2536700000**
	IE-WLT-VL-AP-BR-CL-US	-40 to +75 °C	**2536710000**

Accessories

	Type	Order No.
External backup and restore module	EBR-Modul RS232	**1241430000**
19" Rack Mounting Kit	RM-KIT	**1241440000**

WLAN antennas and connection cables, see chapter H.

Active components
Overview of accessories

Accessories – Active components	Introduction – Accessories – Active components	H.2
	SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)	H.4
	10 Gigabit Ethernet SFP+ transceiver (for use with switches of SubstationLine)	H.7
	Configuration backup and restore module (for use with switches of Value- and PremiumLine such as Basic- and ValueLine WLAN devices)	H.8
	Configuration backup and restore module (for use with switches of Advanced- and SubstationLine)	H.9
	WLAN antennas and connection cables	H.10
	Mobile radio antennas and connection cables	H.13
	Antenna mounting	H.16
	Mounting kits	H.17

Easy assembly, configuration and operation
Our accessories for active Industrial Ethernet solutions

Industrial Ethernet connection solutions from Weidmüller are versatile and can be precisely matched to the infrastructure of your machine, system or factory. In order to guarantee optimum functionality, we provide you with all the connection technology from a single source. We also offer a wide range of accessories for your active Industrial Ethernet components.

Configuration module
To quickly back up, restore and load configurations, we recommend our configuration module. It supports you in performing reconfigurations for replacement devices, thereby minimising your downtimes.

SFP transceivers
Our SFP transceivers give you more flexibility in your choice of transmission media. We offer you a broad selection – for transmission speeds up to 10 Gbit/s and distances up to 60 km. The modules support digital diagnostic monitoring (DDM) for the easy monitoring of the transceiver status.

Antennas and antenna accessories
In order to use radio products in different environments, external antennas and antenna cables are often required. The various antennas are optimised for the respective applications and can be quickly attached with the appropriate mounting material.

19“ mounting kit
For our Industrial Ethernet components, we also offer a mounting kit as an alternative for the installation of DIN rail-based components in 19“ racks.

Individual solutions
In addition to our line of accessories, we provide you with a wide range of products and services for custom connection solutions. This also includes our assembly service, which supports you in mastering even the most complex cabling tasks.



Fast Ethernet SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)

Fast Ethernet SFP transceiver

- IEEE 802.3u compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)



Technical data

Fibre optic transceiver characteristics			
	IE-SFP-1FE-MM-2	IE-SFP-1FE-SM-30	IE-SFP-1FE-SM-60
	2682450000	2682460000	2682470000
Transmission speed	100 Mbit/s	100 Mbit/s	100 Mbit/s
Digital Diagnostic Monitor function (DDM)	Supported	Supported	Supported
Transceiver Type	Multimode	Singlemode	Singlemode
Connector type	LC-Duplex	LC-Duplex	LC-Duplex
Fiber Cable Type	OM1, OM2	G.652	G.652
Typical Distance	2 km, 4 km	30 km	60 km
Wavelength typ (nm)	1310	1310	1310
Wavelength (TX) range (nm)	1270 to 1380	1280 to 1340	1280 to 1340
Wavelength (RX) range (nm)	1260 to 1620	1260 to 1620	1260 to 1620
Optical Power (TX) range (dBm)	-14 to -20	-8 to -15	0 to -5
Optical Power (RX) range (dBm)	-3 to -32	-3 to -34	-3 to -34
Link-Budget (dB)	12	19	29

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

Power supply	
Voltage supply	3.3 V (via Ethernet switch)
Physical characteristics	
Type of mounting	Insert in SFP slot
Weight	17.5 g
Environmental conditions	
Operating temperature	-40 to 85 °C (-40 to 185 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035
Safety standard	UL 62368-1
Guarantee	
Time interval	3 years

Ordering Information

Version	Model Type	Order No.
SFP Transceiver, 100 Mbit/s, Multimode, LC-Duplex, 4 km, -40 °C...85 °C	IE-SFP-1FE-MM-2	**2682450000**
SFP Transceiver, 100 Mbit/s, Singlemode, LC-Duplex, 30 km, -40 °C...85 °C	IE-SFP-1FE-SM-30	**2682450000**
SFP Transceiver, 100 Mbit/s, Singlemode, LC-Duplex, 60 km, -40 °C...85 °C	IE-SFP-1FE-SM-60	**2682470000**

Gigabit Ethernet SFP transceiver

- IEEE 802.3z compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)



Technical data

Fibre optic transceiver characteristics								
	IE-SFP-1GE-MM-05	IE-SFP-1GE-MM-2	IE-SFP-1GE-SM-10	IE-SFP-1GE-SM-40	IE-SFP-1GE-SM-10-BiDi-TX1310	IE-SFP-1GE-SM-10-BiDi-TX1550	IE-SFP-1GE-SM-20-BiDi-TX1310	IE-SFP-1GE-SM-20-BiDi-TX1550
	2682480000	2682490000	2682500000	2682510000	2682520000	2682530000	2682540000	2682550000
Transmission speed	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s	1000 Mbit/s
Digital Diagnostic Monitor function (DDM)	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Transceiver Type	Multimode	Multimode	Singlemode	Singlemode	Singlemode BiDi	Singlemode BiDi	Singlemode BiDi	Singlemode BiDi
Connector type	LC-Duplex	LC-Duplex	LC-Duplex	LC-Duplex	LC-Simplex	LC-Simplex	LC-Simplex	LC-Simplex
Fiber Cable Type	OM1, OM2	OM1, OM2	G.652	G.652	G.652	G.652	G.652	G.652
Typical Distance	275 m, 550 m	2 km	10 km	40 km	10 km	10 km	20 km	20 km
Wavelength typ (nm)	850	1310	1310	1310	RX 1550 / TX 1310	RX 1310 / TX 1550	RX 1550 / TX 1310	RX 1310 / TX 1550
Wavelength (TX) range (nm)	830 to 870	1270 to 1355	1280 to 1365	1280 to 1350	1270 to 1355	1510 to 1570	1270 to 1355	1510 to 1570
Wavelength (RX) range (nm)	770 to 870	1260 to 1620	1260 to 1620	1260 to 1610	1470 to 1600	1250 to 1380	1470 to 1600	1250 to 1380
Optical Power (TX) range (dBm)	-3 to -9	-1 to -9	-3 to -9	+3 to -3	-3 to -9	-3 to -9	-2 to -8	-2 to -8
Optical Power (RX) range (dBm)	-3 to -18	-1 to -19	-3 to -20	-3 to -24	-3 to -20	-3 to -20	-3 to -23	-3 to -23
Link-Budget (dB)	9	10	11	21	11	11	15	15

Note 1: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

Note 2: BiDi-SFP transceivers must be used in pairs'
(e.g, IE-SFP-1GE-SM-10-BIDI-TX1310 and IE-SFP-1GE-SM-10-BIDI-TX1550 or IE-SFP-1GE-SM-20-BIDI-TX1310 and IE-SFP-1GE-SM-20-BIDI-TX1550).

Power supply	
Voltage supply	3.3 V (via Ethernet switch)
Physical characteristics	
Type of mounting	Insert in SFP slot
Weight	17.5 g
Environmental condition	
Operating temperature	-40 to 85 °C (-40 to 185 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035
Safety standard	UL 62368-1
Guarantee	
Time interval	3 years

Ordering Information

Version	Model Type	Order No.
SFP Transceiver, 1000 Mbit/s, Multimode, LC-Duplex, 0.5 km, -40 °C...85 °C	IE-SFP-1GE-MM-05	**2682480000**
SFP Transceiver, 1000 MBit/s, Multimode, LC-Duplex, 2 km, -40 °C...85 °C	IE-SFP-1GE-MM-2	**2682490000**
SFP Transceiver, 1000 Mbit/s, Singlemode, LC-Duplex, 10 km, -40 °C...85 °C	IE-SFP-1GE-SM-10	**2682500000**
SFP Transceiver, 1000 MBit/s, Singlemode, LC-Duplex, 40 km, -40 °C...85 °C	IE-SFP-1GE-SM-40	**2682510000**
SFP Transceiver, 1000 MBit/s, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C	IE-SFP-1GE-SM-10-BIDI-TX1310	**2682520000**
SFP Transceiver, 1000 MBit/s, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C	IE-SFP-1GE-SM-10-BIDI-TX1550	**2682530000**
SFP Transceiver, 1000 MBit/s, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C	IE-SFP-1GE-SM-20-BIDI-TX1310	**2682540000**
SFP Transceiver, 1000 MBit/s, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C	IE-SFP-1GE-SM-20-BIDI-TX1550	**2682550000**

Gigabit Ethernet RJ45 SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)

RJ45 Gigabit Ethernet SFP transceiver

- IEEE 802.3-2002 and IEEE 802.3ab compliant
- 10/100/1000BASE-T operation in host system with SGMII interface
- RJ-45 connector
- Pluggable during operation (hot pluggable)



Technical data

Transceiver characteristics	
Transmission rate	10/100/1000 MBit/s
Digital Diagnostic Monitor function (DDM)	Not supported
Connector type	RJ45
Typical Distance	100 m

Note: 10/100/1000BASE T operation requires the host system to have an SGMII interface with no clocks, and the SFP copper module PHY Interface to be configured by the host system.
With a SERDES interface that does not support SGMII, the module will operate at 1000BASE T only.

Power supply	
Voltage supply	3.3 V (via Ethernet switch)
Interfaces	
RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-duplex mode, Auto MDI/MDI-X port
Physical characteristics	
Type of mounting	Insert in SFP slot
Weight	18 g
Environmental conditions	
Operating temperature	-40 to 85 °C (-40 to 185 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035
Safety standard	UL 62368-1
Guarantee	
Time interval	3 years

Ordering Information

Version	Model Type	Order No.
SFP Transceiver, 10/100/1000 MBit/s, RJ45, 0.1 km, -40 °C...85 °C	IE-SFP-1GE-RJ45	**2766120000**

10 Gigabit Ethernet SFP+ transceiver

- IEEE 802.3ae compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)



Technical data

Fibre optic transceiver characteristics			
	IE-SFP-10GE-MM-03	IE-SFP-10GE-SM-20	IE-SFP-10GE-SM-40
	2779110000	2779120000	2779130000
Transmission speed	10 Gbit/s	10 Gbit/s	10 Gbit/s
Digital Diagnostic Monitor function (DDM)	Supported	Supported	Supported
Transceiver Type	Multimode	Singlemode	Singlemode
Connector type	LC-Duplex	LC-Duplex	LC-Duplex
Fiber Cable Type	OM1, OM2, OM3	G.652	G.652
Typical Distance	33 m, 82 m, 300 m	20 km	40 km
Wavelength typ (nm)	850	1310	1550
Wavelength (TX) range (nm)	840 to 860	1260 to 1355	1530 to 1565
Wavelength (RX) range (nm)	840 to 860	1260 to 1600	1250 to 1600
Optical Power (TX) range (dBm)	-1 to -6.5	0.5 to -4	4 to -4.7
Optical Power (RX) range (dBm)	-1 to -9.9	0.5 to -15	-1 to -15.8
Link-Budget (dB)	3.4	11	11.1

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

Power supply	
Voltage supply	3.3 V (via Ethernet switch)
Physical characteristics	
Type of mounting	Insert in SFP slot
Weight	17.5 g
Environmental conditions	
Operating temperature	-40 to 85 °C (-40 to 185 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	EN 55032, EN 55035
Safety standard	UL 62368-1
Guarantee	
Time interval	3 years

Ordering Information

Version	Model Type	Order No.
SFP+ Transceiver, 10 Gbit/s, Multimode, LC-Duplex, 0.3 km, -40 °C...85 °C	IE-SFP-10GE-MM-03	**2779110000**
SFP+ Transceiver, 10 Gbit/s, Singlemode, LC-Duplex, 20 km, -40 °C...85 °C	IE-SFP-10GE-SM-20	**2779120000**
SFP+ Transceiver, 10 Gbit/s, Singlemode, LC-Duplex, 40 km, -40 °C...85 °C	IE-SFP-10GE-SM-40	**2779130000**

Configuration backup and restore module
(for use with switches of Value- and PremiumLine such as Basic- and ValueLine WLAN devices)

Module for saving and loading a device configuration

- Reduce system downtime by simple reconfiguration in case of replacing devices
- Automatic loading of the saved configuration possible after device restart
- Compact, rugged, reliable design
- For use with switches of Value- and PremiumLine such as Basic- and ValueLine WLAN devices

EBR-MODULE RS232



Technical data

Basic Operation	
Connection type	RJ45
Physical characteristics	
Housing main material	PVC casting
Type of fixing	M4 screw (<4 mm)
Cable length	0.35 m
Protection degree	IP40
Dimensions H x W x D	12 / 32.5 / 97 mm
Environmental conditions	
Operating temperature	0 °C...60 °C
Humidity	5 to 95 % (non-condensing)
EMC conformity and approvals	
EMC standards	FCC Part 15, CISPR (EN55022) Class A, EN 61000-4-2 (ESD), Stage 2, EN 61000-4-3 (RS), Stage 3, EN 61000-4-4 (EFT), Stage 3, EN 61000-4-5 (surge voltage), Stage 3, EN 61000-4-6 (CS), Stage 3
Approvals	CE; UKCA
Note	

Ordering data

Type	**Qty.**	**Order No.**
EBR-MODULE RS232	1	**1241430000**
Note		

Module for saving and loading a device configuration

- Reduce system downtime by simple reconfiguration in case of replacing devices
- 2 storage spaces selectable via DIP switch
- Compact, rugged, reliable design
- For use with switches of Advanced- and SubstationLine

IE-EBR-MODULE-RS232-ALM



Technical data

Interfaces	
Function DIP switch	1x for selection of the configuration storage space (A or B), 1x for selection between upload or download of a configuration
Function start button	Starts the upload or download of a configuration
LED indicator	power, data transmitting, transmission status
Power supply	
Connection type	RJ45
Current consumption	0.14A @ 5V
Supply voltage	5 V DC (via RS-232 RTS signal of serial console port)
Physical characteristics	
Housing main material	PC molding
Cable length	210 mm
Protection degree	IP40
Dimensions H x W x D	14.5 / 32 / 90.25 mm
Environmental conditions	
Operating temperature	-10 °C...60 °C
Humidity	5 to 95 % (non-condensing)
Operating altitude	≤ 2000 m
EMC conformity and approvals	
EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m
Free fall	According to IEC 60068-2-31
Shock	according to IEC 60068-2-27
Safety standard	UL 61010-1, UL 61010-2-201
Vibration	according to IEC 60068-2-6
Approvals	CE; CULUS; UKCA
MTBF	
Operating time (hours), min.	6645051h
According to Standard	Telcordia SR-332
Note	

Ordering data

Type	Qty.	Order No.
IE-EBR-MODULE-RS232-ALM	1	2682610000

Note

WLAN antennas

IE-ANT-P-ABG-75-9-NF



Technical data

Version	Dual Band (2.4 GHz / 5 GHz), Gain 9 dBi
Product type	WLAN antenna, Directional antenna
3dB beamwidth (horizontal)	Band 1: 75°, Band 2: 55°
3dB beamwidth (vertical)	Band 1: 55°, Band 2: 55°
Radiation	Directional
Type of connection	1x N-type female, bottom
Antenna gain	Band 1: 9 dBi, Band 2: 9 dBi
Frequency range	Band 1: 2400 - 2500 (MHz), Band 2: 5150 - 5875 (MHz)
Impedance	50 Ω
Composite power max.	10 W
Vertical electrical tilt	Band 1: 0°, Band 2: 0°
Polarisation	Vertical
Standing wave ratio	< 2
front-to-back ratio	Band 1: 15 dB, Band 2: 15 dB
Physical characteristics	
Colour	grey
Housing main material	PC
Operating temperature	-40 °C...80
Dimensions H x W x D	80 / 101 / 35
Applications	for indoor and outdoor use
Wind load	Frontal, Lateral, 7 N, @ 160 Km/h
Included in delivery	
Included in delivery	1 x antenna, 1 x wall mounting
Note	

Ordering data

Type	Qty.	Order No.
IE-ANT-P-ABG-75-9-NF	1	**1367140000**

Note

WLAN antennas

IE-ANT-WL-DB-MIMO-DO-RPSMAM



IE-ANT-WL-DB-SISO-LO-NF



Technical data

	IE-ANT-WL-DB-MIMO-DO-RPSMAM	IE-ANT-WL-DB-SISO-LO-NF
Version	Wi-Fi antenna, Up to Wi-Fi 6 & 6E (IEEE802.11ax)	Wi-Fi antenna, Up to Wi-Fi 6 & 6E (IEEE802.11ax)
Product type	Omni-directional antenna	Omni-directional antenna
Type of connection	2x RP-SMA male	N female
Antenna gain	1.5 dBi, 0.5 dBi	3 dBi, 4 dBi
Amount of antenna elements (MIMO)	2	
Frequency range	2.3-2.8 GHz, 4.9-7.125 GHz	2.4-2.5 GHz, 4.9-6.425 GHz
Impedance	50 Ω	50 Ω
Composite power max.	25 W	100 W
Polarisation	Linear, Vertical	Vertical
Standing wave ratio	< 2.0 typical, 2.5 max.	<2.0 typical, 3.5 max.
Mechanical characteristics cable		
Min. bending radius, repetitive	25 mm	
Cable length	1 m	
Physical characteristics		
Colour	white	black
Material for base plate	UV- stable rugged thermoplastics	
Operating temperature	-40 °C...80 °C	-40 °C...85 °C
Height	67 mm	45.7 mm
Diameter	137 mm	36.2 mm
Included in delivery		
Included in delivery	1 x antenna	1 x antenna
Note		

Ordering data

Type	Qty.	Order No.
IE-ANT-WL-DB-MIMO-DO-RPSMAM	1	2788070000

Note

Type	Qty.	Order No.
IE-ANT-WL-DB-SISO-LO-NF	1	2788110000

Note

Connection cable WLAN antennas

IE-CC-NM-RPSMAM



IE-CC-RPSMAM-RPSMAF



Technical data

	IE-CC-NM-RPSMAM	IE-CC-RPSMAM-RPSMAF
Type of connection	Connection 1:, N male, Connection 2:, RP-SMA male	Connection 1:, RP-SMA male, Connection 2:, RP-SMA female
Electrical characteristics cable		
Attenuation at 2.4 GHz	0.62 dB/m	0.62 dB/m
Attenuation at 2000 MHz	0.56 dB/m	0.56 dB/m
Attenuation at 5 GHz	0.94 dB/m	0.94 dB/m
Attenuation at 800 MHz	0.34 dB/m	0.34 dB/m
Mechanical characteristics cable		
Min. bending radius, repetitive	25 mm	25 mm
Sheathing colour	black	black
UV-resistant	Yes	Yes
Material sheath	PVC	PVC
Physical characteristics		
Operating temperature	-40 °C...85 °C	-40 °C...85 °C
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1,0 m	IE-CC-NM-RPSMAM-1M	1	2788040000	IE-CC-RPSMAM-RPSMAF-1M	1	2787950000
2,0 m	IE-CC-NM-RPSMAM-2M	1	1367110000			
3,0 m	IE-CC-NM-RPSMAM-3M	1	2788050000	IE-CC-RPSMAM-RPSMAF-3M	1	2787960000
4,0 m	IE-CC-NM-RPSMAM-4M	1	1367100000			
5,0 m	IE-CC-NM-RPSMAM-5M	1	2788060000	IE-CC-RPSMAM-RPSMAF-5M	1	2787970000
Note						

Mobile radio antenna

IE-ANT-CELL-MIMO-DO-SMAM



Technical data

Version	Cellular antenna, Up to 5G (NR)
Product type	Omni-directional antenna
Type of connection	2x SMA male
Antenna gain	2.5 dBi
Amount of antenna elements (MIMO)	2
Frequency range	690-950 MHz, 1.7-3.8 GHz
Impedance	50 Ω
Composite power max.	50 W
Polarisation	Linear, Vertical
Standing wave ratio	<2.0 typical, 3.0 max.
Mechanical characteristics cable	
Min. bending radius, repetitive	25 mm
Cable length	1 m
Physical characteristics	
Colour	black
Operating temperature	-40 °C...85 °C
Height	100 mm
Included in delivery	
Included in delivery	1 x antenna
Note	

Ordering data

Type	Qty.	Order No.
IE-ANT-CELL-MIMO-DO-SMAM	1	2788120000

Note

Mobile radio antenna

	IE-ANT-CELL-SISO-EO-SMAM	IE-ANT-CELL-SISO-LO-NF
		

Technical data

Version	Cellular antenna, Up to 5G (support for frequencies below 2.7 GHz, e.g., bands n1, n2, n28)	Cellular antenna, Up to 5G (NR)
Product type	Omni-directional antenna	Omni-directional antenna
Type of connection	SMA male	N female
Antenna gain	2 dBi	3 dBi
Frequency range	690-950 MHz, 1.7-3.8 GHz	690-950 MHz, 1.7-3.8 GHz
Impedance	50 Ω	50 Ω
Composite power max.	10 W	150 W
Polarisation	Vertical	Vertical
Standing wave ratio	1.5 typical / 2.0 max	< 2.0 typical, 2.5 max.
Physical characteristics		
Colour	black	black
Operating temperature	-40 °C...75 °C	-40 °C...70 °C
Height	208 mm	89 mm
Included in delivery		
Included in delivery	1 x antenna	1 x antenna
Note		

Ordering data

Type	Qty.	Order No.
IE-ANT-CELL-SISO-EO-SMAM	1	**2788130000**

Note

Type	Qty.	Order No.
IE-ANT-CELL-SISO-LO-NF	1	**2788150000**

Note

Connection cable mobile radio antenna

IE-CC-NM-SMAM



IE-CC-SMAM-SMAF



Technical data

	IE-CC-NM-SMAM	IE-CC-SMAM-SMAF
Type of connection	Connection 1:, N male, Connection 2:, SMA male	Connection 1:, SMA male, Connection 2:, SMA female
Electrical characteristics cable		
Attenuation at 2.4 GHz	0.62 dB/m	0.62 dB/m
Attenuation at 2000 MHz	0.56 dB/m	0.56 dB/m
Attenuation at 5 GHz	0.94 dB/m	0.94 dB/m
Attenuation at 800 MHz	0.34 dB/m	0.34 dB/m
Mechanical characteristics cable		
Min. bending radius, repetitive	25 mm	25 mm
Sheathing colour	black	black
UV-resistant	Yes	Yes
Material sheath	PVC	PVC
Physical characteristics		
Operating temperature	-40 °C...85 °C	-40 °C...85 °C
Length	1 m	1 m
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1,0 m	IE-CC-NM-SMAM-1M	1	**2788010000**	IE-CC-SMAM-SMAF-1M	1	**2787920000**
2,0 m	IE-CC-NM-SMAM-2M	1	**1491180000**			
3,0 m	IE-CC-NM-SMAM-3M	1	**2788020000**	IE-CC-SMAM-SMAF-3M	1	**2787930000**
4,0 m	IE-CC-NM-SMAM-4M	1	**1491190000**			
5,0 m	IE-CC-NM-SMAM-5M	1	**2788030000**	IE-CC-SMAM-SMAF-5M	1	**2787940000**
6,0 m	IE-CC-NM-SMAM-6M	1	**1491210000**			
Note						

Antenna mounting

IE-ANT-MOUNT-POLE-NF



Technical data

Physical characteristics	
Colour	silver
Housing main material	Aluminium
Height	108 mm
Note	

Ordering data

Type	Qty.	Order No.
IE-ANT-MOUNT-POLE-NF	1	**2788470000**

Note

Kit for 19" rack-mounting

- For mounting DIN-rail based devices in 19" racks

RM-KIT



Technical data

Dimensions H x W x D	177.8 / 481 / 202.4 mm
Note	

Ordering data

Note	

Type	Qty.	Order No.
RM-KIT	1	**1241440000**

Mounting kits

Mounting kit for wall mounting (BasicLine series B)

Technical data

	IE-WALLMOUNT-KIT-MODEL-A	IE-WALLMOUNT-KIT-MODEL-B
Dimensions H x W x D	65 / 25 / 2 mm	85 / 35 / 2 mm
Note		

Ordering data

	IE-WALLMOUNT-KIT-MODEL-A	IE-WALLMOUNT-KIT-MODEL-B
Note		

Type	Qty.	Order No.
IE-WALLMOUNT-KIT-MODEL-A	1	**3032760000**

Type	Qty.	Order No.
IE-WALLMOUNT-KIT-MODEL-B	1	**3032770000**

Passive components
Introduction

Introduction – Passive components	IE-line connectors	I.2
	Differences between industrial and office Ethernet	I.4
	PROFINET and SERCOS III cabling solutions	I.6
	EtherNet/IP cabling solutions	I.10

IE-LINE plug-in connectors
Clever and flexible with ***STEADY**TEC*® technology

***STEADY**TEC*® – this name stands for the future of connection technology in the field of data and signal transmissions. Established market leaders in the industry, ***STEADY**TEC*® forms the foundation for reliable, application-orientated, standards-compliant solutions - for offices through to areas with harsh industrial conditions.

The objective: The development of reliable plug-in connector technologies for industrial applications. Technologies that satisfy the highest customer demands and hence enable new, specialised and dependable solutions.

The result: An extremely reliable, extraordinarily practical, flexible and especially efficient plug-in connector system for office and industrial applications. And using products whose characteristics accurately reflect the values originally laid out:

- **fast**
- **reliable**
- **solution-based**
- **simple**

The Ethernet connector system: clever – flexible

Connectors for modern industrial applications need to be designed in such a way that they simplify processes and cope with faster data transmission. Weidmüller's Ethernet connectors keep you a step ahead. These products are not only ready for 10 gigabit, they are also standardised for IEC 61076-3-106 and IEC 61076-3-117. In addition, the connector variants 4 (Ethernet TCP/IP), variants 5 and 1 (Ethernet IP) and variant 14 (PROFINET/AIDA) which are named in these standards are all specified as mandatory in the standards covering generic cabling systems for industrial premises: ISO/IEC 24702, IEC 61918 (Automation Island), as well as for Fieldbus installations IEC 61784-5. What's more, you have a unique choice of versions made of plastic or metal as well as inserts for copper and fibre-optic cabling.
All of the connectors are designed for ease of use and for quick on-site assembly. They are also modular and can be tailored to suit your application.

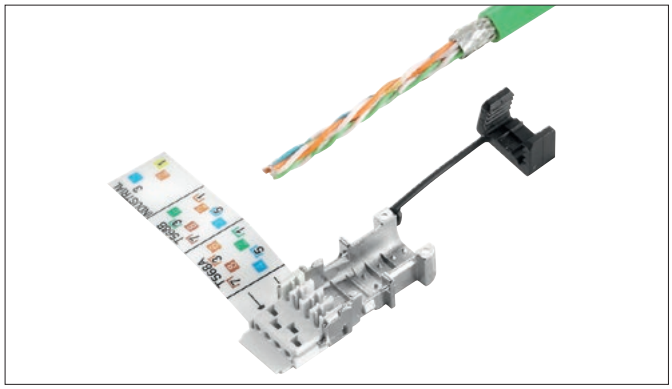


Tool-free assembly and powerful connections: the RJ45 gigabit connector!

You can now securely plug the connector you need directly into your machinery with very little effort – and without a single tool! The 10-gigabit connector, with IDC-connection, was developed to provide quick, simple, secure and, most importantly, tool-free wiring.
In addition, zinc die-casting makes the connector more robust and therefore suitable for industrial applications and as it is fitted with a protected locking clip means it is suitable for meeting the requirements of harsh industrial environments.
Weidmüllers IE product line fulfils the requirements for 10 GBit Ethernet, according to IEEE 802.3an, up to 500 MHz.

***STEADY**TEC*®: Systematic benefits**

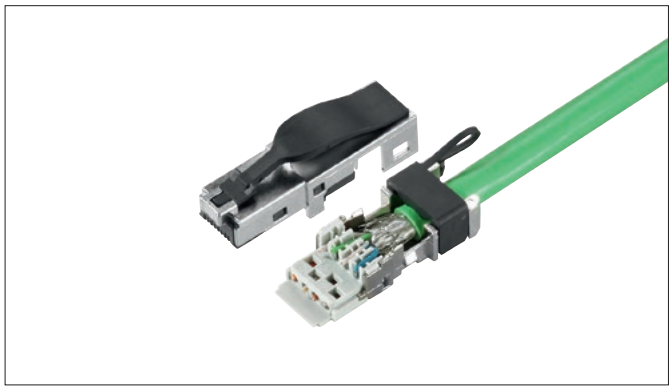
- **Cat. 6_A 10 GBit System Class E_A**
- **Assembly without tools in the field**
- **Countless variations thanks to highly diverse combinations of inserts**
- **Unrestricted compatibility because standardised to IEC 61076-3-106**
- **Reliable and long-lasting thanks to use of diecast zinc**
- **Suitable for industry thanks to IP67 class of protection**
- **Simple ordering procedure and low storage costs thanks to Weidmüller's modular system**



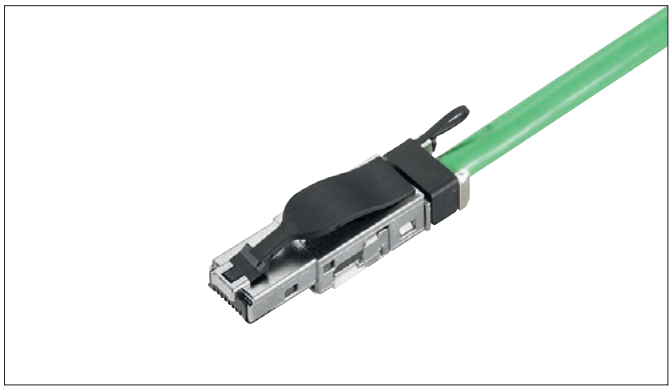
1. Strip sheath cladding and shorten shield to 5 mm



2. Prepare wires and shorten

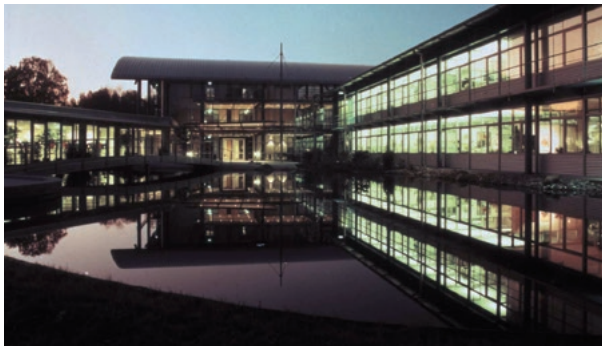


3. Snap together the two pluggable elements



4. Finished

From office communication to Industrial Ethernet
An overview of the differences

	Office Ethernet	Industrial Ethernet
		
Cabling	• Fixed building installation • Variable connection options • Pre-assembled connection cables • Star topology most widely in use	• Individual plant-influenced networks • Robust component characteristics • On-site, user assembly connections • Redundant network topologies (ring)
Transmission	• Large volume of data • Mid-level network availability • Mostly only acyclical transmission • No real-time characteristics required for standard applications	• Small data packets (measurement values) • Very high network availability • Extremely high real-time requirement • Mostly cyclical transmission
Surroundings	• No extreme conditions	• Extreme temperatures • Dust, dirt, splashing water, oils gases, • Vibration, electromagnetic fields • Risks of danger and damage from mechanical or chemical influences

Customised cabling solutions
for PROFINET and SERCOS III

Weidmüller's cabling products enable you to create a specific infrastructure that meets all the requirements of PROFINET and SERCOS III.

The cabling components for copper and fibre-optic cables are designed and tested for use in harsh industrial conditions. Interoperability in the system is assured by the PROFINET and SERCOS cabling guidelines that specifically prescribe the interfaces to be used. For PROFINET this is guaranteed through the manufacturer's declaration.

Comprehensive protection against disturbance by electromagnetic fields is achieved through the use of high quality shielding of the cables and the related connection components. Significant system reserves are offered through the star quad design of the cables and their wire cross-section of AWG 22. Stable real-time transmission is guaranteed, for applications such as PROFINET IRT or SERCOS III typical hardware synchronisation, by the low signal transmission time differences resulting from the cable construction. At the same time the cables offer high crush resistance for reliable installation in industrial applications.

The cabling components are also remarkably easy to handle when out in the field. The plug-in connectors for copper and fibre-optic can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.

PROFINET INDUSTRIAL ETHERNET

sercos the automation bus

Profile specific guidelines for the connection components

Cable:

- Quad-star design of AWG 22

Connector:

- IP20 RJ45
- IP20 SC-RJ
- IP67 PushPull RJ45
- IP67 PushPull Power
- IP67 PushPull SC-RJ
- IP67 M12 D-coding





Weidmüller offers you a wide range of cabling solutions for PROFINET and SERCOS III applications. IP20 plug-in connectors for copper and fibre-optic cables are also included as well as IP67 plug-in connectors and junction boxes for the toughest requirements. The components are designed to be used together from the floor distributors down to the machines.

IP20
plug-in connector



IP67
plug-in connectors data / power



IP67
connection components



IP20
assembled cables



IP20
mounting rail outlets



IP67
flanges data / power



IP67
assembled RJ45 cables



IP65
service interfaces



IP67
plug-in M12 connectors



IP67
assembled M12 cables



Raw cable
copper and fibre-optic



Selection table
Ideal combinations

IP20 plug-in connector



Description	Type	Order No.
RJ45 tool-free PROFINET printing	IE-PS-RJ45-FH-BK-P	1132060000
RJ45 tool-free angeld Profinet printing	IE-PS-RJ45-FH-90-P-1.6	1518100000
SC-RJ for POF fibres 1 mm	IE-PS-SCRJ1-POF	1206720000
SC-RJ for POF fibres 1 mm reconnectable	IE-PS-SCRJ1-POF-QA	2564950000

IP20 assembled data cables



Description	Type	Order No.
RJ45 patch cable PVC type B - 1 m	IE-C5DS4VG0010A60A60-E	1522100010
RJ45 patch cable PVC type B - 3 m	IE-C5DS4VG0030A60A60-E	1522100030
RJ45 patch cable PVC type B - 5 m	IE-C5DS4VG0050A60A60-E	1522100050
RJ45 patch cable PVC type B - 10 m	IE-C5DS4VG0100A60A60-E	1522100100
SC-RJ zipcord patch cable - POF - 1 m	IE-FPOZ2EE0001MSJOSJ0-X	1273430010
SC-RJ zipcord patch cable - POF - 3 m	IE-FPOZ2EE0003MSJOSJ0-X	1273430030
SC-RJ zipcord patch cable - POF - 5 m	IE-FPOZ2EE0005MSJOSJ0-X	1273430050
SC-RJ zipcord patch cable - POF - 10 m	IE-FPOZ2EE0010MSJOSJ0-X	1273430100
Further PROFINET cables - SERCOS III cables can be found in Chapter L		

IP20 mounting rail outlets



Description	Type	Order No.
RJ45 coupling	IE-TO-RJ45-C	8946920000
RJ45 coupling low profile	IE-TO-RJ45-C-LP	2812440000
RJ45 module PROFINET printing	IE-TO-RJ45-FJ-P	8946950000
SC-RJ POF coupling / multimode	IE-TO-SCRJ-MM	8946990000
SC-RJ singlemode coupling	IE-TO-SCRJ-SM	8947000000

IP65 service interface



Beschreibung	Type	Order No.
FrontCom® Micro RJ45 coupling	IE-FCM-RJ45-C	1018790000
FrontCom® Micro RJ45 module PROFINET printing	IE-FCM-RJ45-FJ-P	1018830000

IP67 flange data



Description	Type	Order No.
PushPull standard flange RJ45 coupling	IE-BSS-V14M-RJ45-C	1012310000
PushPull central cable gland RJ45 coupling	IE-BSC-V14M-RJ45-C	1058250000
PushPull standardised flange RJ45 module PROFINET printing	IE-BSS-V14M-RJ45-FJ-P	1085260000
PushPull standardised flange hybrid (Q10) 10-pole module without contacts	IE-BSS-V14M-HYB-10P-FJ	1072900000
Contacts for Hybrid (Q10) module 0.5 mm² - 0.75 mm² VPE 300	IE-BIC-HYB-P-0,75-300	1068970000
Contacts for Hybrid (Q10) module 0.2 mm² - 0.5 mm² VPE 300	IE-BIC-HYB-P-0,5-300	1096150000
PushPull standardised flange SC-RJ coupling POF / multimode	IE-BSS-V14M-SCRJ-MM-C	1058120000
PushPull standardised flange SC-RJ coupling singlemode	IE-BSS-V14M-SCRJ-SM-C	1058140000
PushPull central cable gland SC-RJ coupling POF / multimode	IE-BSC-V14M-SCRJ-MM-C	1062590000
PushPull central cable gland SC-RJ coupling singlemode	IE-BSC-V14M-SCRJ-SM-C	1062600000
PushPull device flange	IE-BHD-V14M	1047940000
other inserts can be found in Chapter J		

IP67 Power connectors



Description	Type	Order No.
PushPull Power with 24 V / 16 A use	IE-PS-VAPM-5P-2.5	2465440000
PushPull Power with 24 V / 16 A use with SNAP IN connection	IE-PS-VAPM-5P-2.5-QT	2912590000

IP67 flange power



Description	Type	Order No.
PushPull Power standardised flange with 24 V / 16 A use	IE-BSS-VAPM-24V	2493480000
PushPull Power device flange	IE-BHD-VAPM	2493490000

IP67 data connectors



Description	Type	Order No.
PushPull RJ45 tool-free module PROFINET printing	IE-PS-V14M-RJ45-FH-P	1012170000
PushPull RJ45 Crimp PROFINET	IE-PS-V14M-RJ45-TH-P	2768740000
PushPull Hybrid (Q10) 10-pole without contacts	IE-PS-V14M-HYB-10P	1072910000
PushPull SC-RJ POF 1 mm	IE-PS-V14M-2SC-POF	1191550000
PushPull SC-RJ POF 1 mm reconnectable	IE-PS-V14M-2SC-POF-QA	2568260000

IP67 assembled data cables



Description	Type	Order No.
PushPull RJ45 patch cable PUR - Type C - 1 m	IE-C5DD4UG0010A2EA2E-X	1119730010
PushPull RJ45 patch cable PUR - Type C - 3 m	IE-C5DD4UG0030A2EA2E-X	1119730030
PushPull RJ45 patch cable PUR - Type C - 5 m	IE-C5DD4UG0050A2EA2E-X	1119730050
PushPull RJ45 patch cable PUR - Type C - 10 m	IE-C5DD4UG0100A2EA2E-X	1119730100
Further PROFINET cables - SERCOS III cables can be found in Chapter L		

IP67 plug connector M12 D-coded and X-Type

M12 components can be found in Chapter J

IP65 connection components



Description	Type	Order No.
FreeCon passive double junction box RJ45/Power	IE-CD-V14MRJ/VAPM24V-FJ	1068830000
FreeCon passive single junction box RJ45	IE-CD-V14MRJ-FJ	1068880000
FreeCon passive single junction box Hybrid (Q10) without contacts	IE-CD-V14MHYB-10P-FJ	1068850000
FreeCon passive double coupling RJ45/Power	IE-CD-V14MRJ/VAPM24V-C-MA	1068820000
FreeCon passive single coupling RJ45	IE-CD-V14MRJ-C-MA	1068870000
FreeCon passive single coupling hybrid (Q10)	IE-CD-V14MHYB-10P-C-MA	1068840000
FreeCon PushPull Power Y-distributor	IE-CD-VAPM24V-Y-MA	1297010000
FreeCon PushPull Power single coupling	IE-CD-VAPM24V-C-MA	1397690000
FreeCon passive single coupling SCRJ	IE-CD-V14MSCRJ-MM-C-MA	1318150000

Media converter / repeater (only for PROFINET)



Description	Type	Order No.
FreeCon active FO PROFINET repeater II	IE-CDR-V14MSCPOF/VAPM-C II	2455360000
FreeCon active FO PROFINET media converter II	IE-CDM-V14MRJSCP/VAPM-C II	2588270000
FreeCon active PROFINET copper repeater	IE-CDR-V14MRJ/VAPM-C	2581810000

Raw cable copper cable



Description	Type	Order No.
100 m ring installation cable PVC type A	IE-C5AS4VG-100	8899000000
500 m ring installation cable PVC type A	IE-C5AS4VG-500	2763430000
100 m ring connection cable PVC type B	IE-C5DS4VG-100	8898990000
500 m ring connection cable PVC type B	IE-C5DS4VG-500	2763470000
100 m ring dragline cable PUR type C	IE-C5DD4UG-100	8899010000
500 m ring dragline cable PUR type C	IE-C5DD4UG-500	2763450000
500 m ring Torsion cable PUR type C	IE-C5IT4UG-500	2763520000
500 m ring hybrid cable PVC	IE-C5DHAG-500	2763460000

Raw cable fibre-optic cable



Description	Type	Order No.
500 m ring POF breakout cable 2X980/1000 µm TPE	IE-FPOD2UG-500	2763640000
500 m ring POF mini breakout cable 2X980/1000 µm PE	IE-FPOB2EG-500	2781950000

Customised cabling solutions
for Ethernet/IP

The wiring guidelines for EtherNet/IP clearly define the interfaces to be used to ensure interoperability in EtherNet/IP systems.

Weidmüller offers all the cabling products needed to build a requirement specific infrastructure which is tailored to the needs of EtherNet/IP.

The wiring components for copper and fibre-optic cables are designed and tested for use in harsh industrial environments. The user is provided with clear guidelines about the requirements of the components for use in industrial environments with the introduction of the MICE classification (EtherNet/IP Media Planning and Installation Manual).

The high-quality shielding of the cables and connection components offers comprehensive protection against electromagnetic interference.

The cables are 8-wire twisted-pair cables for RJ45 or star quad for use in M12.

The cabling components are also easy to handle in the field. The plug-in connectors for copper and fibre optic cables can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.

The connectors wire/pin assignment is either according to TIA568-A or TIA568-B as required. The connectors and modules are marked accordingly, making them easier to connect.

Profile specific guidelines for the connection components

Cable:

- 8-wire twisted-pair shielded cables

Connector:

- IP20 RJ45
- IP20 SC-RJ
- IP67 bayonet RJ45
- IP67 M12 D-coding





Weidmüller offers you a wide range of cabling solutions for EtherNet/IP applications. IP20 plug-in connectors for copper and fibre-optic cables are available, as well as IP67 connectors and junction boxes for the most exacting requirements. The components are designed to be used together from the floor distributors down to the machines.

IP20
plug-in connector



IP67
plug-in connectors data



IP67
connection components



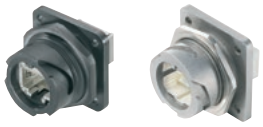
IP20
assembled cables



IP20
mounting rail outlets



IP67
flanges data / power



IP67
assembled RJ45 cables



IP65
service interfaces



IP67
plug-in M12 connectors



IP67
assembled M12 cables



Raw cable
copper and fibre-optic



Selection table
Ideal combinations for a perfect fit

IP20 plug-in connector



Description	Type	Order No.
RJ45 crimp	IE-PS-RJ45-TH-BK	1963590000
RJ45 tool-free TIA-A printing	IE-PS-RJ45-FH-BK-A	1132040000
RJ45 tool-free TIA-B printing	IE-PS-RJ45-FH-BK-B	1132050000
SC-RJ for 1 mm POF fibres	IE-PS-SCRJ1-POF	1206720000

IP20 assembled data cables



Description	Type	Order No.
RJ45 patch cables - see CabinetLine		
SC-RJ zipcord patch cable - POF - 1 m	IE-FPOZ2EE0001MSJOSJ0-X	1273430010
SC-RJ zipcord patch cable - POF - 3 m	IE-FPOZ2EE0003MSJOSJ0-X	1273430030
SC-RJ zipcord patch cable - POF - 5 m	IE-FPOZ2EE0005MSJOSJ0-X	1273430050
SC-RJ zipcord patch cable - POF - 10 m	IE-FPOZ2EE0010MSJOSJ0-X	1273430100
Other EtherNet/IP cables available on request		

IP20 mounting rail outlets



Description	Type	Order No.
RJ45 coupling	IE-TO-RJ45-C	8946920000
RJ45 Module TIA-A printing	IE-TO-RJ45-FJ-A	8946930000
RJ45 Module TIA-B printing	IE-TO-RJ45-FJ-B	8946940000
SC-RJ POF coupling / multimode	IE-TO-SCRJ-MM	8946990000
SC-RJ singlemode coupling	IE-TO-SCRJ-SM	8947000000

IP65 service interface



Description	Type	Order No.
FrontCom® Micro RJ45 coupling	IE-FCM-RJ45-C	1018790000
FrontCom® Micro RJ45 module TIA-A printing	IE-FCM-RJ45-FJ-A	1018810000
FrontCom® Micro RJ45 module TIA-B printing	IE-FCM-RJ45-FJ-B	1018820000

IP67 flange data



Description	Type	Order No.
Bayonet flange metal RJ45 coupling	IE-BS-V01M-RJ45-C	1963470000
Bayonet flange metal RJ45 module TIA-A printing	IE-BS-V01M-RJ45-FJ-A	1963480000
Bayonet flange plastic RJ45 coupling	IE-BS-V01P-RJ45-C	1012370000
Bayonet flange metal RJ45 module TIA-A printing	IE-BS-V01P-RJ45-FJ-A	1012380000
Bayonet flange metal SC-RJ POF / multimode	IE-BS-V01M-SCRJ-MM	1221010000
Bayonet flange metal SC-RJ singlemode	IE-BS-V01M-SCRJ-SM	1221020000
Other inserts can be found in Chapter J		

IP67 data connectors



Description	Type	Order No.
Bayonet plug metal RJ45 crimped	IE-PS-V01M-RJ45-TH	1963140000
Bayonet plug metal RJ45 tool-free	IE-PS-V01M-RJ45-FH	1963120000
Bayonet plug plastic RJ45 crimped	IE-PS-V01P-RJ45-TH	1012470000
Bayonet plug plastic RJ45 tool-free	IE-PS-V01P-RJ45-FH	1012490000
Bayonet plug metal SC-RJ use POF	IE-PS-V01M-2SC-POF	1963280000

IP67 assembled data cables



Description	Type	Order No.
Bayonet metal RJ45 patch cable PUR 1 m	IE-C5ES8UG0010B41B41-E	1066850000
Bayonet metal RJ45 patch cable PUR 2 m	IE-C5ES8UG0020B41B41-E	1066860000
Bayonet metal RJ45 patch cable PUR 5 m	IE-C5ES8UG0050B41B41-E	1066870000
Bayonet metal RJ45 patch cable PUR 10 m	IE-C5ES8UG0100B41B41-E	1066880000
Bayonet plastic RJ45 patch cable PUR 1 m	IE-C5ES8UG0010P41P41-E	1106010000
Bayonet plastic RJ45 patch cable PUR 2 m	IE-C5ES8UG0020P41P41-E	1106020000
Bayonet plastic RJ45 patch cable PUR 5 m	IE-C5ES8UG0050P41P41-E	1106030000
Bayonet plastic RJ45 patch cable PUR 10 m	IE-C5ES8UG0100P41P41-E	1106040000
Other EtherNet/IP cables available on request		

IP67 plug-in M12 connectors

M 12 components can be found in Chapter J

IP65 connection components



Description	Type	Order No.
Single junction box, plastic	IE-OP-V01P-1S	1061830000
Plastic cable coupling	IE-CC-V01P	1061820000
RJ45 module TIA-A printing	IE-BI-RJ45-FJ-A	1962850000
RJ45 module TIA-B printing	IE-BI-RJ45-FJ-B	1963840000

Raw cable copper cable



Description	Type	Order No.
100 m ring installation cable PVC Cat. 5 SF/UTP	IE-C5CS8VG-100	8813150000
500 m ring installation cable PVC Cat. 5 SF/UTP	IE-C5CS8VG-500	2763440000
100 m ring installation cable PUR Cat. 5 SF/UTP	IE-C5CS8UG-100	8813160000
500 m ring installation cable PUR Cat. 5 SF/UTP	IE-C5CS8UG-500	2762870000
100 m ring connection cable PVC Cat. 5 SF/UTP	IE-C5ES8VG-100	8813190000
500 m ring connection cable PVC Cat. 5 SF/UTP	IE-C5ES8VG-500	2763510000
100 m ring connection cable PUR Cat. 5 SF/UTP	IE-C5ES8UG-100	8813200000
500 m ring connection cable PUR Cat. 5 SF/UTP	IE-C5ES8UG-500	2763500000
Other EtherNet/IP cables available on request		

Raw cable fibre-optic cable



Description	Type	Order No.
500 m ring POF breakout cable 2X980/1000 µm TPE	IE-FPOD2UG-500	2763640000
500 m ring POF mini breakout cable 2X980/1000 µm PE	IE-FPOB2EG-500	2781950000

Single Pair Ethernet (SPE)

Single Pair Ethernet (SPE)	Overview	J.2
	Raw cable	J.16
	Connection components	J.18
	Ethernet-APL	J.22

Single Pair Ethernet
New SPE Connectivity for Industry

In the factory of the future, machines and systems will be seamlessly connected through a data infrastructure. These cyber-physical systems can operate autonomously within the Industrial Internet of Things (IIoT), communicate in real time, and control production processes. To enable this, an end-to-end network with high-performance data connections from the sensor to the cloud is required. This pushes conventional communication systems to their limits.

Single Pair Ethernet (SPE) extends Ethernet technology all the way to the sensor level. SPE is compact, flexible, and enables long transmission distances. It allows the expansion of existing installations and supports seamless communication based on the Ethernet protocol. For Weidmüller, SPE is therefore the missing building block for closing today's gap between the standard Ethernet network and the field level.

SPE does not define new transmission speeds through its two-wire technology. Instead, it provides the standardized framework for application-specific, simplified Ethernet cabling using data cables up to 1,000 m in length. Together with technologies such as TSN, OPC UA, PROFINET over SPE, and EtherNet/IP, SPE enables both continuous IP communication between servers and the cloud as well as power transmission in complex IIoT solutions.



SPE Single Pair Ethernet Association

The Single Pair Ethernet Association was formed through the merger of the former Single Pair Ethernet System Alliance and the SPE Industrial Partner Network. As an open consortium, it brings together leading technology companies and research institutions from various industries and fields of application.
Manufacturers of sensors, cables, connectors, measuring instruments, semiconductors, switches, and end devices are working together to establish SPE solutions for a wide range of applications.

New, uniform SPE connector face

A new standard for all applications

The user organization PROFIBUS & PROFINET International (PI), in which electrical connectivity expert Weidmüller is actively involved as one of more than 1,800 members, has established a unified mating face for Single Pair Ethernet (SPE) based on key application requirements. Through its core technologies such as IO-Link and PROFINET, PI is responsible for the development of market-leading, open standards for all areas of industrial production. By agreeing on a unified mating face for PROFINET over SPE, the industry is now taking a decisive step toward the future.

The new SPE connector system is defined in IEC 63171-7 ED2 and provides a unified mating face for applications in control cabinets, in the field, and for hybrid installations. As a result, this standard is increasingly becoming the key connector standard for Single Pair Ethernet in industrial automation and beyond. It defines a unified mating face for IP20, M8, M12, and M12 hybrid applications and has already been adopted as a reference in IEC 61158-2-100 for Ethernet SPE and Ethernet-APL. In addition, it is referenced in other important industrial communication standards, including IEC 61784-1, IEC 61784-2, IEC 61784-5, as well as the PROFINET installation guideline.

IEC 63171-7 ED2 therefore provides the foundation for vendor-independent interoperability and a globally standardized SPE infrastructure. As a key driver of this technology, Weidmüller will expand its product portfolio with solutions featuring the new mating face.



First products compliant with IEC 63171-7 Ed.2 available after publication of the standard

Versatile use in different applications
SPE applications in practice

SPE solutions are particularly well suited for infrastructures in machinery and plant engineering, process industries, and building infrastructure. In other words, wherever data must be transmitted seamlessly over longer distances. Field devices, sensors, and actuators can be integrated directly into an existing Ethernet environment using SPE, without the need for additional gateways or interfaces.

Examples of SPE applications in buildings:
- Building automation systems
- Lighting systems
- Elevator and escalator control systems
- Monitoring systems
- Access control systems
- Safety and fire alarm systems

Examples of industrial applications:
- Industrial automation
- Process automation
- Robotics
- Machinery and plant engineering
- Material handling
- Quality control
- Agricultural machinery technology

Factory Automation



Building Infrastructure



Process Automation



Intrinsically safe process industry with Ethernet-APL



New SPE Connectivity for Industry

A Standardized Connector System for PROFINET over SPE

Unified SPE mating face according to IEC 63171-7
The harmonized mating face for IP20, M8, M12, and M12 hybrid applications unlocks all the benefits of Single Pair Ethernet: interoperability, vendor independence, and future readiness. It reduces planning risks, simplifies integration, and accelerates deployment. Start planning today with Weidmüller as your trusted partner.

The standard for PROFINET over SPE – supported across the industry
For PROFINET over SPE, the mating face specified in IEC 63171-7 Ed.2 has already been defined as the standard in the applicable guidelines. This provides clear guidance for device and machine manufacturers. At the same time, PI, ODVA, the OPC Foundation, and FieldComm Group are driving consistent SPE standardization in a joint working group, including PoDL power classes and suitable connector systems, to ensure interoperable, vendor-independent solutions from the field level to IT systems.

Universal connectivity – integration into the IEC 61158 series
The integration of SPE into the IEC 61158 series is underway. As a result, the mating face is being universally adopted in future fieldbus specifications and is becoming increasingly important for all user organizations, including PROFINET International, ODVA, the OPC Foundation, and FieldComm Group.



The new standard for high demands
Single Pair Ethernet connectors for the industry

Single Pair Ethernet (SPE) connections can transmit both data and power over a single twisted pair. This enables seamless IP communication from the server to the cloud, while also providing power delivery for complex IIoT solutions. As a result, SPE connectors offer an efficient and future-oriented connectivity solution.

Market requirements for data connectors at the field level include:
- Ultra-compact design for the implementation of IIoT devices
- High robustness for use in industrial environments
- Simple connectivity for safe and fast installation
- Future-proof design based on international standards

Advantages of SPE connectors at a glance:

Miniaturisation **Industrial suitability**



Simplicity **Future-proof**

Particularly compact

Miniaturisation of Single Pair Ethernet connectors according to IEC 63171-7

The SPE connector faceplate, compliant with IEC 63171-7, offers compact solutions for Single Pair Ethernet (SPE) applications. It saves up to 33% space compared to RJ45 interfaces. This allows device manufacturers to save valuable space on the printed circuit board and build smaller devices. This reduces port costs in device manufacturing and effectively saves space in the control cabinet.

Compact Mating Face
- Market-leading compact SPE mating face

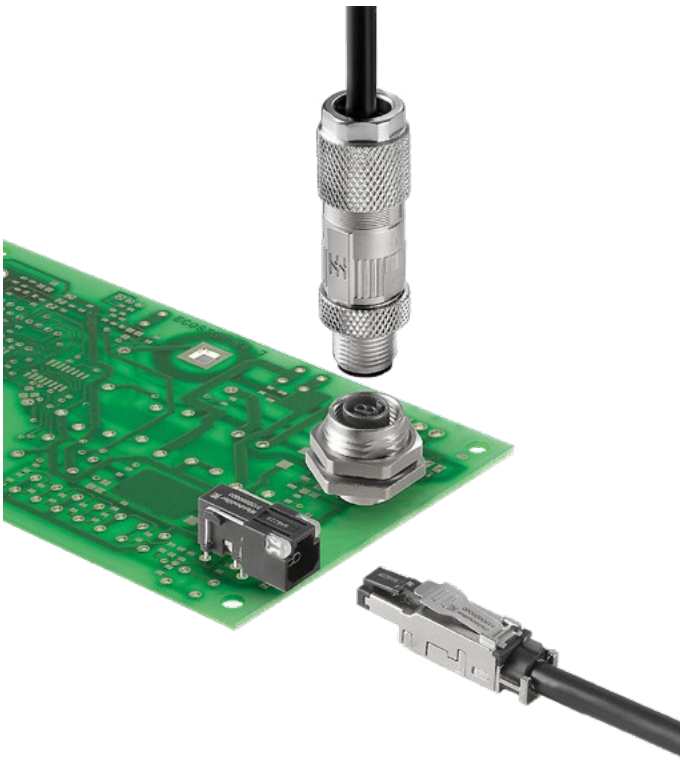
High Port Density
- More compact PCB integration thanks to the smaller mating face
- More interfaces within the same device footprint
- 33% less PCB area compared to a standard RJ45 jack
- Only 67% of the area required by a standard RJ45 enables more ports per PCB
- Minimal space requirements inside the device
- Simplified PCB layout
- Only two signal conductors instead of four pairs reduce routing complexity
- Compact design enables flexible module and device configurations
- Reduced material consumption



Made for highest demands

The industrial suitability of Single Pair Ethernet connectors

The development of SPE technology was driven by the automotive industry. The original driver behind the development of Single Pair Ethernet (SPE) technology was the automotive industry. The goal was to create highly efficient cabling infrastructures. In the future, all industrial sectors can benefit from the SPE standard. Weidmüller SPE connectors are particularly robust and vibrationresistant. They are highly immune to electromagnetic interference and have been specifically designed to meet the demanding requirements of industrial applications.



Mechanical Robustness

- Robust metal housing with metal locking latch
- Reliable industrial dual-contact design compared to the single-contact design of RJ45
- Shock-resistant and vibration-resistant according to IEC 60068
- Secure locking mechanism under lateral forces

EMC Compatibility

- Coupling attenuation at 600 MHz according to IEEE 802.3
- Optimized shield connection to the PCB through four symmetrical contact legs
- Additional burst testing according to IEC 61000-6-2

Industrial suitability

- PCB connectors for environments up to Pollution Degree 2
- Impulse voltage withstand capability of 2.25 kV according to IEEE 802.3
- Optimized contact spacing for 100-ohm systems
- The SPE mating face according to IEC 63171-7 ED2 provides compact solutions for Single Pair Ethernet (SPE) applications. It saves up to 33% installation space compared to RJ45 interfaces. This enables device manufacturers to reduce the required PCB space and design more compact devices. As a result, port costs can be reduced and valuable cabinet space can be used more efficiently.

Easy to use
Ease of Use of Single Pair Ethernet Connectors

Ethernet technology is too complex for many industrial applications. Thanks to their simplicity, Single Pair Ethernet (SPE) components offer significant advantages. Compared to four-pair Ethernet, installation is easier and enables substantial reductions in both space and weight. In addition, SPE connectors support robust cabling in a short amount of time while providing long transmission distances in an extremely compact form factor.



Proven Locking Mechanism
- Industrial-grade plugs and sockets with metal latch locking mechanism
- Familiar locking and unlocking mechanism based on the RJ45 standard
- High retention force (> 50 N)



Tool-Free Connection
- Proven IDC termination technology
- Easy assembly thanks to the two-piece connector design
- Clear color coding to prevent wiring errors
- Suitable for all commercially available SPE cables





Ready for the challenges of tomorrow
Future-Proof Design of SPE Connectors

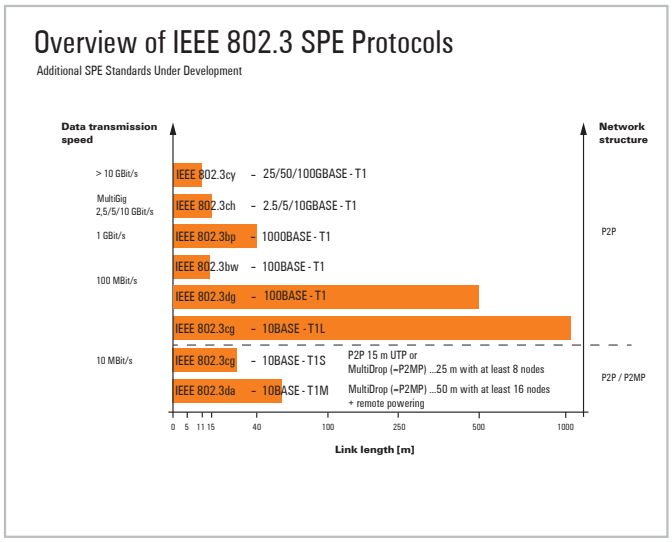
SPE Is the Next Milestone in Networking Technology. SPE enables seamless intelligent connectivity across all levels of automation. It is scalable, deterministic, and fully compatible, allowing all components to communicate with one another. As a key enabling technology for Industry 4.0 and IIoT applications, it will form the foundation for a wide range of industrial applications in the future.

Broad Industry Support

The SPE product family is already supported by several leading connector manufacturers. In addition, partnerships have been established with leading technology companies from various markets and application areas that have joined forces in the Single Pair Ethernet System Alliance. This ensures broad technological expertise that will provide long-term benefits for all users.

Suitable for Low to High Data Rates

The compact SPE interface is suitable for a wide range of Ethernet applications with data rates from 10 Mbit/s to 1 Gbit/s. Simulations have confirmed bandwidths of up to 2.5 GHz, corresponding to the new IEEE 802.3ch Ethernet transmission standard, which is being developed for data rates of up to 10 Gbit/s.





Single Pair Ethernet Solutions acc. to IEC 63171-2 and -5
Ordering data

Switches

	Type	Versions	Qty.	Order No.
	IE-SW-SPE05-4T1LMPODL-1TX	Network switch, unmanaged, Fast Ethernet, 10BaseT1L, Number of ports: 1x RJ45, 4x SPE port acc. to IEC 63171-2, IP30	1	3012120000
Note:	Shown products are acc. to IEC 63171-2 and -5. First products compliant with IEC 63171-7 will be available after the standard is published.			

SPE cabling

	Type	Versions	Qty.	Order No.
	IE-S1DS2VE0010T02T02-E	Patch cable, IP 20, Female-Female, 1m	1	3123990010
	IE-S1DS2VE0020T02T02-E	Patch cable, IP 20, Female-Female, 2m	1	3123990020
	IE-S1DS2VE0030T02T02-E	Patch cable, IP 20, Female-Female, 3m	1	3123990030
	IE-S1DS2VE0050T02T02-E	Patch cable, IP 20, Female-Female, 5m	1	3123990050
	IE-S1DS2VE0020TM1TM1-E	Other lengths in the online catalogue and on request	1	2726050020
	IE-S1DS2VE0050TM1TM1-E	Patch cable overmoulded, M8 IP 67, Female-Female, 5m	1	2726050050
	IE-S1DS2VE0100TM1TM1-E	Patch cable overmoulded, M8 IP 67, Female-Female, 10m	1	2726050100
	IE-S1DS2VE0150TM1TM1-E	Patch cable overmoulded, M8 IP 67, Female-Female, 15m	1	2726050150
	IE-S1DS2VE0020TM1TM2-E	Patch cable overmoulded, M8 IP67, Female-Male, 2m	1	2726060020
	IE-S1DS2VE0020TM2TM2-E	Patch cable overmoulded, M8 IP67, Male-Male, 2m	1	2726070020
Note:	Shown products are acc. to IEC 63171-2 and -5. First products compliant with IEC 63171-7 will be available after the standard is published. Other lengths in the online catalogue and on request			

Connecting components

	Type	Versions	Qty.	Order No.
	IE-PS-SP0-S-FH-180	Field attachable plug IP20, Female	1	2726040000
	IE-BI-SP0-C	SPE IP20 coupling, Male, for installation in service interface FrontCom® Vario	1	2861260000
	IE-FCM-SP0-C	FrontCom® Micro Service interface IP65 with SPE coupling, Male	1	2870820000
	IE-TO-SP0-C-LP	DIN rail outlets IP20 with SPE coupling, Male	1	2870790000
Note:	Shown products are acc. to IEC 63171-2 and -5. First products compliant with IEC 63171-7 will be available after the standard is published.			

PCB components

	Type	Versions	Qty.	Order No.
	LM SPE 5.08/02/135 3.5SN OR BX	PCB terminal block, 5.08 mm, number of poles: 2, 135°, Tension clamp connection connection	500	**3089370000**
	LM SPE 5.08/03/135 3.5SN OR BX	PCB terminal block, 5.08 mm, number of poles: 3, 135°, Tension clamp connection connection	500	**3089380000**
	LSF-SMT SPE 3.50/02/135 3.5SN BK TU	PCB terminal block, 3.50 mm, number of poles: 2, 135°, PUSH IN	71	**3077550000**
	LSF-SMT SPE 3.50/03/135 3.5SN BK TU	PCB terminal block, 3.50 mm, number of poles: 3, 135°, PUSH IN	49	**3077560000**
	LSF-SMT SPE 5.00/02/135 3.5SN BK TU	PCB terminal block, 5.00 mm, number of poles: 2, 135°, PUSH IN	60	**3077570000**
	LSF-SMT SPE 5.00/03/135 3.5SN BK TU	PCB terminal block, 5.00 mm, number of poles: 3, 135°, PUSH IN	39	**3077630000**
	MTS SPE 5/02 H T4 B T	PCB terminal block, 5.00 mm, number of poles: 2, 90°, SNAP IN	44	**3095900000**
	MTS SPE 5/03 H T4 B T	PCB terminal block, 5.00 mm, number of poles: 3, 90°, SNAP IN	31	**3095910000**
	MTS SPE 5/02 V T4 B T	PCB terminal block, 5.00 mm, number of poles: 2, 180°, SNAP IN	44	**3095920000**
	MTS SPE 5/03 V T4 B T	PCB terminal block, 5.00 mm, number of poles: 3, 180°, SNAP IN	31	**3095980000**
Note:	Shown products are acc. to IEC 63171-2 and -5. First products compliant with IEC 63171-7 will be available after the standard is published.			

Single Pair Ethernet Solutions acc. to IEC 63171-7
Ordering data

Connecting components

	Type	Versions	Qty.	Order No.
	IE-PS-SP0-S-FH-2-180	Field attachable plug IP20, Male	1	**3150000000**

Note:

PCB components

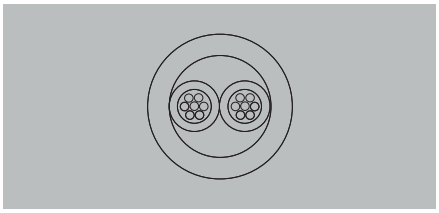
	Type	Versions	Qty.	Order No.
	SPE P20 R1H 2.1 6 N/N TU	PCB connector, IP20, 90°, THR, female contact, Tube	62	**3150600000**
	SPE P20 R1H 2.1 6 N/N RL	PCB connector, IP20, 90°, THR, female contact, Tape-on-Reel	100	**3234500000**
	SPE P20 R1H 2.1 6 YG/YG TU	PCB connector, IP20, 90°, LED, THR, female contact, Tube	62	**3150590000**
	SPE P20 R1H 2.1 6 YG/YG RL	PCB connector, IP20, 90°, LED, THR, female contact, Tape-on-Reel	100	**3234510000**
	SPE M12F DD RV 2.0 6 TY	PCB connector, Dome, M12, IP67, 180°, THR, female contact, Tray	10	**3180870000**
	SPE M12F DC BPM16 RV 2.0 6 TY	M12 PCB connector, IP67, rear panel mounting, 180°, THR, female contact, Tray	10	**3228140000**
	SPE M12F DC FPM16 RV 2.0 6 TY	M12 PCB connector, IP67, rear panel mounting, 180°, THR, female contact, Tray	10	**3228130000**
	LM SPE 5.08/02/135 3.5SN OR BX	PCB terminal, 5.08 mm, number of poles: 2, 135°, clamping yoke	500	**3089370000**
	LM SPE 5.08/03/135 3.5SN OR BX	PCB terminal block, 5.08 mm, number of poles: 3, 135°, clamping yoke	500	**3089380000**
	LSF-SMT SPE 3.50/02/135 3.5SN BK TU	PCB terminal, 3.50 mm, number of poles: 2, 135°, PUSH IN	71	**3077550000**
	LSF-SMT SPE 3.50/03/135 3.5SN BK TU	PCB terminal, 3.50 mm, number of poles: 3, 135°, PUSH IN	49	**3077560000**
	LSF-SMT SPE 5.00/02/135 3.5SN BK TU	PCB terminal, 5.00 mm, number of poles: 2, 135°, PUSH IN	60	**3077570000**
	LSF-SMT SPE 5.00/03/135 3.5SN BK TU	PCB terminal, 5.00 mm, number of poles: 3, 135°, PUSH IN	39	**3077630000**
	MTS SPE 5/02 H T4 B T	PCB terminal, 5.00 mm, number of poles: 2, 90°, SNAP IN	44	**3095900000**
	MTS SPE 5/03 H T4 B T	PCB terminal, 5.00 mm, number of poles: 3, 90°, SNAP IN	31	**3095910000**
	MTS SPE 5/02 V T4 B T	PCB terminal, 5.00 mm, number of poles: 2, 180°, SNAP IN	44	**3095920000**
	MTS SPE 5/03 V T4 B T	PCB terminal, 5.00 mm, number of poles: 3, 180°, SNAP IN	31	**3095980000**
Note:	First products compliant with IEC 63171-7 ED2 will be available after the standard is published.			

Raw cables

- AWG 22

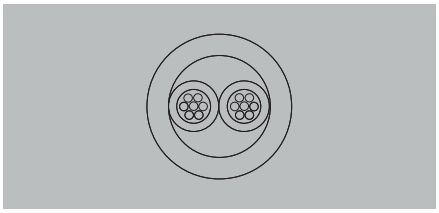
PUR





LSZH





Technical data

	PUR	LSZH
Product type	System cable	System cable
Category	T1-B	T1-B
Shielding	S/FTP	S/FTP
Cross-section	1 x 2 x AWG 22/7 - 0.35 mm²	1 x 2 x AWG 22/7 - 0.35 mm²
Sheath diameter, max.	5.3 mm	5.1 mm
Material sheath	PUR	LSZH
Sheathing colour	black	black
Insulation diameter	1.7 mm	1.7 mm
Min. bending radius, repetitive	56 mm	56 mm
Min. bending radius, once only	22 mm	22 mm
Ambient temperature (operational)	-40 °C...80 °C	-20 °C...60 °C
Installation temperature	...	...
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1
Resistance to spread of flame	in accordance with IEC 60332-1-2	in accordance with IEC 60332-1-2
Approvals		
Note		

Ordering data

	PUR			LSZH		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
100.0 m	IE-S1DS2UE-100	1	**2926110000**	IE-S1DS2LE-100	1	**2926120000**
500.0 m	IE-S1DS2UE-500	1	**2924340000**	IE-S1DS2LE-500	1	**2924350000**
Note						

Accessories

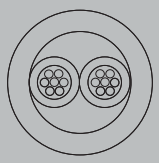
	PUR			LSZH		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Note						

Raw cables

- AWG 26

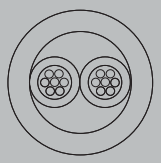
PUR





LSZH





Technical data

	PUR	LSZH
Product type	System cable	System cable
Category	T1-B	T1-B
Shielding	S/FTP	S/FTP
Cross-section	1 x 2 x AWG 26/7 - 0.132 mm²	1 x 2 x AWG 26/7 - 0.132 mm²
Sheath diameter, max.	3.7 mm	4.3 mm
Material sheath	LSZH	PUR
Sheathing colour	black	black
Insulation diameter	1.15 mm	1.15 mm
Min. bending radius, repetitive	56 mm	56 mm
Min. bending radius, once only	28 mm	28 mm
Ambient temperature (operational)	-20 °C...60 °C	-40 °C...80 °C
Installation temperature	...	...
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1	halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in accordance with IEC 60332-1-2	in accordance with IEC 60332-1-2
Approvals		
Note		

Ordering data

	PUR			LSZH		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
100.0 m	IE-S1ES2LE-100	1	**2926140000**	IE-S1ES2UE-100	1	**2926130000**
500.0 m	IE-S1ES2UE-500	1	**2924360000**	IE-S1ES2LE-500	1	**2924370000**
Note						

Accessories

	PUR			LSZH		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Note						

Plug

- Only one pair of wires for data and power
- Multi-port capable
- IP20
- in accordance with IEC 63171-7 ED2

Field-terminated plug IP20

Male contact



Technical data

Category	T1-B
Protection degree	IP20
Transmission rate	10/100 MBit/s, 100 MBit/s
Ambient temperature (operational)	-25...85 °C
Plugging cycles	750
Housing main material	zinc diecast nickel-plated
Contact material	Bronze tin-plated
Contact surface	Gold-plated
Nominal current	
Connection diameter, flexible, min. / max.	...
Connection cross-section, flexible, min. / max.	AWG 26...AWG 22
Connection diameter, solid, min. / max.	...
Connection cross-section, solid, min. / max.	...
Sheath diameter, min. / max.	3.6...5.5 mm
Insulation cross-section, min.	0.85 mm
Insulation cross-section, max.	1.6 mm
Insulation resistance	≥ 500 MΩ
PoE / PoE+	PoDL acc. to IEEE 802.3bu / cg
Dielectric strength, contact / contact	≥ 1000 V DC
Dielectric strength, contact / shield	2250 V DC
Connector standard	IEC 63171-7
UL 94 flammability rating	V-0

Note

Ordering data

Plug		Type	Qty.	Order No.
field-terminated plug		IE-PS-SP0-S-FH-2-180	1	3150000000

Note

Accessories

Type	Qty.	Order No.

Note

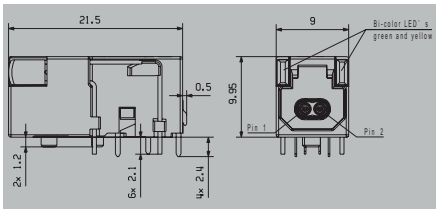
PCB socket IP20

- Integrated shielding
- Only one pair of wires for data and power
- Multi-port capable
- Robust locking mechanism
- Shock and vibration proof
- Most compact design

Socket, 90°

Female contact

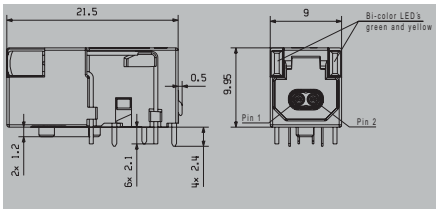




Socket, 90°, incl. LED

Female contact





Technical data

Category	CAT B (ISO/IEC 63171)	CAT B (ISO/IEC 63171)
Protection degree	IP20	IP20
Ambient temperature (operational)	-40…85 °C	-40…85 °C
Transmission rate	10/100/1000 MBit/s	10/100/1000 MBit/s
Type of connection	Solder connection	Solder connection
Outgoing elbow	90°	90°
Number of poles	2	2
Mounting onto the PCB	THT/THR solder connection	THT/THR solder connection
Plugging cycles	750	750
Contact material	Cu-alloy	Cu-alloy
Contact surface	Ni/Au	Ni/Au
Nominal voltage	72 V	72 V
Rated current		
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
PoE / PoE+	PoDL acc. to IEEE 802.3bu / cg	PoDL acc. to IEEE 802.3bu / cg
Dielectric strength, contact / contact	1000 V DC	1000 V DC
Dielectric strength, contact / shield	2250 V DC	2250 V DC
Connector standard	IEC 63171-7 ED2	IEC 63171-7 ED2
UL 94 flammability rating	V-0	V-0
Note		

Ordering data

	Type	Qty.	Order No.
PCB connector, IP20, socket contact, tube	SPE P20 R1H 2.1 6 N/N TU	62	**3150600000**
PCB connector, IP20, socket contact, tape-on-reel	SPE P20 R1H 2.1 6 N/N RL	100	**3234500000**
Note			

	Type	Qty.	Order No.
	SPE P20 R1H 2.1 6 YG/YG TU	62	**3150590000**
	SPE P20 R1H 2.1 6 YG/YG RL	100	**3234510000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

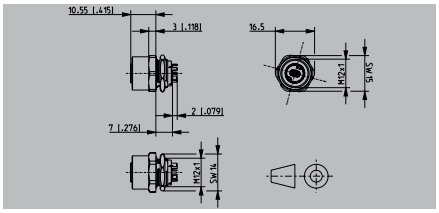
PCB socket, panel mount

- One-piece design with fixing flange
- 180° (vertical)
- Shield contacts integrated
- Only one pair of wires for data and power
- Shock and vibration proof
- Most compact design

M12 socket, front panel mounting

Female contact

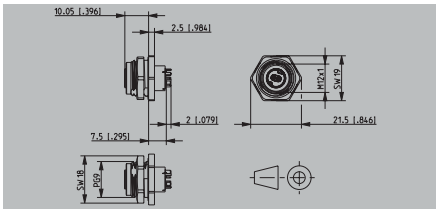




M12 socket, rear panel mounting

Female contact





Technical data

Category	T1-B	T1-B
Ambient temperature (operational)	-40...85 °C	-40...85 °C
Protection degree	IP67 with housing	IP67 with housing
Pollution severity		
Connection thread		
Number of poles	2	2
Type of connection	Socket connector	Socket connector
Outgoing elbow	180°	180°
Contact material	CuZn	CuZn
Contact surface	Ni/Au	Ni/Au
Contact carrier material	PA	PA
Operational voltage range	≤ 50 V AC, ≤ 60 V DC	≤ 50 V AC, ≤ 60 V DC
Rated current		
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ
Dielectric strength, contact / contact	1000 V DC	1000 V DC
Dielectric strength, contact / shield	2250 V DC	2250 V DC
Connector standard	IEC 63171-7 ED2	IEC 63171-7 ED2
UL 94 flammability rating	V-0	V-0
Note		

Ordering data

	Type	Qty.	Order No.
Tray	SPE M12F DC FPM16 RV 2.0 6 TY	1000	3228130000
Note	Product compliant with IEC 63171-7 ED2 will be available after the standard is published.		

	Type	Qty.	Order No.
	SPE M12F DC BPM16 RV 2.0 6 TY	1000	3228140000
	Product compliant with IEC 63171-7 ED2 will be available after the standard is published.		

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

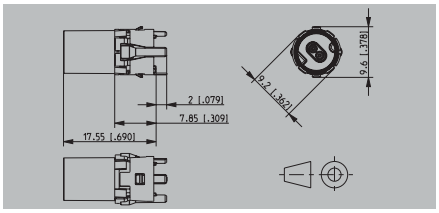
PCB socket insert IP67

- Without fixing flange
- 180° (vertical)
- Shield contacts integrated
- Only one pair of wires for data and power
- Shock and vibration proof
- Most compact design

M12 socket

Female contact





Technical data

Category	T1-B
Ambient temperature (operational)	-40...85 °C
Protection degree	IP67 with housing
Pollution severity	
Connection thread	
Number of poles	2
Type of connection	Socket connector
Outgoing elbow	180°
Contact material	CuZn
Contact surface	Ni/Au
Contact carrier material	PA
Operational voltage range	≤ 50 V AC, ≤ 60 V DC
Rated current	
Insulation resistance	≥ 100 MΩ
Dielectric strength, contact / contact	1000 V DC
Dielectric strength, contact / shield	2250 V DC
Connector standard	IEC 63171-7 ED2
UL 94 flammability rating	V-0

Note

Ordering data

	Type	Qty.	Order No.
THR, Tape-on-Reel	SPE M12F DD RV 2.0 6 TY	10	3180870000

Note

Product compliant with IEC 63171-7 ED2 will be available after the standard is published.

Accessories

Type	Qty.	Order No.

Note

Ethernet-APL

The two-wire solution for the process industry

Ethernet-compatible interfaces are increasingly needed in the process industry to access data from the field via IIoT. More and timely information is required from sensors and devices, even over long distances. This requires the integration of IIoT devices into the network infrastructure.

Ethernet-APL as an internationally standardised two-wire solution enables direct access right down to the field and device level. This leads to increased system availability and access to production data.

Advantages of Ethernet-APL

- High data rates: 10 Mbit/s communication with ranges of up to 1,000 m in accordance with IEEE 802.3cg-2019.
- PoDL (Power over data line): Supports remote power supply in accordance with IEEE 802.3bu.
- Direct connection to field devices: Integration of sensors and actuators.
- Scalability: Ideal for networking small to large industrial systems.
- Increased system availability through information on individual devices.
- No gateway required between field and company IT.

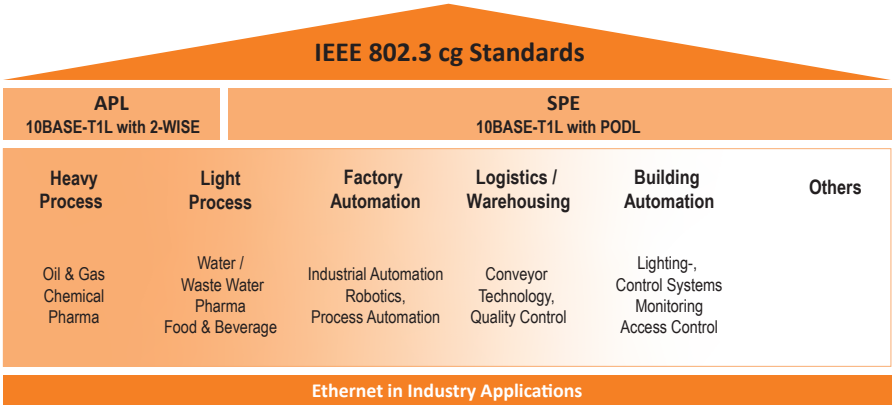




Ethernet-APL and Single Pair Ethernet in comparison

What is the difference between APL and SPE?

While SPE primarily addresses industrial factory automation and building infrastructure, APL is aimed at the process industry with consideration of additional intrinsic safety for use in explosion-protected areas



	Ethernet-APL	Single Pair Ethernet
Technology	Two-wire technology	Two-wire technology
Ethernet Standards	10BASE-T1L, IEC TS 60079-47 (2-WISE)	10BASE-T1S, 10BASE-T1L, 100BASE-T1, 1000BASE-T1
Data transmission	10 Mbit/s	10 Mbit/s up to 10 Gbit/s
Power Transmission	2-WISE (2-Wire Intrinsically Safe Ethernet) power supply limits current in hazardous areas, supports various power levels, and minimizes sparking.	PoDL (Power over Dataline) transmits up to 50W over a single pair
Cable / conductor length	Up to 1,000 m	15 to 1,000 m
Main application	Process industry	Factory automation and building infrastructure
Special features	The extension of the 10BASE-T1L standard in accordance with IEEE 802.3cg includes additional safety precautions that are specially tailored to the needs of the process industry in potentially explosive atmospheres.	Miniaturisation, industrial suitability, simplicity, future-proofing
Connection technology	Classic terminal blocks with screw or tension spring connection, like Omnimate® PCB components, built-in and field-attachable connectors (M12).	Connectors with miniaturised mating faces, patch cables, field attachable plugs, M8 adapters as well as IP20 and IP67 sockets in different outlet directions.



Ethernet-APL solutions
Ordering data

PCB components

	Type	Versions	Qty.	Order No.
	LMF APL 5.00/03/180 3.5SN BX	PCB terminal block, 5.00 mm, number of poles: 3, 180°, PUSH IN	90	**2873470000**
	LMF APL 5.00/03/90 3.5SN BX	PCB terminal block, 5.00 mm, number of poles: 3, 90°, PUSH IN	90	**2873480000**
	LM APL 5.08/03/135 3.5SN OR BX	PCB terminal block, 5.08 mm, number of poles: 3, 135°, tension clamp connection	500	**2873490000**
	LM APL 5.08/03/90 3.5SN OR BX	PCB terminal block, 5.08 mm, number of poles: 3, 90°, tension clamp connection	500	**2873500000**
	BLZP APL 5.00HC/03/180F SN OR BX	PCB connector, female connector, 5.00 mm, number of poles: 3, 180°, tension clamp connection	72	**2872550000**
	MPS APL 5/03 S F2 TN B B D D	PCB connector, female connector, 5.00 mm, number of poles 3, 180°, SNAP IN	114	**8000094097**



M12 connectors

	Type	Versions	Qty.	Order No.
	SAIBM-4/8S-M12 4P A-ZF	Field attachable plug connector, M12, socket, straight	1	**1784740002**
	SAISM-4/8S-M12 4P A-ZF	Field attachable connector, M12, male, straight	1	**1304280000**
	SAIE-M12S-4-0.5U-PG9	Built-in connector, M12, male, straight, mounting thread: PG 9, number of poles: 4, wire/cable length: 0.5 m, front panel mounting	1	**1861220000**
	SAIE-M12B-4-0.5U-PG9	Built-in plug, M12, female, straight, mounting thread: PG 9, no. of poles: 4, wire/cable length: 0.5 m, front panel mounting	1	**1861250000**

Accessories

	Type	Versions	Qty.	Order No.
	SH ETH U	Shielding bracket, accessories, screw flange, galvanised, silver-grey, box	25	**2903230000**





IP20 plug-in connectors and mounting rail outlets
Overview

IP20 plug-in connectors and mounting rail outlets	IP20 plug-in connectors		
		Single Pair Ethernet (SPE) plug	K.2
		RJ45 plug	K.4
		FO Connector	K.10
		RJ45 keystone	K.11
	IP20 mounting rail outlets		
		RJ45	K.13
		RJ45 and RJ12 Counter installation (Smart Metering)	K.16
		USB	K.18
		FO	K.19
		Socket adapter	K.21

Single Pair Ethernet (SPE) plug

- Only one pair of wires for data and power
- Multi-port capable
- IP20
- in accordance with IEC 63171-7 ED2

Field-terminated plug IP20

Male contact



Technical data

Category	T1-B
Protection degree	IP20
Transmission rate	10/100 MBit/s, 100 MBit/s
Ambient temperature (operational)	-25...85 °C
Plugging cycles	750
Housing main material	zinc diecast nickel-plated
Contact material	Bronze tin-plated
Contact surface	Gold-plated
Nominal voltage	
Connection diameter, flexible, min. / max.	...
Connection cross-section, flexible, min. / max.	AWG 26...AWG 22
Connection diameter, solid, min. / max.	...
Connection cross-section, solid, min. / max.	...
Sheath diameter, min. / max.	3.6...5.5 mm
Insulation cross-section, min.	0.85 mm
Insulation cross-section, max.	1.6 mm
Insulation resistance	≥ 500 MΩ
PoE / PoE+	PoDL acc. to IEEE 802.3bu / cg
Dielectric strength, contact / contact	≥ 1000 V DC
Dielectric strength, contact / shield	2250 V DC
Connector standard	IEC 63171-7
UL 94 flammability rating	V-0

Note

Ordering data

Plug	Type	Qty.	Order No.
field-terminated plug	IE-PS-SP0-S-FH-2-180	1	3150000000

Note

Accessories

Type	Qty.	Order No.

Note

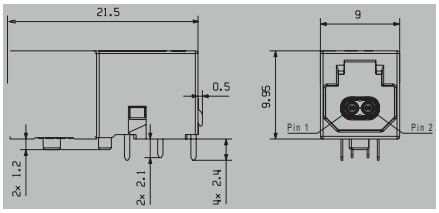
Single Pair Ethernet (SPE) plug

- Integrated shielding
- Only one pair of wires for data and power
- Multi-port capable
- Robust locking mechanism
- Shock and vibration proof
- Most compact design

Socket, 90°

Female contact

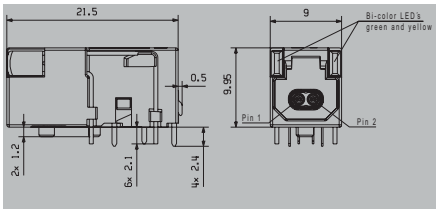




Socket, 90°, incl. LED

Female contact





Technical data

Category	CAT B (ISO/IEC 63171)	CAT B (ISO/IEC 63171)
Protection degree	IP20	IP20
Ambient temperature (operational)	-40…85 °C	-40…85 °C
Transmission rate	10/100/1000 MBit/s	10/100/1000 MBit/s
Type of connection	Solder connection	Solder connection
Outgoing elbow	90°	90°
Number of poles	2	2
Mounting onto the PCB	THT/THR solder connection	THT/THR solder connection
Plugging cycles	750	750
Contact material	Cu-alloy	Cu-alloy
Contact surface	Ni/Au	Ni/Au
Nominal voltage	72 V	72 V
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
PoE / PoE+	PoDL acc. to IEEE 802.3bu / cg	PoDL acc. to IEEE 802.3bu / cg
Dielectric strength, contact / contact	1000 V DC	1000 V DC
Dielectric strength, contact / shield	2250 V DC	2250 V DC
Connector standard	IEC 63171-7 ED2	IEC 63171-7 ED2
UL 94 flammability rating	V-0	V-0
Note		

Ordering data

	Type	Qty.	Order No.
PCB connector, IP20, socket contact, tube	SPE P20 R1H 2.1 6 N/N TU	62	**3150600000**
PCB connector, IP20, socket contact, tape-on-reel	SPE P20 R1H 2.1 6 N/N RL	100	**3234500000**

Note

Type	Qty.	Order No.
SPE P20 R1H 2.1 6 YG/YG TU	62	**3150590000**

Accessories

Type	Qty.	Order No.

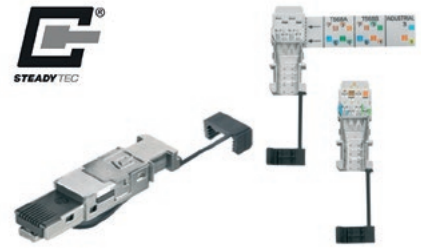
Type	Qty.	Order No.

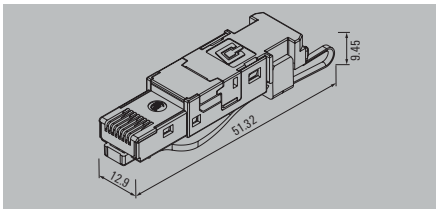
Note

RJ45 plug, tool free

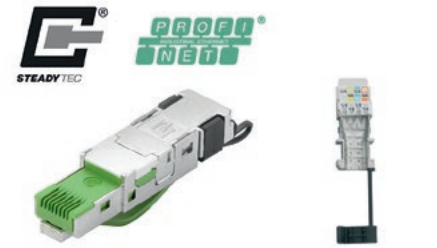
- Cat. 6_A(8 wires)/cat. 5 (4 wires) for PROFINET
- Multi-port compatibel
- IP20

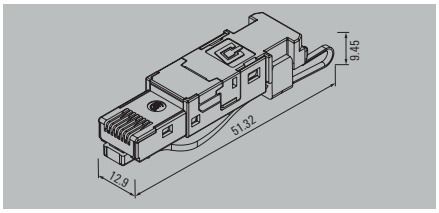
8-wire





4-wire for PROFINET





Technical data

	8-wire	4-wire for PROFINET
Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)	Cat.5 (ISO/IEC 11801)
Protection degree	IP20	IP20
Housing main material	Zinc diecast	Zinc diecast
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26/7 / AWG 22/7	AWG 26/7 / AWG 22/7
Connection diameter, solid, min. / max.	0.41 mm / 0.64 mm	0.41 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24/1 / AWG 22/1	AWG 26/1 / AWG 22/1
Wire connection cross-section, finely stranded	Approval of the cable by Weidmüller necessary	Approval of the cable by Weidmüller necessary
Insulation diameter, min. / max.	0.85 mm / 1.6 mm	0.85 mm / 1.6 mm
Sheath diameter, min. / max.	5.5 mm / 8.5 mm	5.5 mm / 8.5 mm
Contact surface	Gold over nickel	Gold over nickel
Shielding	360° all-round enclosure	360° all-round enclosure
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Current-carrying capacity (at 50 °C)	1 A	1 A
Transmission rate	10 Gbit/s	100 MBit/s
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Approvals	CCLINK; CULUS	CCLINK; CULUS
Note	Approvals available on request. Weidmüller connection cat. 7 AWG 27/7 LSZH cable possible	

Ordering data

Plug	Type	Qty.	Order No.	Type	Qty.	Order No.
with tear-off flags: EIA/TIA T568-A/B / PROFINET	IE-PS-RJ45-FH-BK	10	**1963600000**			
with printing: PROFINET				IE-PS-RJ45-FH-BK-P	10	**1132060000**
with printing: EIA/TIA T568-A	IE-PS-RJ45-FH-BK-A	10	**1132040000**			
with printing: EIA / TIA T568-B	IE-PS-RJ45-FH-BK-B	10	**1132050000**			
Note						

Accessories

Strain relief	Type	Qty.	Order No.	Type	Qty.	Order No.
green	IE-CR-IP20-RJ45-FH-GN	10	**1963100000**	IE-CR-IP20-RJ45-FH-GN	10	**1963100000**
grey	IE-CR-IP20-RJ45-FH-GY	10	**1963060000**	IE-CR-IP20-RJ45-FH-GY	10	**1963060000**
blue	IE-CR-IP20-RJ45-FH-BU	10	**1963080000**	IE-CR-IP20-RJ45-FH-BU	10	**1963080000**
orange	IE-CR-IP20-RJ45-FH-OG	10	**1963070000**	IE-CR-IP20-RJ45-FH-OG	10	**1963070000**
yellow	IE-CR-IP20-RJ45-FH-YE	10	**1963090000**	IE-CR-IP20-RJ45-FH-YE	10	**1963090000**
white	IE-CR-IP20-RJ45-FH-WH	10	**1963050000**	IE-CR-IP20-RJ45-FH-WH	10	**1963050000**

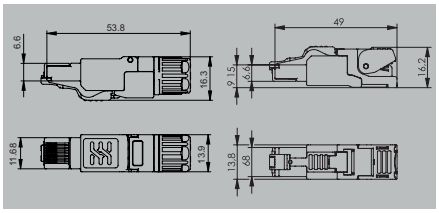
Note

RJ45 plug, straight, tool free

- Fieldattachable
- Cat. 6_A (8-wire)
- Multi-port compatibel
- IP20

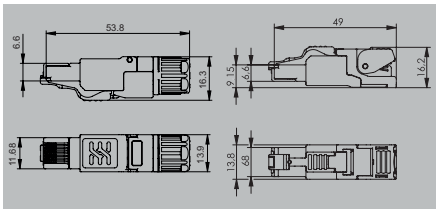
8-wire, insulation diameter 1.1 - 1.6 mm





8-wire, insulation diameter 0.85 - 1.1 mm





Technical data

Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Protection degree	IP20	IP20
Housing main material	Zinc diecast, nickel-plated	Zinc diecast, nickel-plated
Connection diameter, flexible, min. / max.	0.46 mm / 0.76 mm	0.46 mm / 0.61 mm
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 22	AWG 27 / AWG 24
Connection diameter, solid, min. / max.	0.51 mm / 0.64 mm	0.41 mm / 0.51 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 26 / AWG 24
Connection diameter, very finely stranded, min./max.	0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary	0.51 mm / / Approval of the cable by Weidmüller necessary
Connection cross-section, very finely stranded, min./max.	AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary	AWG 26 / / Approval of the cable by Weidmüller necessary
Insulation diameter, min. / max.	1.1 mm / 1.6 mm	0.85 mm / 1.1 mm
Sheath diameter, min. / max.	5 mm / 9 mm	5 mm / 9 mm
Contact surface	Gold over nickel	Gold over nickel
Shielding	360° all-round enclosure	360° all-round enclosure
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Current-carrying capacity (at 50 °C)	1 A	1 A
Transmission rate	10 Gbit/s	10 Gbit/s
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Approvals	CULUS; DETNORVER	CULUS; DETNORVER
Note		

Ordering data

Plug with latching strain relief	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
with printing: EIA/TIA T568-A	IE-PS-RJ45-FH-180-A-1.6	1	**1992820000**	IE-PS-RJ45-FH-180-A-1.1	1	**1992850000**
with printing: EIA / TIA T568-B	IE-PS-RJ45-FH-180-B-1.6	1	**1992830000**	IE-PS-RJ45-FH-180-B-1.1	1	**1992860000**
Plug with cable gland						
with printing: EIA/TIA T568-A	IE-PS-RJ45-FH-180-A-1.6-CG	1	**2703390000**	IE-PS-RJ45-FH-180-A-1.1-CG	1	**2703440000**
with printing: EIA / TIA T568-B	IE-PS-RJ45-FH-180-B-1.6-CG	1	**2703410000**	IE-PS-RJ45-FH-180-B-1.1-CG	1	**2703460000**
Note						

Accessories

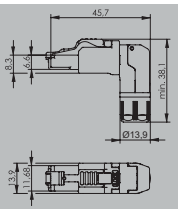
Substitute wire manager	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
TIA-A, insulation diameter 1.1...1.6 mm	IE-PI-RJ45-FH-A-1.6	30	**1992880000**			
TIA-B, insulation diameter 1.1...1.6 mm	IE-PI-RJ45-FH-B-1.6	30	**1992900000**			
TIA-A, insulation diameter 0.85...1 mm				IE-PI-RJ45-FH-A-1.1	30	**1992920000**
TIA-B, insulation diameter 0.85...1 mm				IE-PI-RJ45-FH-B-1.1	30	**1992930000**
Note						

RJ45 plug, angled, tool free

- Assembled
- Cat. 6_A (8-wire)
- Multi-port compatibel
- IP20

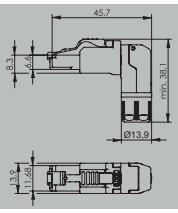
8-wire, insulation diameter 1.1 - 1.6 mm





8-wire, insulation diameter 0.85 - 1.1 mm





Technical data

	8-wire, insulation diameter 1.1 - 1.6 mm	8-wire, insulation diameter 0.85 - 1.1 mm
Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Protection degree	IP20	IP20
Housing main material	Zinc diecast, nickel-plated	Zinc diecast, nickel-plated
Connection diameter, flexible, min. / max.	0.46 mm / 0.76 mm	0.46 mm / 0.61 mm
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 22	AWG 27 / AWG 24
Connection diameter, solid, min. / max.	0.51 mm / 0.64 mm	0.41 mm / 0.51 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 26 / AWG 24
Connection diameter, very finely stranded, min./max.	0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary	0.51 mm / / Approval of the cable by Weidmüller necessary
Connection cross-section, very finely stranded, min./max.	AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary	AWG 26 / / Approval of the cable by Weidmüller necessary
Insulation diameter, min. / max.	1.1 mm / 1.6 mm	0.85 mm / 1.1 mm
Sheath diameter, min. / max.	5 mm / 9 mm	5 mm / 9 mm
Contact surface	Gold over nickel	Gold over nickel
Shielding	360° all-round enclosure	360° all-round enclosure
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Current-carrying capacity (at 50 °C)	1 A	1 A
Transmission rate	10 Gbit/s	10 Gbit/s
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Approvals	CULUS; DETNORVER	CULUS; DETNORVER
Note		

Ordering data

Plug	Type	Qty.	Order No.	Type	Qty.	Order No.
with printing: EIA/TIA T568-A	IE-PS-RJ45-FH-90-A-1.6	1	**1992870000**	IE-PS-RJ45-FH-90-A-1.1	1	**1518080000**
with printing: EIA / TIA T568-B	IE-PS-RJ45-FH-90-B-1.6	1	**1992890000**	IE-PS-RJ45-FH-90-B-1.1	1	**1518090000**
Note	With pre-installed dust cap			With pre-installed dust cap		

Accessories

Substitute wire manager	Type	Qty.	Order No.	Type	Qty.	Order No.
TIA-A, insulation diameter 1.1...1.6 mm	IE-PI-RJ45-FH-A-1.6	30	**1992880000**			
TIA-B, insulation diameter 1.1...1.6 mm	IE-PI-RJ45-FH-B-1.6	30	**1992900000**			
TIA-A, insulation diameter 0.85...1 mm				IE-PI-RJ45-FH-A-1.1	30	**1992920000**
TIA-B, insulation diameter 0.85...1 mm				IE-PI-RJ45-FH-B-1.1	30	**1992930000**

Note

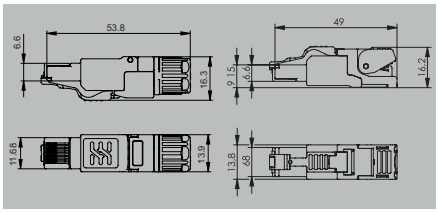
RJ45 plug, straight and angled, tool free

- Fieldattachable
- Cat. 5 (4-wire) for PROFINET
- Multi-port compatibel
- IP20

4-wire for PROFINET

Straight

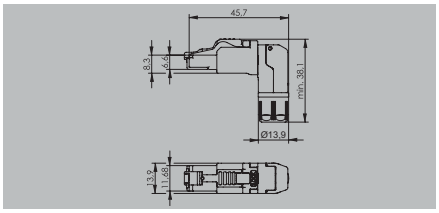




4-wire for PROFINET

Angled





Technical data

Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Protection degree	IP20	IP20
Housing main material	Zinc diecast, nickel-plated	Zinc diecast, nickel-plated
Connection diameter, flexible, min. / max.	0.46 mm / 0.76 mm	0.46 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 22	AWG 27 / AWG 22
Connection diameter, solid, min. / max.	0.51 mm / 0.64 mm	0.51 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Connection diameter, very finely stranded, min./max.	0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary	0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary
Connection cross-section, very finely stranded, min./max.	AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary	AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary
Insulation diameter, min. / max.	1.1 mm / 1.6 mm	1.1 mm / 1.6 mm
Sheath diameter, min. / max.	5 mm / 9 mm	5 mm / 9 mm
Contact surface	Gold over nickel	Gold over nickel
Shielding	360° all-round enclosure	360° all-round enclosure
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	≥ 500 MΩ	≥ 500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Current-carrying capacity (at 50 °C)	1 A	1 A
Transmission rate	100 MBit/s	100 MBit/s
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Approvals	CULUS; DETNORVER	CULUS; DETNORVER
Note		

Ordering data

Plug with latching strain relief	**Type**	**Qty.**	**Order No.**
with printing: PROFINET	IE-PS-RJ45-FH-180-P-1.6	1	**1992840000**
Plug with cable gland			
with printing: PROFINET	IE-PS-RJ45-FH-180-P-1.6-CG	1	**2703420000**
Note	With pre-installed dust cap		

Type	**Qty.**	**Order No.**
IE-PS-RJ45-FH-90-P-1.6	1	**1518100000**
With pre-installed dust cap		

Accessories

Substitute wire manager	**Type**	**Qty.**	**Order No.**
PROFINET, insulation diameter 1.1...1.6 mm	IE-PI-RJ45-FH-P-1.6	30	**1992910000**

Type	**Qty.**	**Order No.**
IE-PI-RJ45-FH-P-1.6	30	**1992910000**

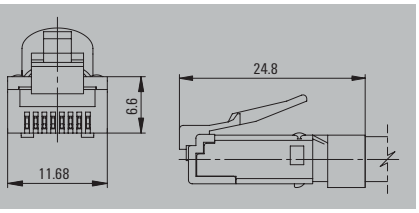
Note

RJ45 crimp plug

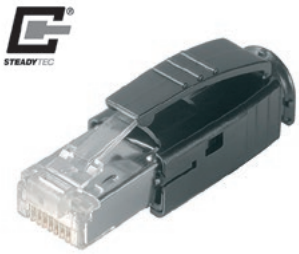
- Cat. 6
- With anti-folding protection
- With anti-crash lever protection

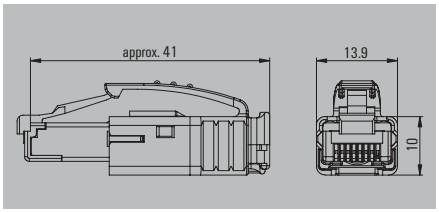
8-wire, housing 1-part





8-wire, housing 2-part





Technical data

Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Protection degree	IP20	IP20
Connection diameter, flexible, min. / max.	0.46 mm / 0.61 mm	0.46 mm / 0.61 mm
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 24	AWG 27 / AWG 24
Connection diameter, solid, min. / max.	0.36 mm / 0.51 mm	0.36 mm / 0.51 mm
Connection cross-section, solid, min. / max.	AWG 27 / AWG 24	AWG 27 / AWG 24
Insulation cross-section, max.	1.05 mm	1.05 mm
Sheath diameter, min. / max.	5.5 mm / 6.2 mm	5 mm / 7.3 mm
Shielding	360° all-round enclosure	360° all-round enclosure
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Bending protection sleeve material	PVC, UL 94-V0	Polycarbonate PC, UL 94 V-0
Material insulator	Polycarbonate PC, UL 94 V-0	Polycarbonate PC, UL 94 V-0
Contact material / Contact surface	Phosphorus bronze / Gold-plated	Phosphorus bronze / Gold-plated
Shielding material	0.5 mm brass, 2 µm nickel	0.5 mm brass, 2 µm nickel
Cable pull-out force, min.	89 N	89 N
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	500 MΩ	500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Current-carrying capacity (at 50 °C)	1 A	1 A
PoE / PoE+	conforming to IEEE 802.3af	conforming to IEEE 802.3af
Approvals		CCLINK; CURUS
Note		

Ordering data

Plug	Type	Qty.	Order No.	Type	Qty.	Order No.
with kink protection; 5.5 - 6.2 mm	IE-P63	10	**8813110000**			
with anti-kink protection; 6.2 - 7.1 mm	IE-P70	10	**8813120000**			
with anti-kink sleeve. black				IE-PS-RJ45-TH-BK	10	**1963590000**
without anti-kink sleeve	IE-P	100	**8813100000**	IE-PM-RJ45-TH	100	**1963580000**
Note						

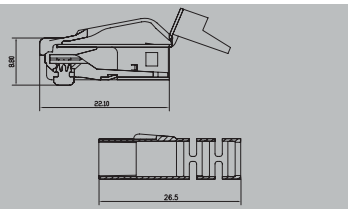
Accessories

Kink prevention sleeve	Type	Qty.	Order No.	Type	Qty.	Order No.
white				IE-PH-RJ45-TH-WH	10	**1962430000**
green				IE-PH-RJ45-TH-GN	10	**1962490000**
grey				IE-PH-RJ45-TH-GY	10	**1962440000**
yellow				IE-PH-RJ45-TH-YE	10	**1962480000**
orange				IE-PH-RJ45-TH-OG	10	**1962450000**
black				IE-PH-RJ45-TH-BK	10	**1962500000**
blue				IE-PH-RJ45-TH-BU	10	**1962470000**
Tools						
Pressing tool	TT 8 RS MP 8	1	**9202800000**	TT 8 RS MP 8	1	**9202800000**
Note						

RJ45 PROFINET crimp plug

4-wire for PROFINET, 1-part enclosure





Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP20
Connection diameter, flexible, min. / max.	0.57 mm / 0.64 mm
Connection cross-section, flexible, min. / max.	AWG 23 / AWG 22
Connection diameter, solid, min. / max.	0.57 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 23 / AWG 22
Insulation cross-section, max.	1.6 mm
Sheath diameter, min. / max.	/ 7.5 mm
Shielding	360° all-round enclosure
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 60603-7
Bending protection sleeve material	Polyamide PA6, UL 94-V0
Material insulator	
Contact material / Contact surface	Copper alloy
Shielding material	
Cable pull-out force, min.	
Contact resistance	≤ 10 mΩ
Insulation resistance	500 MΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC
Current-carrying capacity (at 50 °C)	
PoE / PoE+	conforming to IEEE 802.3af
Approvals	
Note	

Ordering data

Plug	Type	Qty.	Order No.
	IE-PS-RJ45-TH-BK-P	10	2584980000
Note			

Accessories

Tools	Type	Qty.	Order No.
Pressing tool	IE-CWZ-RJ45-TH-P	1	2614210000

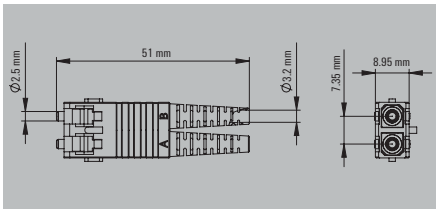
Note

FO connector

- IP20

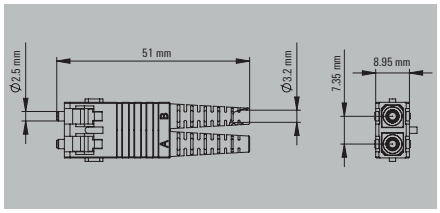
SCRJ, POF, Crimp





SCRJ, POF, reconnectable





Technical data

Protection degree	IP20	IP20
Plugging cycles	1000	1000
Ambient temperature (operational)	-20 °C...80 °C	-20 °C...80 °C
Connector standard	IEC 61754-24	IEC 61754-24
Individual wire diameter, min. / max.	2.1 mm...2.3 mm	2.1 mm...2.3 mm
Crimp barrel material	Copper, nickel-plated	Copper, nickel-plated
Pressure spring material	Stainless steel, rust-proof	Stainless steel, rust-proof
Ferrule material	Nickel silver	Nickel silver
Dust protection cap material	TPE	TPE
Bending protection sleeve material	TPE	TPE
Cable pull-out force, min.	100 N	100 N
Housing main material	PC UL 94 V0	PC UL 94 V0
Housing material, insert	Zinc diecast, nickel-plated	Zinc diecast, nickel-plated
Humidity	0...93 % rel. humidity	0...93 % rel. humidity
Approvals	UL	
Note		

Ordering data

	Type	Qty.	Order No.
POF	IE-PS-SCRJ1-POF	10	**1206720000**
Note			

Type	Qty.	Order No.
IE-PS-SCRJ1-POF-QA	10	**2564950000**

Accessories

Tools	Type	Qty.	Order No.
Mounting tool, POF	HTX-IE-POF	1	**1208870000**
Replacement ferrule	IE-SCRJ1-IP20-POF-100	100	**1278420000**
Contact Removal Tool	REMOVAL TOOL HD	1	**1866730000**

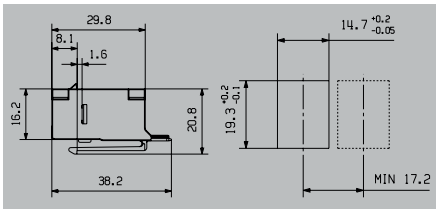
Type	Qty.	Order No.

Note

RJ45 keystone

RJ45 Coupling





Technical data

Housing main material	Zinc diecast
Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Protection degree	IP20
Plugging cycles	750
PoE / PoE+	conforming to IEEE 802.3at
Connector standard	IEC 60603-7-5
Approvals	

Note

Ordering data

Type	Qty.	Order No.
IE-XR-RJ45/RJ45-2	24	**8952950000**

Note

Accessories

Type	Qty.	Order No.

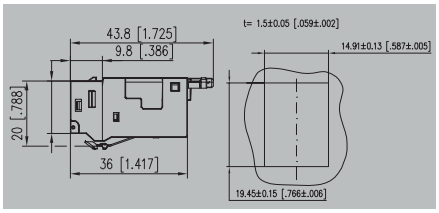
Note

RJ45 keystone

RJ45 module

Mounting cut-out Rectangular

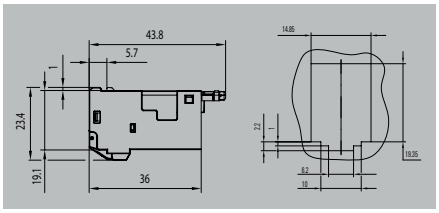




RJ45 module

Mounting cut-out special shape





Technical data

Category	Cat.6$_A$ / Class E$_A$ (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Wiring	TIA-568A, TIA-568B, PROFINET	TIA-568A, TIA-568B, PROFINET
Protection degree	IP20	IP20
Housing main material	Zinc diecast	Zinc diecast
Connection diameter, flexible	0.48...0.76 mm	0.48...0.76 mm
Conductor connection cross-section, flexible (AWG)	AWG 26...AWG 22	AWG 26...AWG 22
Connection diameter, solid	0.41...0.64 mm	0.41...0.64 mm
Conductor connection cross-section, solid (AWG)	AWG 26...AWG 22	AWG 26...AWG 22
Insulation cross-section, max.	1.8 mm	1.8 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40...70 °C	-40...70 °C
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Contact surface	Gold over nickel	Gold over nickel
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	500 MΩ	500 MΩ
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Dielectric strength, contact / contact	≥ 1000 V DC	≥ 1000 V DC
Dielectric strength, contact / shield		
Approvals		DETNORVER
Note		

Ordering data

Type	Qty.	Order No.
IE-KEY-RJ45/IDC-1	1	**2782300000**

Note

Type	Qty.	Order No.
IE-XRJ45/IDC	1	**8808330000**

Note

Accessories

Type	Qty.	Order No.

Note

Type	Qty.	Order No.

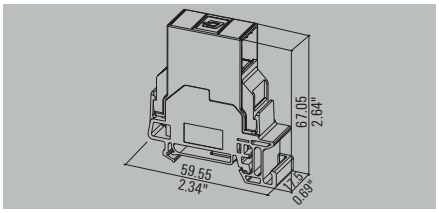
Module RJ45

Outlet direction straight

- Cat. 6_A
- IP20
- TS 35

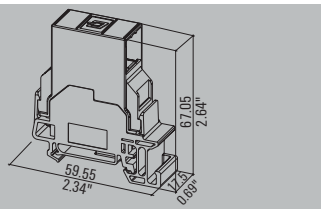
8-wire





4-wire





Technical data

	8-wire	4-wire
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.5 (ISO/IEC 11801)
Protection degree	IP20	IP20
Housing main material	PA UL 94 V0, PA 66 UL V0 E63957	PA UL 94 V0, PA 66 UL V0 E63957
Contact surface	Au ≥ 0.8 µm	Au ≥ 0.8 µm
Colour	Light Grey	Light Grey
Type of mounting	TS 35	TS 35
Plugging cycles	750 (RJ45)	750 (RJ45)
Composition	Switchable volt. connection from module/coupling to mounting rail	Switchable volt. connection from module/coupling to mounting rail
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Temperature range, assembly, min. / max.	-25 °C...70 °C	-25 °C...70 °C
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Electrical properties*		
PoE / PoE+	conforming to IEEE 802.3bt	conforming to IEEE 802.3bt
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Current-carrying capacity (at 50 °C)	1 A	1 A
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Insulation resistance	500 MΩ	500 MΩ
Approvals	CULUS	
Note	Weidmüller connection cat. 7 AWG 27/7 LSZH cable possible	

Ordering data

	Type	Qty.	Order No.
A-coded	IE-TO-RJ45-FJ-A	10	8946930000
B-coded	IE-TO-RJ45-FJ-B	10	8946940000
PROFINET-coded			

Type	Qty.	Order No.
IE-TO-RJ45-FJ-P	10	8946950000

Note

Accessories

Marking tags

	Type	Qty.	Order No.
MultiCard, white	ESG 9/11 K MC NE WS	200	1857440000

Type	Qty.	Order No.
ESG 9/11 K MC NE WS	200	1857440000

Note

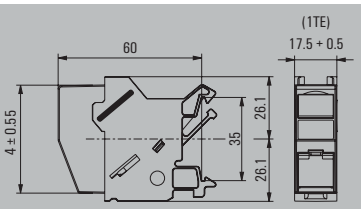
Module RJ45

Outlet direction diagonal

- Cat. 6
- IP20
- TS 35

8-wire





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP20
Housing main material	PA 66, UL 94: V-0
Contact surface	
Colour	Light Grey
Type of mounting	TS 35
Plugging cycles	750 (RJ45)
Composition	1 TE pitch dimension acc. to DIN 43880. insta-compatible Installation flange with mounting frame
Ambient temperature (operational)	-25 °C...70 °C
Temperature range, assembly, min. / max.	...
Connector standard	IEC 60603-7-5
Connection diameter, flexible, min. / max.	0.48 mm / 0.64 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22
Electrical properties*	
PoE / PoE+	conforming to IEEE 802.3at
Contact resistance	≤ 20 mΩ
Current-carrying capacity (at 50 °C)	1 A
Dielectric strength, contact / contact	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC
Insulation resistance	500 MΩ
Approvals	CULUS; DETNORVER
Note	

Ordering data

	Type	Qty.	Order No.
A/B-coded	IE-XM-RJ45/IDC	1	8808360000

Note

Accessories

Marking tags	Type	Qty.	Order No.
Marking tag	IE-DM	50	8813500000

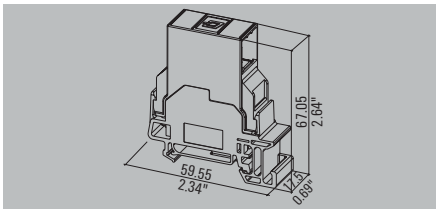
Note

Coupling RJ45, 8-wire

- Cat. 6_A
- IP20
- TS35

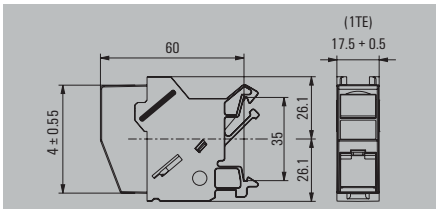
Outlet direction straight





Outlet direction diagonal





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP20	IP20
Housing main material	PA UL 94 V0, PA 66 UL V0 E63957	PA 66, UL 94: V-0
Contact material / Contact surface	Spring steel, Ni 1.2 µm / Au ≥ 0.8 µm	
Colour	Light Grey	Light Grey
Type of mounting	TS 35	TS 35
Plugging cycles	750 (RJ45)	750
Composition	Switchable volt. connection from module/coupling to mounting rail	1 TE pitch dimension acc. to DIN 43880. insta-compatible Installation flange with mounting frame
Ambient temperature (operational)	-40 °C...70 °C	-25 °C...70 °C
Temperature range, assembly, min. / max.	-25 °C...70 °C	...
Humidity	0...93 % rel. humidity	
Shock resistance acc. to IEC 60512-6-3	250 ms^{-2}	
Vibration resistance acc. to IEC 60512-6-4	50 ms^{-2} sinusoidal (9...500 Hz)	
Housing material, insert	Zinc diecast	
Connector standard	IEC 60603-7-51	IEC 60603-7-5
Electrical properties*		
PoE / PoE+	conforming to IEEE 802.3af	conforming to IEEE 802.3at
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Current-carrying capacity (at 50 °C)	1 A	1 A
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Insulation resistance	500 MΩ	500 MΩ
Approvals	CULUS	CULUS; DETNORVER
Note		

Ordering data

Type	Qty.	Order No.
IE-TO-RJ45-C	1	8946920000

Type	Qty.	Order No.
IE-XM-RJ45/RJ45	1	8879050000

Note

Accessories

Marking tags

Type	Qty.	Order No.
ESG 9/11 K MC NE WS MultiCard, white Marking tag	200	1857440000

Type	Qty.	Order No.
IE-DM	50	8813500000

Note

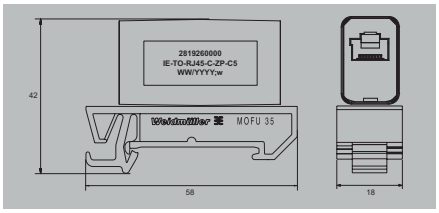
Coupling RJ45, Counter installation (Smart Metering)

- Cat. 5
- IP20

TS35

Unshielded

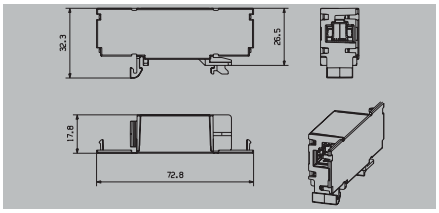




TS35 + mounting in the meter cross

Shielded





Technical data

Category	Cat. 5	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP20	IP20
Housing main material	Plastic, PA 66 UL V0 E63957	PA 66 UL V0 E63957
Contact material / Contact surface	/ Gold over nickel	Spring steel, Ni 1.2 µm / Au ≥ 0.8 µm
Colour	beige, black	Light Grey
Type of mounting	TS 35	TS 35
Plugging cycles	750 (RJ45)	750 (RJ45)
Composition		
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...70 °C
Temperature range, assembly, min. / max.	...	...
Humidity		0...93 % rel. humidity
Shock resistance acc. to IEC 60512-6-3		500 ms^{-2}
Vibration resistance acc. to IEC 60512-6-4		50 ms^{-2} sinusoidal (10...500 Hz)
Housing material, insert	Plastic	Zinc diecast
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Electrical properties*		
PoE / PoE+		conforming to IEEE 802.3af
Contact resistance		≤ 20 mΩ
Current-carrying capacity (at 50 °C)	1 A	1 A
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Insulation resistance		500 MΩ
Approvals		
Note		

Ordering data

Type	Qty.	Order No.
IE-TO-RJ45-C-ZP-C5	10	**2819260000**

Note

Type	Qty.	Order No.
IE-TO-RJ45-C-LP	10	**2812440000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

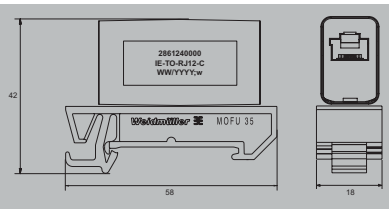
Note

Coupling RJ12, Counter installation (Smart Metering)

- IP20
- unshielded

TS35





Technical data

Protection degree	IP20
Housing main material	Plastic
Contact material / Contact surface	/ Gold over nickel
Colour	beige, black
Type of mounting	TS 35
Plugging cycles	≥ 200
Ambient temperature (operational)	-40 °C...80 °C
Housing material, insert	Plastic
Connector standard	TIA-1096-A
Approvals	

Note

Ordering data

Type	Qty.	Order No.
IE-TO-RJ12-C	10	2861240000

Note

Accessories

Type	Qty.	Order No.

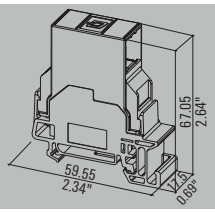
Note

USB connection

- IP20
- TS 35

USB A





Technical data

Protection degree	IP20
Housing main material	PA UL 94 V0
Colour	Light Grey
Type of mounting	TS 35
Ambient temperature (operational)	-40 °C...70 °C
Temperature range, assembly, min. / max.	-25 °C...70 °C
Connector standard	IEC 61076-3-107
Connection 1 / 2	USB A / USB A
Approvals	
Note	

Ordering data

USB

Type	Qty.	Order No.
IE-TO-USB	1	**8946960000**

Note

Accessories

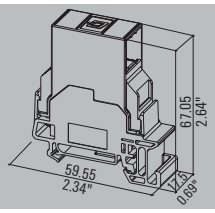
Marking tags

Type	Qty.	Order No.
MultiCard, white ESG 9/11 K MC NE WS	200	**1857440000**

Note

USB AB





Technical data

IP20	
PA UL 94 V0	
Light Grey	
TS 35	
-40 °C...70 °C	
-25 °C...70 °C	
IEC 61076-3-107	
USB A / USB B	

Ordering data

Type	Qty.	Order No.
IE-TO-USB-AB	1	**1438180000**

Accessories

Type	Qty.	Order No.
ESG 9/11 K MC NE WS	200	**1857440000**

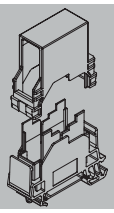
Note

Coupling fibre-optic

- IP20
- TS 35

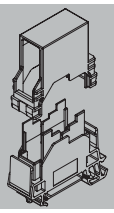
SC duplex





SC-RJ





Technical data

	SC duplex	SC-RJ
Protection degree	IP20	IP20
Housing main material	PA UL 94 V0	PA UL 94 V0
Colour	Light Grey	Light Grey
Type of mounting	TS 35	TS 35
Plugging cycles	1000	1000
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Temperature range, assembly, min. / max.	-25 °C...70 °C	-25 °C...70 °C
Connector standard	IEC 61754-4	IEC 61754-24
Approvals	UL	UL
Note		

Ordering data

Fibre-optic	SC duplex Type	Qty.	Order No.	SC-RJ Type	Qty.	Order No.
Singlemode	IE-TO-SCD-SM	1	**8946980000**	IE-TO-SCRJ-SM	10	**8947000000**
Multimode/POF	IE-TO-SCD-MM	10	**8946970000**	IE-TO-SCRJ-MM	10	**8946990000**
Note						

Accessories

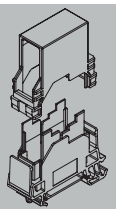
Marking tags	SC duplex Type	Qty.	Order No.	SC-RJ Type	Qty.	Order No.
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**
Note						

Coupling fibre-optic

- IP20
- TS 35

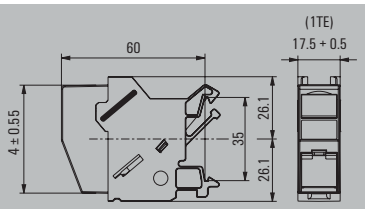
LC Duplex





ST





Technical data

Protection degree	IP20	IP20
Housing main material	PA UL 94 V0	PA 66, UL 94: V-0
Colour	Light Grey	Light Grey
Type of mounting	TS 35	TS 35
Composition		1 TE pitch dimension acc. to DIN 43880. insta-compatible Installation flange with mounting frame
Plugging cycles	1000	750
Ambient temperature (operational)	-40 °C...70 °C	-25 °C...70 °C
Temperature range, assembly, min. / max.	-25 °C...70 °C	...
Connector standard	IEC 61754-20	IEC 61754-2
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.
Singlemode	IE-TO-LCD-SM	10	**8947020000**
Multimode	IE-TO-LCD-MM	10	**8947010000**

Type	Qty.	Order No.
IE-XM-ST/ST	1	**8808340000**

Note

Accessories

Marking tags

	Type	Qty.	Order No.
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Marking tag			

Type	Qty.	Order No.
IE-DM	50	**8813500000**

Note

Socket adapter

- IP20
- TS 35

Socket adapter



Technical data

Protection degree	IP20
Housing main material	Polycarbonate PC, Acrylnitril-Butadien-Styrol (ABS)
Ambient temperature (operational)	-25 °C...70 °C
Approvals	

Note

Ordering data

Type	Qty.	Order No.
IE-DINRAIL-AD-PWB	1	**2534680000**

Note

Accessories

Inserts, Power	Type	Qty.	Order No.
Socket AU 15 A	IE-FCI-PWB-AU	1	**1450830000**
Socket AU 10 A	IE-FCI-PWB-AU-10A	1	**1546590000**
Socket CH	IE-FCI-PWB-CH	1	**1450780000**
Socket CN	IE-FCI-PWB-CN	1	**1450790000**
Socket GB	IE-FCI-PWB-GB	1	**1450770000**
Socket DE	IE-FCI-PWB-DE	1	**1450730000**
Socket DE orange	IE-FCI-PWB-DE-OR	1	**1554000000**
Socket DK	IE-FCI-PWB-DK	1	**2661340000**
Socket FR orange	IE-FCI-PWB-FR-OR	1	**2007230000**
Socket IT/EU	IE-FCI-PWS-IT	1	**1450810000**
Socket FR/B/CZ	IE-FCI-PWB-FR/B/CZ	1	**2426700000**
Socket IND	IE-FCI-PWB-IND	1	**2500710000**
RCBO	IE-FCI-PWB-RCBO	1	**1534250000**
ISR socket	IE-FCI-PWB-ISR	1	**2531060000**

Note

FrontCom® IP65 service interfaces
Overview

FrontCom® IP65 service interfaces

FrontCom® Vario IP65 service interface

Frames	L.14
Insert plates	L.18
Inserts	L.27
Accessories	L.43
Sets	L.44

FrontCom® Micro IP65 service interface

RJ45	L.46
USB	L.48



Easy access to the PLC and functional electronics

FrontCom® Vario is setting new standards

Optimum system control and high system availability ensure that your company remains productive and profitable, in addition to giving you that invaluable competitive edge. Attaching protected service interfaces to the housing walls of your cabinets is a simple, well-proven solution used to effectively boost your system's availability and productivity. You can then grant your technicians quick and safe access to the control elements and functional electronics in the cabinet at any time, conveniently doing so from outside – through the closed cabinet door. This means that you can have a wealth of service work performed during ongoing operation and don't have to wait on specially authorised professionals. At the same time, the risk of misuse or accidents is drastically reduced.

Benefits of modern service interfaces

- Faster work processes
- Production data is read out quickly
- Convenient troubleshooting, error configuration and error programming
- No downtimes caused by having to wait for authorised professionals
- Fewer risks caused by incorrect operation inside the cabinet
- Higher operational reliability and reduced risk of accidents
- Optimised system availability

FrontCom® Vario

The service interface FrontCom® Vario is setting new standards. It requires only half the space of conventional service interfaces – and also boasts plenty of intelligent details that mean a multitude of maintenance and optimisation processes can be performed on your systems in a far more efficient manner and thus at a far more affordable price. The FrontCom® Vario is therefore a clever investment that delivers a wealth of attractive benefits.

- Takes up half the space of conventional service interfaces
- Fewer installation costs as the data, signal and power connections are housed in a single frame
- Data transmission pursuant to the latest Cat.6_A standard
- High flexibility thanks to a variety of possible customisations and combinations
- Variants with UL 508 and NEMA 4X approval, for particularly demanding environmental conditions (outdoor)
- Various locks to suit the individual security level

Find out more about the new FrontCom® Vario service interfaces at:

www.weidmueller.com/frontcom

You want to configure your interface online right now – no problem:

galaxy.weidmueller.com/wi_frontcom



FrontCom® Vario single frames

Power supply, signal and data transmission on half the space

Compared to conventional service interfaces, FrontCom® Vario combines several functions in just one single frame, so it only takes up half the space.

The system is compact, simple to install and can be assembled flexibly. There are different data, signal and power modules plus several attractive housing designs available, so you can choose a solution that suits your specific requirements.



Simple and clear identification
The large marking surface on the cover makes for optimum equipment identification and fantastic legibility. The optional touch-safe protection on the inside offers additional marking options for any interface and facilitates clear assignment.





Different protection levels
FrontCom® Vario is available with various locks. From simple knobs to locks with inverse cabinet keys (Daimler Lock) and further to genuine security locks for perfect protection.



Handling Video



Easier everyday work
The practical cover fixation with five lock-in positions allows for easier access and faster work processes. It also means you still have full use of both your hands!





Flexibility and future-proof
The modular system enables perfect adaptation to a wide range of applications and is 100% compatible with the market standard. RJ45 inserts in accordance with the latest Cat.6A standard ensure the best transmission properties. They allow high data transmission rates of up to 10 GBit/s.



Available with shielding as an option
The optional shielding only has to be connected to the frame's earthing screw once, then it transfers the functional earth to all the metal inserts.



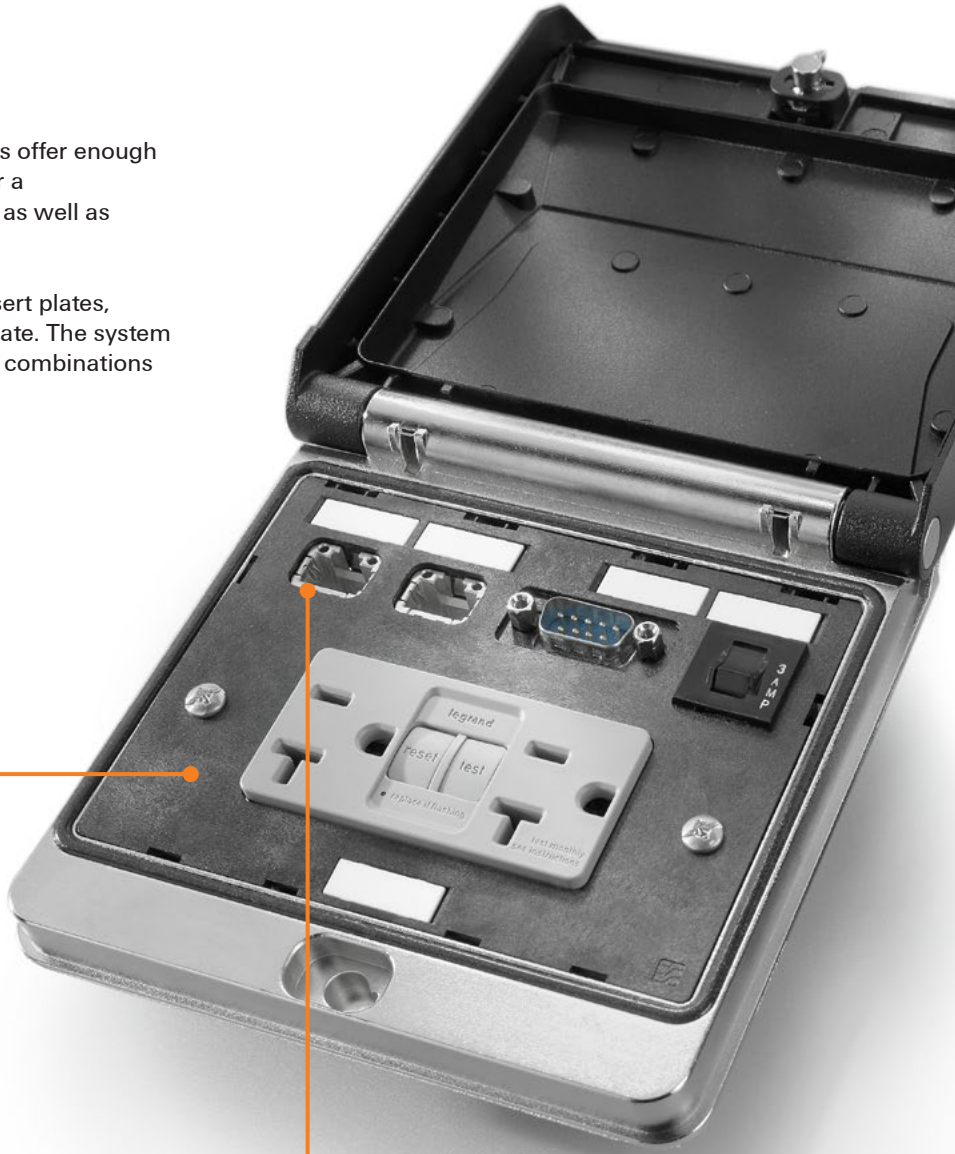
Versatile & Robust in IP65
Cover and frame options are available in plastic or metal – offering either lightweight, cost-effective solutions or highly durable versions for harsh environments. Choose from a semi-transparent plastic cover, a metal cover, or a weather-resistant outdoor version with NEMA 4X approval.



FrontCom® Vario double frames
Sufficient space and maximum flexibility

FrontCom® Vario double frame service interfaces offer enough space to accommodate up to 10 connections or a mains socket with circuit breaker (GFCI / RCBO) as well as additional data and signal interfaces.

The double frame can be equipped with two insert plates, separated by the strip, or with a double insert plate. The system thus offers the possibility of numerous interface combinations with maximum flexibility.



Flexible and modular system
FrontCom® Vario achieves unparalleled levels of flexibility as a result of its modular design. All variants meet the IP65 rating requirements and are compatible with market standards.



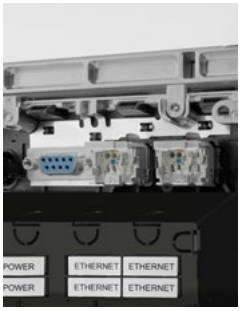
Future-proof data transmission
RJ45 inserts according to current Cat. 6_A standard guarantee optimal data transmission characteristics. They allow high data transmission rates of up to 10 Gbit/s.

Handling Video



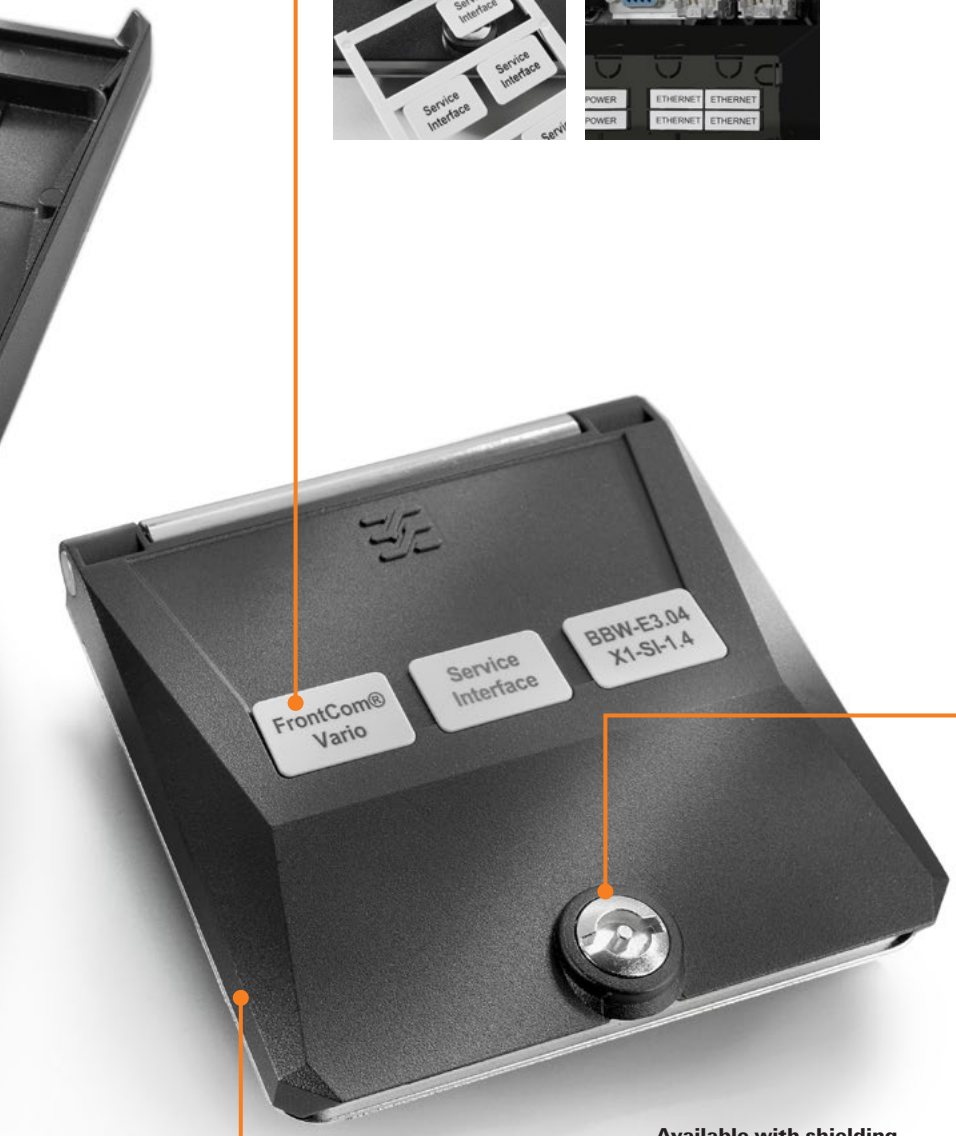
Clear identification
A large marking surface supports perfect equipment identification and legibility. An optional touch-safe protection on the inside offers additional marking options.





Outdoor variants
Special powder-coated variants for the harshest environmental conditions (NEMA 4X - outdoor approval)

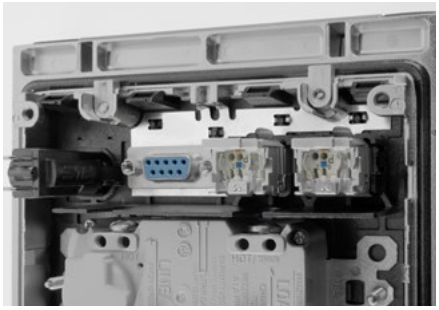




Different protection levels
FrontCom® Vario is available with various locks. From simple knobs to locks with inverse cabinet keys (Daimler Lock) and further to genuine security locks for perfect protection.



Available with shielding
The optional shielding has to be connected only once to the frame's earthing screw to earth all of the metal inserts.



Project planning has to take a multitude of factors into account

We offer more than 5,000 possible combinations

Design engineers and planners are faced with particular challenges when it comes to planning a system project. No two machines are the same and every customer has a different set of requirements. FrontCom® Vario, offers you a hitherto unequalled range of options for adapting your service interface to suit your individual requirements. This also applies to any modifications and retrofitting work required during operation.
The modular FrontCom® Vario service interface offers the perfect combination of frame, inserts and suitable insert plates for almost every configuration. All in all, you can choose from more than 5,000 possible combinations.

The modular principle: Every FrontCom® Vario variant can be designed with a modular structure using the following components:



A variety of frames

With the wide selection of frames and closures, the FrontCom® Vario can adapt to meet different requirements. And installation? It's easy! If there's a suitable cut-out in the housing or panel, all you have to do is position the pre-assembled frame and fix it with the integrated fastening screws.



A variety of insert plates

The insert plates are set apart by different combinations of holders for power, data and signal inserts. Every variant is available with shielding as an option. For installation, the insert plates can simply be locked to the available frames.



Inserts to suit every requirement

Depending on your requirements, you can opt for different data, signal or power inserts and simply lock them to the suitable insert plate.
For example, choose country-specific socket systems or different connector types such as RJ45, USB or D-Sub.

FrontCom® Vario online configurator

Our convenient online configurator is available to help you quickly and easily create the perfect solution from the wide range of products on offer. In this respect, you can simply select the components you would like using the drag and drop function. You will then receive a parts list with all of the individual components required that you can save and query online straight away.

FrontCom® Vario Onlinekonfigurator:
galaxy.weidmueller.com/wi_frontcom

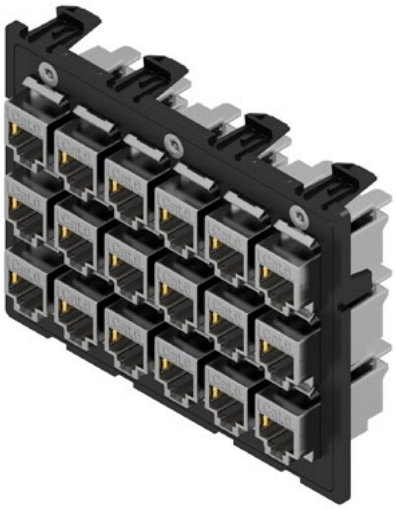


FrontCom® Vario Sets and individual designs

Independently of our inserts, the single and double blanking plates allow the individual combination of different interfaces available on the market. The stable 3 mm base plate can be reworked by the user as required and then the desired combination can be mounted.

Examples of designs for our customers' single and double insert plates:





One of the advantages of FrontCom® Vario is maximum flexibility in the combination of interfaces. However, if, for example in the case of series machines, one and the same combination is required in large quantities, sets can also be offered. Customers still enjoy freedom of choice for the base frame, insert plates and inserts as well as interfaces. The markers can also be individually printed and supplied for sets.

Example of a typical FrontCom® Vario set:



FrontCom® Micro

Compact service interfaces for efficient data access in industrial environments

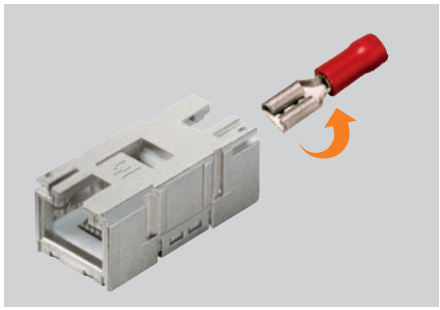
FrontCom® Micro is a compact, secure, and maintenance-friendly service interface.

Thanks to its space-saving design and easy installation in a standard 22 mm cut-out, it allows fast access to networks and control systems without opening the enclosure. This helps reduce downtime through quick diagnostics and updates.

Robust USB, Single Pair Ethernet, and Cat.6A RJ45 interfaces ensure reliable data connections, while the IP65 protection rating safeguards against dust and splashing water.



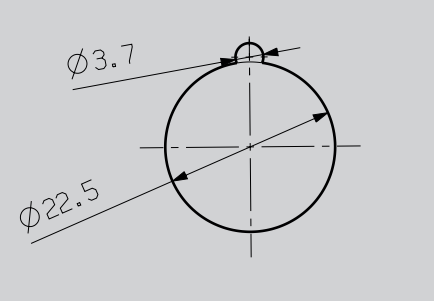
Easy Shielding of Metal Inserts
The FS 2.8 flat connector enables quick and convenient shielding of SteadyTec metal inserts.



Handling Video



Easy Installation
The installation requires only a simple standardized round hole with a 22.5 mm diameter. An additional 3.7 mm hole provides optimal protection against rotation.





Future-Proof Data Transmission
State-of-the-art Cat.6A RJ45 modules ensure excellent transmission performance, supporting high data rates of up to 10 Gbps. In addition, interfaces for USB A, USB A/B, USB 2.0 and Single Pair Ethernet are also available.



Easy and Clear Identification
Optional SwitchMark markers enable optimal equipment labeling and ensure excellent readability.



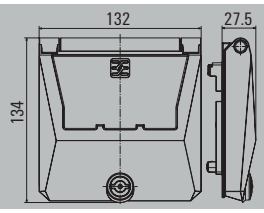
FrontCom® Vario IP65 service interface

FrontCom® Vario
Metal double frame

- IP65
- Possibility of using single and double insertion plates

Metal cover





Technical data

Protection degree / Protection class (UL)	IP65, in closed state / Type 12
Material cover	Zinc diecast, powder-coated
Material frame	Zinc diecast
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CSA; CURUS
Note	

Ordering data

	Type	Qty.	Order No.
Rotary button operation	IE-FC-DFM-KNOB	1	**2003170000**
Lockable with key	IE-FC-DFM-KEY	1	**2003180000**
Lockable with electrical cabinet key	IE-FC-DFM-CAB	1	**2003190000**
Lockable with electrical cabinet key (Daimler lock)	IE-FC-DFM-CAB-DB	1	**2003150000**
Note			

Accessories

	Type	Qty.	Order No.
spare key			
	IE-FC-KEY2	1	**2066650000**
Marking tags			
silver	SM 27/18 K MC NE SI	80	**1713760000**
light grey	SM 27/18 K MC NE GR	80	**1073340000**
white	SM 27/18 K MC NE WS	80	**1707270000**
MultiCard			
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection			
Touch-safe protection	IE-FC-PWPC	1	**1450820000**
Bar (for mounting single insert plates)			
Partition	IE-FC-DF-IPH	1	**2003340000**

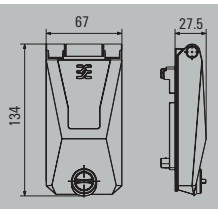
Note

FrontCom® Vario
Metal single frame

- IP65

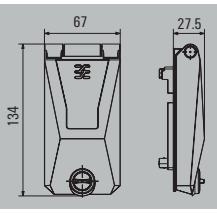
Metal cover





Plastic cover





Technical data

	Metal cover	Plastic cover
Protection degree / Protection class (UL)	IP65, in closed state / Type 12	IP65, in closed state
Material cover	Zinc diecast, powder-coated	Polycarbonate PC
Material frame	Zinc diecast	Zinc diecast
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	DETNORVER
Note		

Ordering data

	Metal cover			Plastic cover		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Rotary button operation	IE-FC-SFM-KNOB	1	**1450530000**	IE-FC-SFP-KNOB	1	**1450510000**
Lockable with key	IE-FC-SFM-KEY2	1	**1450540000**	IE-FC-SFP-KEY2	1	**1450520000**
Control cabinet key (double bit)	IE-FC-SFM-CAB	1	**2003160000**	IE-FC-SFP-CAB	1	**2003140000**
Control cabinet key (Daimler)	IE-FC-SFM-CAB-DB	1	**2663200000**	IE-FC-SFP-CAB-DB	1	**2663190000**
Note						

Accessories

	Metal cover			Plastic cover		
spare key	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	IE-FC-KEY2	1	**2066650000**	IE-FC-KEY2	1	**2066650000**
Marking tags						
silver	SM 27/18 K MC NE SI	80	**1713760000**	SM 27/18 K MC NE SI	80	**1713760000**
light grey	SM 27/18 K MC NE GR	80	**1073340000**	SM 27/18 K MC NE GR	80	**1073340000**
white	SM 27/18 K MC NE WS	80	**1707270000**	SM 27/18 K MC NE WS	80	**1707270000**
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Accessories for mounting cut-out						
Punch for hole punching tool	KOK 52 X 91	1	**2008410000**	KOK 52 X 91	1	**2008410000**
Punching tool	IE-KO-HAT	1	**1966810000**	IE-KO-HAT	1	**1966810000**

Note

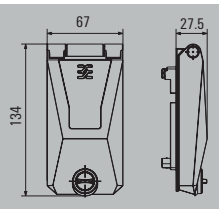
FrontCom® Vario IP65 service interface

FrontCom® Vario
Plastic single frame

- IP65

Plastic cover





Technical data

Protection degree / Protection class (UL)	IP65, in closed state
Material cover	Polycarbonate PC
Material frame	Polycarbonate glass fiber reinforced
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CE

Note

Ordering data

Type	Qty.	Order No.
IE-FC-SFPP-KNOB	1	**3041950000**

Note

Accessories

	Type	Qty.	Order No.
Marking tags			
silver	SM 27/18 K MC NE SI	80	**1713760000**
light grey	SM 27/18 K MC NE GR	80	**1073340000**
white	SM 27/18 K MC NE WS	80	**1707270000**
MultiCard			
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection			
Touch-safe protection	IE-FC-PWPC	1	**1450820000**
Accessories for mounting cut-out			
Punch for hole punching tool	KOK 52 X 91	1	**2008410000**
Punching tool	IE-KO-HAT	1	**1966810000**

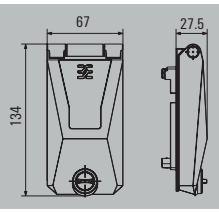
Note

FrontCom® Vario
Frame UL Type 4X

- For particularly harsh environmental conditions (outdoor) with UL Type 4X approval

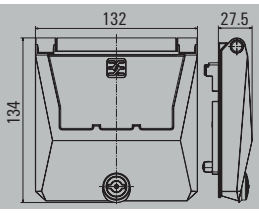
Single frame, metal cover





Double frame, metal cover





Technical data

Protection degree / Protection class (UL)	IP65, in closed state / Type 4X	IP65, in closed state / Type 4X
Material cover	Zinc diecast, powder-coated	Zinc diecast, powder-coated
Material frame	Zinc diecast, powder-coated	Zinc diecast, powder-coated
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	CSA; CURUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Rotary button operation	IE-FC-SFM-KNOB-4X	1	**2669630000**	IE-FC-DFM-KNOB-4X	1	**2669640000**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Marking tags						
silver	SM 27/18 K MC NE SI	80	**1713760000**	SM 27/18 K MC NE SI	80	**1713760000**
light grey	SM 27/18 K MC NE GR	80	**1073340000**	SM 27/18 K MC NE GR	80	**1073340000**
white	SM 27/18 K MC NE WS	80	**1707270000**	SM 27/18 K MC NE WS	80	**1707270000**
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Accessories for mounting cut-out						
Punch for hole punching tool	KOK 52 X 91	1	**2008410000**			
Punching tool	IE-KO-HAT	1	**1966810000**			
Bar (for mounting single insert plates)						
Partition				IE-FC-DF-IPH	1	**2003340000**

Note		

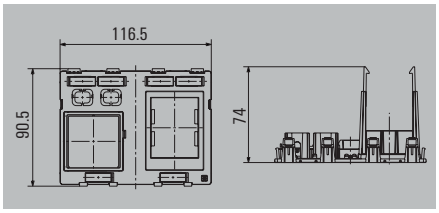
FrontCom® Vario IP65 service interface

FrontCom® Vario
Insert plates for double frames

- IP20

1 x power, 2 x data, 1 x RCBO





Technical data

Material	Polycarbonate PC
Insert, data	2
Insert Power large	1
Insert RCBO (2 modular width units)	1
Insert suitable for RCBO according to standard	DIN43880
Insert GFCI /2 x Power US pre-assembled	
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CSA; CURUS
Note	

Ordering data

	Type	Qty.	Order No.
shielded	IE-FC-DSP-PWB/2ST/FILS	1	2067080000
unshielded	IE-FC-DIP-PWB/2ST/FILS	1	2067070000
Note			

Accessories

Inserts, Data	Type	Qty.	Order No.
SPE Coupling	IE-BI-SP0-C	1	2861260000
RJ45 coupling	IE-BI-RJ45-C	10	1962840000
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	1963840000
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	1963830000
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	1962850000
USB 2.0 A / A	IE-BI-USB-A	1	1019570000
USB 3.0 A / A	IE-BI-USB-3.0-A	1	1487920000
USB 2.0 A / B	IE-BI-USB-AB	1	1131380000
MultiCard			
	ESG 7/20 SIRIUS MC NE WS	200	1736181044
Touch-safe protection			
Touch-safe protection	IE-FC-PWPC	1	1450820000

Note	An overview of the power inserts can be found in this chapter under power insert sockets.

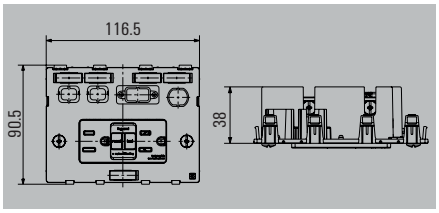
FrontCom® Vario
Insert plates for double frames

- IP20

1x GFCI, 2x data, 1x signal, 1x fuse

GFCI pre-assembled

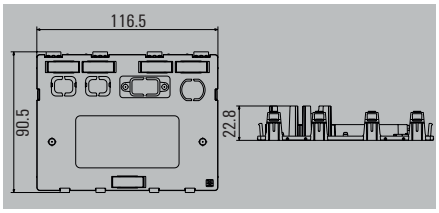




1x GFCI, 2x data, 1x signal, 1x fuse

without GFCI





Technical data

Material	Polycarbonate PC	Polycarbonate PC
Insert, data	2	2
Insert Power large		
Insert fuse	1	1
Signal insert D-Sub 9-pole / VGA / HDMI	1	1
Insert RCBO (2 modular width units)		
Insert GFCI /2 x Power US pre-assembled	1	
Ambient temperature (operational)	-35 °C...66 °C	-40 °C...70 °C
Approvals	CSA; CURUS	
Technical data GFCI insert		
Operating voltage / Nominal current	125 V / 20 A	
GFCI protected US outlet	2 pieces	
Self-test	automatically every 3 seconds	
Status indication	red LED	
Type of connection	Screw connection	
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	
Conductor connection cross-section, rigid	1.5 ... 4 mm²	
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded	IE-FC-DSP-CI/3A/2ST/1D9	1	**2004810000**			
unshielded	IE-FC-DIP-CI/3A/2ST/1D9	1	**2003370000**	IE-FC-DIP-PWC-3A/2ST/1D9	1	**2897320000**
Note	incl. pre-mounted GFCI					

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Inserts, Signal						
D-Sub, 9-pole, female/female	IE-FCI-D9-FF	1	**1450840000**	IE-FCI-D9-FF	1	**1450840000**
D-Sub, 9-pole, female / male	IE-FCI-D9-FM	1	**1450850000**	IE-FCI-D9-FM	1	**1450850000**
D-Sub, 9-pole, female / solder connection	IE-FCI-D9-FS	1	**1450870000**	IE-FCI-D9-FS	1	**1450870000**
VGA coupling	IE-FCI-HD15-FF	1	**1556290000**	IE-FCI-HD15-FF	1	**1556290000**
HDMI coupling	IE-FCI-HDMI-FF	1	**2003390000**	IE-FCI-HDMI-FF	1	**2003390000**
Fuse inserts						
3 A	IE-FCI-PWCB-3A	1	**1543690000**	IE-FCI-PWCB-3A	1	**1543690000**
Inserts, Data						
SPE Coupling	IE-BI-SP0-C	1	**2861260000**	IE-BI-SP0-C	1	**2861260000**
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**	IE-BI-RJ45-C	10	**1962840000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**	IE-BI-RJ45-FJ-A	10	**1962850000**
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**	IE-BI-RJ45-FJ-P	10	**1963830000**
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**	IE-BI-USB-A	1	**1019570000**
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**	IE-BI-USB-3.0-A	1	**1487920000**
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**	IE-BI-USB-AB	1	**1131380000**
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Note						

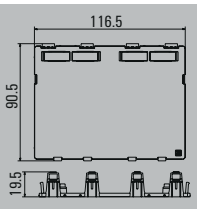
FrontCom® Vario IP65 service interface

FrontCom® Vario Insert plates

- IP20

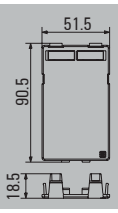
blank double plate





blank single plate





Technical data

Material	Polycarbonate PC	Polycarbonate PC
Ambient temperature (operational)	-40...70	-40...70
Approvals	CSA; CURUS	CSA; CURUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
unshielded	IE-FC-DIP-BP	1	**2004890000**
Note			

	Type	Qty.	Order No.
	IE-FC-IP-BP	1	**1450710000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

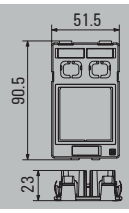
Note		

FrontCom® Vario
Insert plates

- IP20

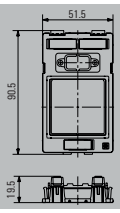
1 x power, 2 x data





1x Power, 1x Signal





Technical data

Material	Polycarbonate PC	Polycarbonate PC
Insert, data	2	
Signal insert DisplayPort		
Signal insert D-Sub 9-pole / VGA / HDMI		1
Insert, signal, D-Sub, 25-pole		
Insert Power large	1	1
Insert Power small		
Insert Power US		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	CSA; CURUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded	IE-FC-SP-PWB/2ST	1	**1450550000**			
unshielded	IE-FC-IP-PWB/2ST	1	**1450630000**	IE-FC-IP-PWB/1D9	1	**2003350000**
Note						

Accessories

Inserts, Data						
SPE Coupling	IE-BI-SP0-C	1	**2861260000**			
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**			
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**			
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**			
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**			
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**			
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**			
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**			
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Inserts, Signal						
D-Sub, 9-pole, female/female				IE-FCI-D9-FF	1	**1450840000**
D-Sub, 9-pole, female / male				IE-FCI-D9-FM	1	**1450850000**
D-Sub, 9-pole, female / solder connection				IE-FCI-D9-FS	1	**1450870000**
VGA coupling				IE-FCI-HD15-FF	1	**1556290000**
HDMI coupling				IE-FCI-HDMI-FF	1	**2003390000**
DisplayPort (DP)						

Note	You will find an overview of the power inserts in this chapter under Power inserts-sockets.	You will find an overview of the power inserts in this chapter under Power inserts-sockets.

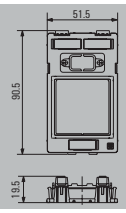
FrontCom® Vario IP65 service interface

FrontCom® Vario Insert plates

- IP20

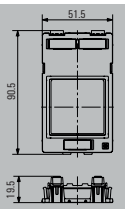
1x Power, 1x Signal





1x Power





Technical data

	1x Power, 1x Signal	1x Power
Material	Polycarbonate PC	Polycarbonate PC
Insert, data		
Signal insert DisplayPort	1	
Signal insert D-Sub 9-pole / VGA / HDMI		
Insert, signal, D-Sub, 25-pole		
Insert Power large	1	1
Insert Power small		
Insert Power US		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals		CSA; CURUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded						
unshielded	IE-FC-IP-PWB/1DP	1	**3042060000**	IE-FC-IP-PWB	1	**2548060000**
Note						

Accessories

Inserts, Data	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
SPE Coupling						
RJ45 coupling						
RJ45 module EIA/TIA T568 A						
RJ45 module EIA/TIA T568 B						
RJ45 module PROFINET						
USB 2.0 A / A						
USB 3.0 A / A						
USB 2.0 A / B						
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Inserts, Signal						
D-Sub, 9-pole, female/female						
D-Sub, 9-pole, female / male						
D-Sub, 9-pole, female / solder connection						
VGA coupling						
HDMI coupling						
DisplayPort (DP)	IE-FCI-DP-FF	1	**3042050000**			

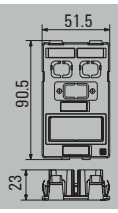
Note		
		You will find an overview of the power inserts in this chapter under Power inserts-sockets.

FrontCom® Vario
Insert plates

- IP20

1x Power, 2x Data, 1x Signal





Technical data

Material	Polycarbonate PC
Insert, data	2
Signal insert DisplayPort	
Signal insert D-Sub 9-pole / VGA / HDMI	1
Insert, signal, D-Sub, 25-pole	
Insert Power large	
Insert Power small	1
Insert Power US	
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER
Note	

Ordering data

	Type	Qty.	Order No.
shielded	IE-FC-SP-PWS/2ST/1D9	1	**1450600000**
unshielded	IE-FC-IP-PWS/2ST/1D9	1	**1450690000**
Note			

Accessories

Inserts, Data	**Type**	**Qty.**	**Order No.**
SPE Coupling	IE-BI-SP0-C	1	**2861260000**
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**
MultiCard			
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection			
Touch-safe protection	IE-FC-PWPC	1	**1450820000**
Inserts, Signal			
D-Sub, 9-pole, female/female	IE-FCI-D9-FF	1	**1450840000**
D-Sub, 9-pole, female / male	IE-FCI-D9-FM	1	**1450850000**
D-Sub, 9-pole, female / solder connection	IE-FCI-D9-FS	1	**1450870000**
VGA coupling	IE-FCI-HD15-FF	1	**1556290000**
HDMI coupling	IE-FCI-HDMI-FF	1	**2003390000**
DisplayPort (DP)			

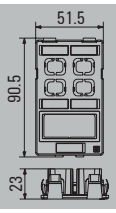
Note	
	You will find an overview of the power inserts in this chapter under Power inserts-sockets.

FrontCom® Vario Insert plates

- IP20

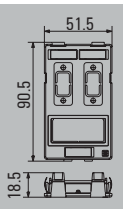
1 x power, 4 x data





1 x power, 2 x signal





Technical data

Material	Polycarbonate PC	Polycarbonate PC
Insert, data	4	
Signal insert D-Sub 9-pole / VGA / HDMI		2
Insert, signal, D-Sub, 25-pole		
Insert Power large		
Insert Power small	1	1
Insert Power US		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	CSA; CURUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded	IE-FC-SP-PWS/4ST	1	**1450570000**	IE-FC-SP-PWS/2D9	1	**1450610000**
unshielded	IE-FC-IP-PWS/4ST	1	**1450640000**	IE-FC-IP-PWS/2D9	1	**1450680000**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Inserts, Power						
Socket IT/EU	IE-FCI-PWS-IT	1	**1450810000**	IE-FCI-PWS-IT	1	**1450810000**
Inserts, Data						
SPE Coupling	IE-BI-SP0-C	1	**2861260000**			
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**			
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**			
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**			
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**			
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**			
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**			
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**			
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Inserts, Signal						
D-Sub, 9-pole, female/female				IE-FCI-D9-FF	1	**1450840000**
D-Sub, 9-pole, female / male				IE-FCI-D9-FM	1	**1450850000**
D-Sub, 9-pole, female / solder connection				IE-FCI-D9-FS	1	**1450870000**
VGA coupling				IE-FCI-HD15-FF	1	**1556290000**
HDMI coupling				IE-FCI-HDMI-FF	1	**2003390000**

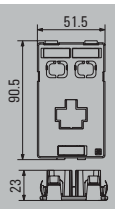
Note

FrontCom® Vario
Insert plates

- IP20

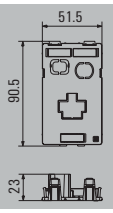
1 x power, 2 x data





1 x power, 1 x 3A fuse, 1 x data





Technical data

Material	Polycarbonate PC	Polycarbonate PC
Insert, data	2	1
Signal insert D-Sub 9-pole / VGA / HDMI		
Insert, signal, D-Sub, 25-pole		
Insert Power large		
Insert Power small		
Insert Power US	1	1
Insert fuse		1
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	CSA; CURUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded	IE-FC-SP-PWU/2ST	1	**1450620000**			
unshielded	IE-FC-IP-PWU/2ST	1	**1450700000**	IE-FC-IP-PWU/1ST/CB	1	**1543710000**
Note	For US socket the touch-safe protection is mandatory			For US socket the touch-safe protection is mandatory		

Accessories

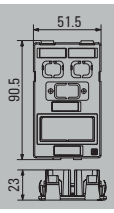
Inserts, Signal	Type	Qty.	Order No.	Type	Qty.	Order No.
D-Sub, 9-pole, female/female						
D-Sub, 9-pole, female / male						
D-Sub, 9-pole, female / solder connection						
D-Sub, 25-pole, female/female						
D-Sub, 25-pole, female/male						
D-Sub, 25-pole, female / solder connection						
HDMI coupling						
VGA coupling						
Inserts, Data						
SPE Coupling	IE-BI-SP0-C	1	**2861260000**	IE-BI-SP0-C	1	**2861260000**
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**	IE-BI-RJ45-C	10	**1962840000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**	IE-BI-RJ45-FJ-A	10	**1962850000**
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**	IE-BI-RJ45-FJ-P	10	**1963830000**
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**	IE-BI-USB-A	1	**1019570000**
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**	IE-BI-USB-3.0-A	1	**1487920000**
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**	IE-BI-USB-AB	1	**1131380000**
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Inserts, Power						
US socket	IE-FCI-PWS-US	1	**1450800000**	IE-FCI-PWS-US	1	**1450800000**
Fuse inserts						
3 A				IE-FCI-PWCB-3A	1	**1543690000**
Note						

FrontCom® Vario Insert plates

- IP20

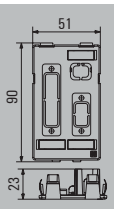
2 x data, 2 x signal





1 x data, 2 x signal





Technical data

	2 x data, 2 x signal	1 x data, 2 x signal
Material	Polycarbonate PC	Polycarbonate PC
Insert, data	2	1
Signal insert D-Sub 9-pole / VGA / HDMI	2	1
Insert, signal, D-Sub, 25-pole		1
Insert Power large		
Insert Power small		
Insert Power US		
Insert fuse		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CSA; CURUS; DETNORVER	CSA; CURUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
shielded	IE-FC-SP-2ST/2D9	1	**1450590000**	IE-FC-SP-1ST/1D9/1D25	1	**1450580000**
unshielded	IE-FC-IP-2ST/2D9	1	**1450670000**	IE-FC-IP-1ST/1D9/1D25	1	**1450650000**
Note						

Accessories

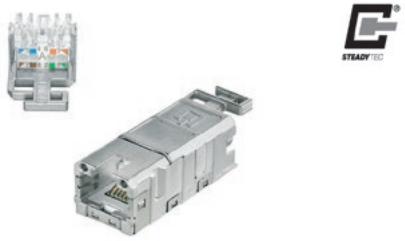
	Type	Qty.	Order No.	Type	Qty.	Order No.
Inserts, Signal						
D-Sub, 9-pole, female/female	IE-FCI-D9-FF	1	**1450840000**	IE-FCI-D9-FF	1	**1450840000**
D-Sub, 9-pole, female / male	IE-FCI-D9-FM	1	**1450850000**	IE-FCI-D9-FM	1	**1450850000**
D-Sub, 9-pole, female / solder connection	IE-FCI-D9-FS	1	**1450870000**	IE-FCI-D9-FS	1	**1450870000**
D-Sub, 25-pole, female/female				IE-FCI-D25-FM	1	**1450890000**
D-Sub, 25-pole, female/male				IE-FCI-D25-FS	1	**1450900000**
D-Sub, 25-pole, female / solder connection				IE-FCI-D25-FF	1	**1450880000**
HDMI coupling	IE-FCI-HDMI-FF	1	**2003390000**	IE-FCI-HDMI-FF	1	**2003390000**
VGA coupling	IE-FCI-HD15-FF	1	**1556290000**	IE-FCI-HD15-FF	1	**1556290000**
Inserts, Data						
SPE Coupling	IE-BI-SP0-C	1	**2861260000**	IE-BI-SP0-C	1	**2861260000**
RJ45 coupling	IE-BI-RJ45-C	10	**1962840000**	IE-BI-RJ45-C	10	**1962840000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**	IE-BI-RJ45-FJ-A	10	**1962850000**
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**	IE-BI-RJ45-FJ-P	10	**1963830000**
USB 2.0 A / A	IE-BI-USB-A	1	**1019570000**	IE-BI-USB-A	1	**1019570000**
USB 3.0 A / A	IE-BI-USB-3.0-A	1	**1487920000**	IE-BI-USB-3.0-A	1	**1487920000**
USB 2.0 A / B	IE-BI-USB-AB	1	**1131380000**	IE-BI-USB-AB	1	**1131380000**
MultiCard						
	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**	ESG 7/20 SIRIUS MC NE WS	200	**1736181044**
Touch-safe protection						
Touch-safe protection	IE-FC-PWPC	1	**1450820000**	IE-FC-PWPC	1	**1450820000**
Inserts, Power						
US socket						
Fuse inserts						
3 A						
Note						

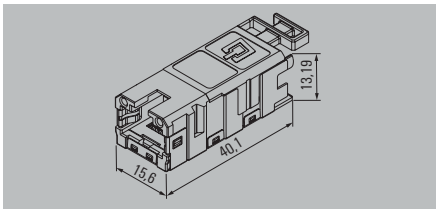
Data inserts

RJ45

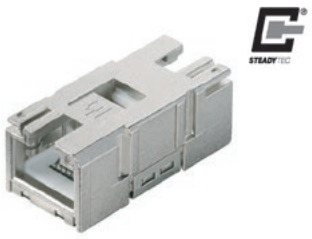
- Completely in Cat. 6_A
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

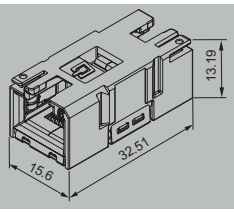
Module





Coupling





Technical data

Protection degree	IP67 with housing	IP67 with housing
Plugging cycles	750	750
Shielding	360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding	360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over Nickel, Au ≥ 0.8 µm	Gold over Nickel, Au ≥ 0.8 µm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	
Insulation diameter, min. / max.	0.85 mm...1.6 mm	...
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
PoE / PoE+	conforming to IEEE 802.3bt	conforming to IEEE 802.3af
Approvals	CULUS	CULUS; DETNORVER
Note	Connection of WM Cat. 7 AWG 27/7 LSZH possible	

Ordering data

tool-free	Type	Qty.	Order No.	Type	Qty.	Order No.
TIA-A. Cat. 6_A	IE-BI-RJ45-FJ-A	10	**1962850000**			
TIA-B. Cat. 6_A	IE-BI-RJ45-FJ-B	10	**1963840000**			
PROFINET Cat. 5	IE-BI-RJ45-FJ-P	10	**1963830000**			
Coupling				IE-BI-RJ45-C	10	**1962840000**
Note						

Accessories

Type	Qty.	Order No.	Type	Qty.	Order No.

Note

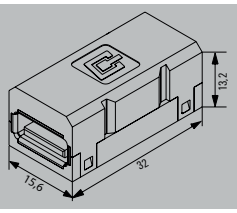
Data inserts

USB

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

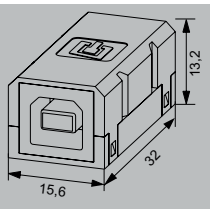
Coupling USB A/A





Coupling USB A/B





Technical data

Protection degree	IP67 with housing	IP67 with housing
Shielding	360° all-round enclosure	360° all-round enclosure
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connection 1 / 2	USB A / USB A	USB A / USB B
Connector standard	IEC 61076-3-107	IEC 61076-3-107
Approvals	CULUS; DETNORVER	CULUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
USB 2.0	IE-BI-USB-A	1	**1019570000**	IE-BI-USB-AB	1	**1131380000**
USB 3.0	IE-BI-USB-3.0-A	1	**1487920000**			
Note						

Accessories

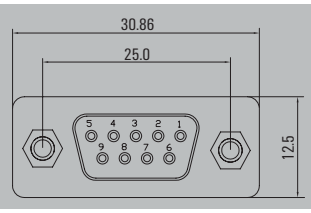
	Type	Qty.	Order No.	Type	Qty.	Order No.
USB cable 2.0						
0.5 m	IE-USB-A-A-0.5M	1	**1993550005**			
1.0 m	IE-USB-A-A-1.0M	1	**1993550010**			
1.5 m	IE-USB-A-A-1.5M	1	**1993550015**			
1.8 m	IE-USB-A-A-1.8M	1	**1993550018**			
3.0 m	IE-USB-A-A-3.0M	1	**1993550030**			
USB cable 3.0						
0.5 m	IE-USB-3.0-A-A-0.5M	1	**2581730005**			
1.8 m	IE-USB-3.0-A-A-1.8M	1	**2581730018**			
3.0 m	IE-USB-3.0-A-A-3M	1	**2581730030**			
5.0 m	IE-USB-3.0-A-A-5M	1	**2581730050**			

Note

Signal inserts
D-sub

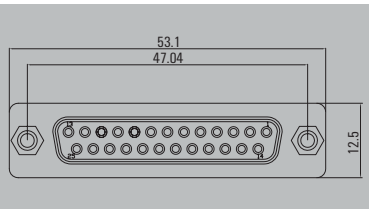
9-pole





25-pole





Technical data

	9-pole	25-pole
Protection degree	IP20	IP20
Housing main material	SPCC	SPCC
Number of poles	9	25
Housing surface	tin-plated	tin-plated
Material insulator	PBT glass fibre reinforced UL 94 V-0	PBT glass fibre reinforced UL 94 V-0
Contact surface	Gold-plated	Gold-plated
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	1000 MΩ at 500 V DC	1000 MΩ at 500 V DC
Dielectric strength, contact / contact	1 kV_{eff} /1 min.	1 kV_{eff} /1 min.
Ambient temperature (operational)	-55 °C...105 °C	-55 °C...105 °C
Approvals	DETNORVER	DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
Socket / socket	IE-FCI-D9-FF	1	**1450840000**
Socket / plug	IE-FCI-D9-FM	1	**1450850000**
Socket / solder connection	IE-FCI-D9-FS	1	**1450870000**

Note

	Type	Qty.	Order No.
Socket / socket	IE-FCI-D25-FF	1	**1450880000**
Socket / plug	IE-FCI-D25-FM	1	**1450890000**
Socket / solder connection	IE-FCI-D25-FS	1	**1450900000**

Note

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

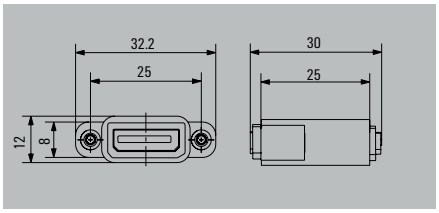
Note

FrontCom® Vario IP65 service interface

Signal inserts

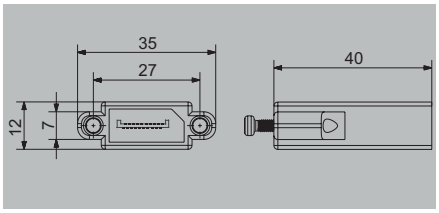
HDMI





DisplayPort (DP)





Technical data

Protection degree	IP20	IP20
Housing main material	PVC casting	PVC casting
Number of poles	9	20
Housing surface		
Contact surface	Gold-plated	Gold-plated
Contact resistance		
Insulation resistance		
Dielectric strength, contact / contact		
Ambient temperature (operational)	-15 °C...50 °C	-20 °C...45 °C
Approvals		
Note		

Ordering data

Type	Qty.	Order No.
IE-FCI-HDMI-FF	1	**2003390000**

Note

Type	Qty.	Order No.
IE-FCI-DP-FF	1	**3042050000**

Note

Accessories

Type	Qty.	Order No.

Note

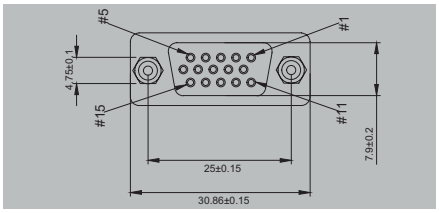
Type	Qty.	Order No.

Note

Signal inserts

HD15 / VGA





Technical data

Protection degree	IP20
Housing main material	
Number of poles	25
Housing surface	
Contact surface	Gold over nickel
Contact resistance	
Insulation resistance	1000 MΩ at 500 V DC
Dielectric strength, contact / contact	1000 V_{eff} / 1 min
Ambient temperature (operational)	-55 °C...105 °C
Approvals	DETNORVER
Note	

Ordering data

Type	Qty.	Order No.
IE-FCI-HD15-FF	1	1556290000

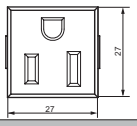
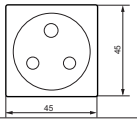
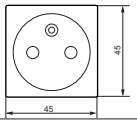
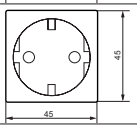
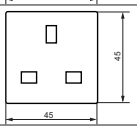
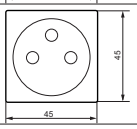
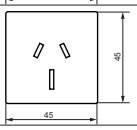
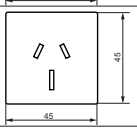
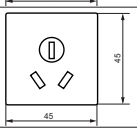
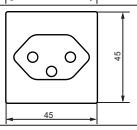
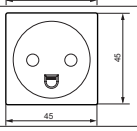
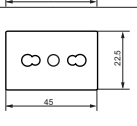
Note

Accessories

Type	Qty.	Order No.

Note

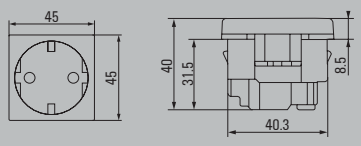
Type overview: Power inserts/sockets

Type	Region	Plug-Type		Qty.	Order No.
IE-FCI-PWS-US	USA	Type B	 Power socket type B isn't compatible with mounting rail adaptor, but it's applicable with following insert plates: 1450620000, 1450700000, 1543710000.	1	**1450800000**
IE-FCI-PWB-IND	India, South Africa	Type D		1	**2500710000**
IE-FCI-PWB-FR/B/CZ	France, Belgium, Czechia	Type E		1	**2426700000**
IE-FCI-PWB-DE	Germany	Type F		1	**1450730000**
IE-FCI-PWB-GB	Great Britain	Type G		1	**1450770000**
IE-FCI-PWS-ISR	Israel	Tpy H		1	**2531060000**
IE-FCI-PWB-AU-15A	Australia	Type I	 The difference to IE-FCI-PWB-AU-10A and IE-FCI-PWB-CN is rated current: 15A 240V and the protective contact is higher and wider. Furthermore the difference to IE-FCI-PWB-CN is the connection on the backside.	1	**1450830000**
IE-FCI-PWB-AU-10A	Australia	Type I	 The difference to IE-FCI-PWB-CN is the connection on the backside. Connector face is the same. The difference to IE-FCI-PWB-AU is rated current: 10A 240V and the protective contact is smaller and thinner.	1	**1546590000**
IE-FCI-PWB-CN	China	Type I	 The difference to IE-FCI-PWB-AU is rated current: 10A 240V and the protective contact is smaller and thinner. Furthermore the difference to IE-FCI-PWB-AU-10A and IE-FCI-PWB-AU is the connection on the backside.	1	**1450790000**
IE-FCI-PWB-CH	Schwitzerland	Type J		1	**1450780000**
IE-FCI-PWB-DK	Denmark	Type K		1	**2661340000**
IE-FCI-PWS-IT	Italy, Europe	Type L		1	**1450810000**

Power inserts
Power sockets

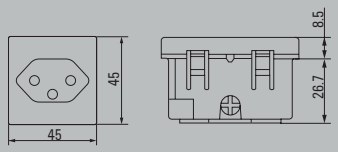
Germany





Switzerland





Technical data

	Germany	Switzerland
Protection degree	IP20	IP20
Housing main material	Polycarbonate PC	Polycarbonate PC
Type of connection	PUSH IN	PUSH IN
Connector face	Type F	Type J
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	1.5 ... 1.5 mm²
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	1.5 ... 1.5 mm²
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
Stripping length	10 mm	10 mm
Rated voltage (AC)	250 V	250 V
Nominal current	16 A	10 A
Ambient temperature (operational)	-5 °C...40 °C	-5 °C...40 °C
Approvals	CE; DETNORVER	CE; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
white	IE-FCI-PWB-DE	1	**1450730000**	IE-FCI-PWB-CH	1	**1450780000**
orange	IE-FCI-PWB-DE-OR	1	**1554000000**			
black	IE-FCI-PWB-DE-BK	1	**3088740000**			
Note						

Accessories

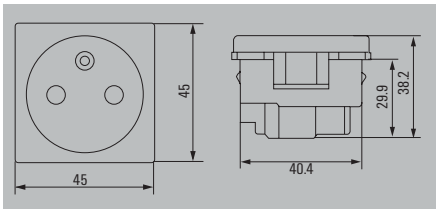
FrontCom	Type	Qty.	Order No.	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**	IE-DINRAIL-AD-PWB	1	**2534680000**
Flat blade connector, 6.5 mm						
straight, 4.8 mm, fully insulated						
Note						

FrontCom® Vario IP65 service interface

Power inserts
Power sockets

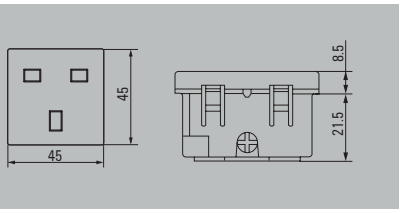
France / Belgium / Czech Republic





UK





Technical data

Protection degree	IP20	IP20
Housing main material	Polycarbonate PC	Polycarbonate PC
Type of connection	PUSH IN	Screw connection
Connector face	Type E	Type G
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 4 mm²
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 4 mm²
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²	1.5 ... 4 mm²
Stripping length	12 mm	9 mm
Rated voltage (AC)	250 V	250 V
Nominal current	16 A	13 A
Ambient temperature (operational)	-5 °C...35 °C	-5 °C...40 °C
Approvals	CE	CE; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
white	IE-FCI-PWB-FR/B/CZ	1	**2426700000**
orange	IE-FCI-PWB-FR-OR	1	**2007230000**
black			

	Type	Qty.	Order No.
	IE-FCI-PWB-GB	1	**1450770000**

Note

Accessories

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**
Flat blade connector, 6.5 mm			
straight, 4.8 mm, fully insulated			

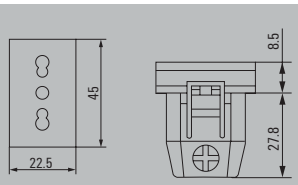
Type	Qty.	Order No.
IE-DINRAIL-AD-PWB	1	**2534680000**

Note

Power inserts
Power sockets

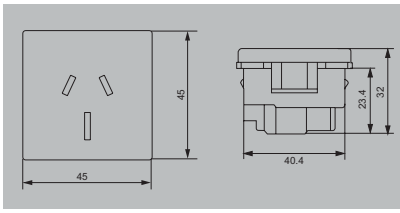
Italy / Europe





Australia, 15 A





Technical data

Protection degree	IP20	IP20
Housing main material	Polycarbonate PC	Polycarbonate PC
Type of connection	Screw connection	Screw connection
Connector face	Type L	Type I
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 4 mm²	1.5 ... 4 mm²
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 4 mm²	1.5 ... 4 mm²
Conductor connection cross-section, rigid	1.5 ... 4 mm²	1.5 ... 4 mm²
Stripping length	9 mm	9 mm
Rated voltage (AC)	250 V	240 V
Nominal current	16 A	15 A
Ambient temperature (operational)	-5 °C...40 °C	-5 °C...40 °C
Approvals	CE; DETNORVER	CE; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
white	IE-FCI-PWS-IT	1	**1450810000**
orange			
black			

	Type	Qty.	Order No.
	IE-FCI-PWB-AU	1	**1450830000**

Note

Accessories

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**
Flat blade connector, 6.5 mm			
straight, 4.8 mm, fully insulated			

	Type	Qty.	Order No.
	IE-DINRAIL-AD-PWB	1	**2534680000**

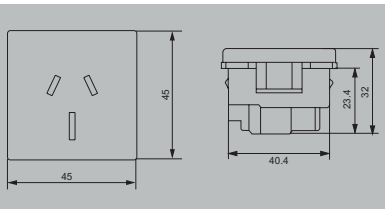
Note

FrontCom® Vario IP65 service interface

Power inserts
Power sockets

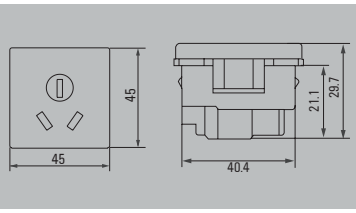
Australia, 10 A





China





Technical data

Protection degree	IP20	IP20
Housing main material	Polycarbonate PC	Polycarbonate PC
Type of connection	Screw connection	Screw connection
Connector face	Type I	Type I
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 4 mm²	1.5 ... 4 mm²
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded without wire-end ferrule	1.5 ... 4 mm²	1.5 ... 4 mm²
Conductor connection cross-section, rigid	1.5 ... 4 mm²	1.5 ... 4 mm²
Stripping length	9 mm	9 mm
Rated voltage (AC)	240 V	250 V
Nominal current	10 A	10 A
Ambient temperature (operational)	-5 °C...40 °C	-5 °C...40 °C
Approvals	CE; DETNORVER	CE; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
white	IE-FCI-PWB-AU-10A	1	**1546590000**
orange			
black			

	Type	Qty.	Order No.
	IE-FCI-PWB-CN	1	**1450790000**

Note

Accessories

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**
Flat blade connector, 6.5 mm			
straight, 4.8 mm, fully insulated			

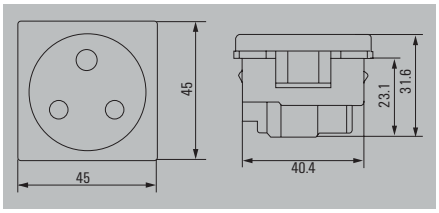
	Type	Qty.	Order No.
	IE-DINRAIL-AD-PWB	1	**2534680000**

Note

Power inserts
Power sockets

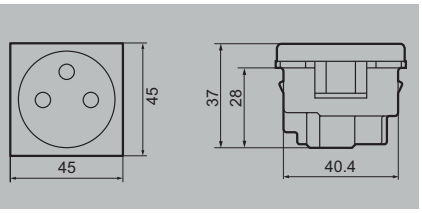
India





Israel





Technical data

	India	Israel
Protection degree	IP20	IP20
Housing main material	Polycarbonate PC	PP
Type of connection	Screw connection	Screw connection
Connector face	Type D	Type H
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 1.5 mm²
finely stranded without wire-end ferrule	...	...
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 1.5 mm²
finely stranded without wire-end ferrule	...	...
Conductor connection cross-section, rigid	1.5 ... 4 mm²	1.5 ... 2.5 mm²
Stripping length	9 mm	11 mm
Rated voltage (AC)	250 V	250 V
Nominal current	5 A	16 A
Ambient temperature (operational)	-5 °C...40 °C	-5 °C...40 °C
Approvals	CE	CE
Note		

Ordering data

	India Type	Qty.	Order No.	Israel Type	Qty.	Order No.
white	IE-FCI-PWB-IND	1	2500710000	IE-FCI-PWB-ISR	1	2531060000
orange						
black						
Note						

Accessories

FrontCom	India Type	Qty.	Order No.	Israel Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	2534680000	IE-DINRAIL-AD-PWB	1	2534680000
Flat blade connector, 6.5 mm						
straight, 4.8 mm, fully insulated						

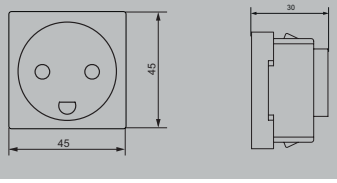
Note		

FrontCom® Vario IP65 service interface

Power inserts
Power sockets

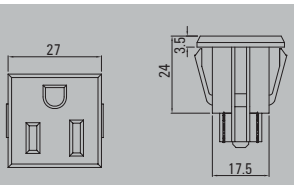
Denmark





USA





Technical data

	Denmark	USA
Protection degree	IP20	IP20 (front side)
Housing main material	Polycarbonate PC	PA 66
Type of connection	PUSH IN	Solder connection, FS 4.8 x 0.8
Connector face	Type K	Type B
Connector standard		
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	...
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	...
finely stranded with wire-end ferrule	1.5 ... 1.5 mm²	...
finely stranded without wire-end ferrule	1.5 ... 2.5 mm²	...
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²	...
Stripping length	13 mm	
Rated voltage (AC)	250 V	125 V
Nominal current	13 A	15 A
Ambient temperature (operational)	-5 °C...40 °C	-20 °C...85 °C
Approvals	CE	CURUS; DETNORVER; UR
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
white	IE-FCI-PWB-DK	1	**2661340000**			
orange						
black				IE-FCI-PWS-US	1	**1450800000**
Note				For US socket the touch-safe protection is mandatory		

Accessories

FrontCom	Type	Qty.	Order No.	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**			
Flat blade connector, 6.5 mm						
straight, 4.8 mm, fully insulated				VFSKHV/1,5-2,5/485	100	**1491920000**

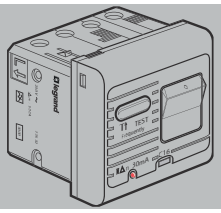
Note

Power inserts

RCBO

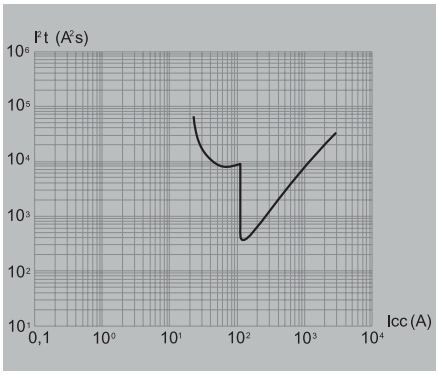
RCBO





Technical data

Ambient temperature (operational)	-5 °C...40 °C
Operating voltage	230 V AC
Nominal current	16 A
IΔm	500 A
IΔn	30 mA
Triggering characteristic	Typ C
Type of connection	Screw connection
Line connection cross-section	
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²
Note	



Ordering data

Type	Qty.	Order No.
IE-FCI-PWB-RCBO	1	1534250000

Note

Accessories

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	2534680000

Note

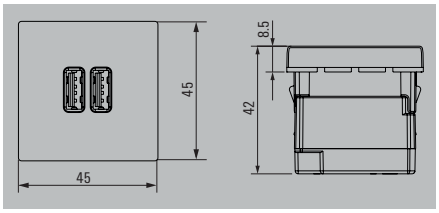
Power inserts

USB charge insert

- IP20
- USB Charger 5 V / 3 A

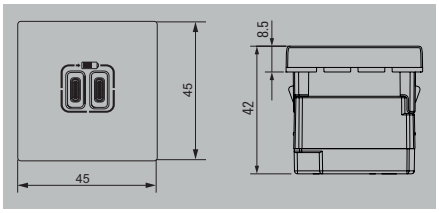
2 x USB A





2 x USB C





Technical data

Ambient temperature (operational)	0 °C...45 °C	0 °C...45 °C
Input voltage	100...240 V	100...240 V
Frequency range	50...60 Hz	50...60 Hz
Input current	≤ 300 mA	≤ 300 mA
Output voltage	5 V DC	5 V DC
Output current	3 A	3 A
Degree of efficiency	80%	80%
Power consumption in standby mode	max. 0.1 W	max. 0.1 W
Standards	EN 60950-1, EN 62684	EN 60950-1, EN 62684
Protection class	II	II
Housing main material	Polycarbonate PC	Polycarbonate PC
Type of connection	Screw connection	Screw connection
Line connection cross-section		
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²	1.5 ... 2.5 mm²
Stripping length	6 mm	6 mm
Note		

Ordering data

Type	Qty.	Order No.
IE-FCI-PWB-2USB-A-5V	1	**2505070000**

Note

Type	Qty.	Order No.
IE-FCI-PWB-2USB-C-5V	1	**2902350000**

Accessories

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**

FrontCom	Type	Qty.	Order No.
Adapter for mounting rail installation	IE-DINRAIL-AD-PWB	1	**2534680000**

Note

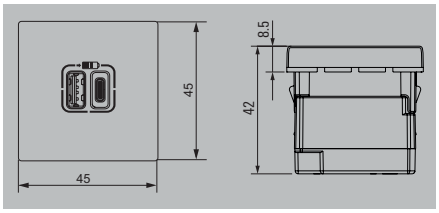
Power inserts

USB charge insert

- IP20
- USB Charger 5 V / 3 A

USB A / USB C





Technical data

Ambient temperature (operational)	0 °C...45 °C
Input voltage	100...240 V
Frequency range	50...60 Hz
Input current	≤ 300 mA
Output voltage	5 V DC
Output current	3 A
Degree of efficiency	80%
Power consumption in standby mode	max. 0.1 W
Standards	EN 60950-1, EN 62684
Protection class	II
Housing main material	Polycarbonate PC
Type of connection	Screw connection
Line connection cross-section	
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²
finely stranded with wire-end ferrule	1.5 ... 2.5 mm²
Conductor connection cross-section, rigid	1.5 ... 2.5 mm²
Stripping length	6 mm

Note

Ordering data

Type	Qty.	Order No.
IE-FCI-PWB-2USB-A/C-5V	1	2902340000

Note

Accessories

FrontCom

Adapter for mounting rail installation

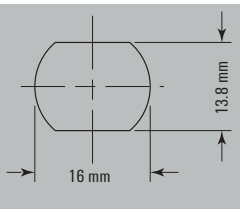
Type	Qty.	Order No.
IE-DINRAIL-AD-PWB	1	2534680000

Note

3A fuse

3A fuse





Technical data

Operating voltage	32 V DC, 250 V AC
Nominal current	3 A
Type of connection	Flat-blade receptacles 6.5 mm

Note

Ordering data

Type	Qty.	Order No.
IE-FCI-PWCB-3A	1	**1543690000**

Note

Accessories

Flat blade connector, 6.5 mm

Type	Qty.	Order No.
angled WFSKHV/1,5-2,5	100	**1491970000**
straight VFSKHV/1,5-2,5/638	100	**1491940000**

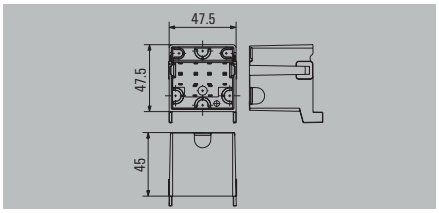
Note

Accessories

Touch-safe protection

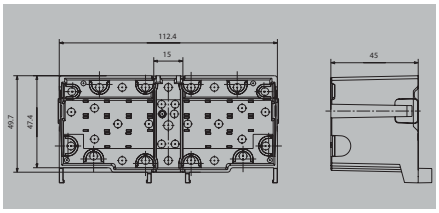
Touch-safe protection socket outlet single frame





Touch-safe protection double frame





Technical data

Length x width x height	47.5 / 47.5 / 45 mm	112.4 / 47.4 / 45 mm
Material	PC	PC
Note		

Ordering data

Type	Qty.	Order No.
IE-FC-PWPC	1	1450820000

Type	Qty.	Order No.
IE-FC-DFM-PWPC	1	2971460000

Note

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

FrontCom® Vario IP65 service interface

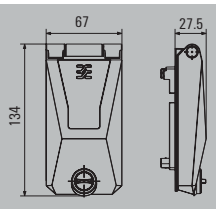
Sets

- shielded

2x Data 1x Power DE

Plastic cover





Technical data

Frame	Plastic cover
Insert plate	2x data, 1x power, Shielded
Data inserts	USB 2.0 A/A, RJ45 coupling Cat.6_A
Power inserts	Socket DE
Rated voltage for socket	250 V
Rated current for socket	16 A
Protection degree	IP65, in closed state
products included in the set	1450510000;1450550000;1450730000;1019570000;196284 0000

Note

Ordering data

	Type	Qty.	Order No.
shielded	IE-FC-SET-SPDED001-KN-P	1	**1529580000**
unshielded			

Note

Accessories

Type	Qty.	Order No.

Note

Sets

Incl. fixed label: "Service only!", "USB", "Ethernet", "230 V AC"

2x Data, 1x Power



2x Data, 1x Power



Technical data

Frame	Plastic cover, Lockable with key	Plastic cover, Lockable with key
Insert plate	2x data, 1x power, Shielded	2x data, 1x power, Unshielded
Data inserts	USB 2.0 A/A, RJ45 coupling Cat.6_A	USB 2.0 A/A, RJ45 coupling Cat.6_A
Power inserts	Socket DE	Socket DE
Rated voltage for socket	250 V	250 V
Rated current for socket	16 A	16 A
Protection degree	IP65, in closed state	IP65, in closed state
products included in the set	1450520000;1450550000;1450730000;1019570000;1962840000;1450820000	1450520000;1450630000;1450730000;1019570000;1962840000;1450820000
Note		

Ordering data

	Type	Qty.	Order No.
shielded	IE-FC-SET-SPDEK001-KY-P	1	**1989020000**
unshielded			
Note			

Type	Qty.	Order No.
IE-FC-SET-IPDEK001-KY-P	1	**1543680000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

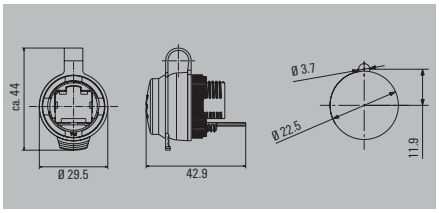
Note

FrontCom® Micro IP65 service interface

FrontCom® Micro RJ45 Module

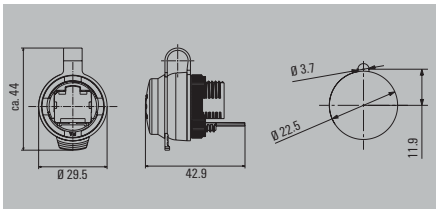
8-wire





4-wire





Technical data

	8-wire	4-wire
Category	Cat.6$_A$ / Class E$_A$ (ISO/IEC 11801 2010)	Cat.5 (ISO/IEC 11801)
Protection degree	IP65, in closed state	IP65, in closed state
Housing main material	PA UL 94 V0	PA UL 94 V0
Contact surface	Gold over nickel	Gold over nickel
Colour	black	black
Shielding	360° shield contact	360° shield contact
Type of mounting	Cabinet, Distribution box	Cabinet, Distribution box
Plugging cycles	750	750
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Connection 1 / 2	RJ45 / IDC	RJ45 / IDC
Wall thickness, min. / max.	1 mm / 5 mm	1 mm / 5 mm
Dust protection cap material	EPDM	EPDM
PoE / PoE+	conforming to IEEE 802.3bt	conforming to IEEE 802.3bt
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Approvals	CULUS	CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
PROFINET module				IE-FCM-RJ45-FJ-P	10	**1018830000**
TIA-A module	IE-FCM-RJ45-FJ-A	10	**1018810000**			
TIA-B module	IE-FCM-RJ45-FJ-B	10	**1018820000**			
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Fixing tool						
	IE-FISP-V4	2	**9204370000**	IE-FISP-V4	2	**9204370000**
Marking tags						
SwitchMark markers white	SM 27/18 MC NE WS	80	**1699860000**	SM 27/18 MC NE WS	80	**1699860000**
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**
Holder						
	SM-H 27/18 SW	25	**1716630000**	SM-H 27/18 SW	25	**1716630000**

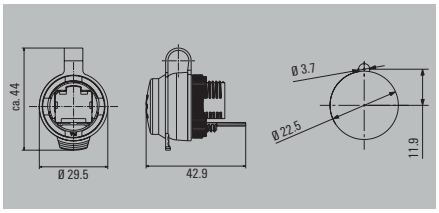
Note

FrontCom® Micro
Coupling

RJ45

8-wire





Technical data

Category	Cat.6$_A$ / Class E$_A$ (ISO/IEC 11801 2010)
Protection degree	IP65, in closed state
Housing main material	PA UL 94 V0
Contact surface	Gold over nickel
Colour	black
Shielding	360° shield contact
Type of mounting	Cabinet, Distribution box
Plugging cycles	750 (RJ45)
Connector standard	IEC 60603-7-51
Connection 1 / 2	RJ45 / RJ45
Wall thickness, min. / max.	1 mm / 5 mm
Dust protection cap material	EPDM
PoE / PoE+	conforming to IEEE 802.3af
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CULUS

Note

Ordering data

	Type	Qty.	Order No.
Coupling	IE-FCM-RJ45-C	10	**1018790000**

Note

Accessories

	Type	Qty.	Order No.
Fixing tool			
	IE-FISP-V4	2	**9204370000**
Marking tags			
SwitchMark markers white	SM 27/18 MC NE WS	80	**1699860000**
Holder			
	SM-H 27/18 SW	25	**1716630000**

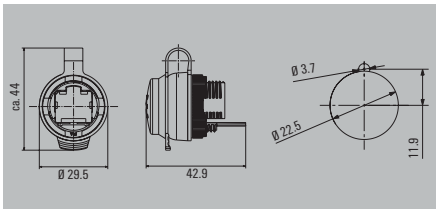
Note

FrontCom® Micro IP65 service interface

FrontCom® Micro USB

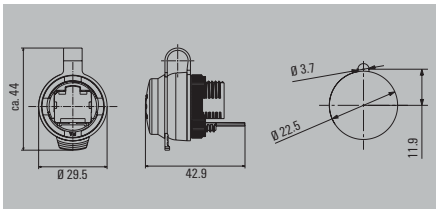
Coupling AA





Coupling AB





Technical data

Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Protection degree	IP65, in closed state	IP65, in closed state
Housing main material	PA UL 94 V0	PA UL 94 V0
Colour	black	black
Shielding	360° shield contact	360° shield contact
Type of mounting	Cabinet, Distribution box	Cabinet, Distribution box
Connector standard	IEC 61076-3-107	IEC 61076-3-107
Connection 1 / 2	USB A / USB A	USB A / USB B
Dust protection cap material	EPDM	EPDM
Wall thickness, min. / max.	1 mm / 5 mm	1 mm / 5 mm
Approvals	CULUS	CULUS
Note	Approvals available on request	

Ordering data

	Type	Qty.	Order No.
USB 2.0	IE-FCM-USB-A	10	**1018840000**
USB 3.0	IE-FCM-USB-3.0-A	10	**1427960000**

	Type	Qty.	Order No.
	IE-FCM-USB-AB	10	**1222550000**

Note

Accessories

	Type	Qty.	Order No.
Fixing tool			
	IE-FISP-V4	2	**9204370000**
Marking tags			
SwitchMark markers white	SM 27/18 MC NE WS	80	**1699860000**
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Holder			
	SM-H 27/18 SW	25	**1716630000**
USB cable 2.0			
0.5 m	IE-USB-A-A-0.5M	1	**1993550005**
1.0 m	IE-USB-A-A-1.0M	1	**1993550010**
1.5 m	IE-USB-A-A-1.5M	1	**1993550015**
1.8 m	IE-USB-A-A-1.8M	1	**1993550018**
3.0 m	IE-USB-A-A-3.0M	1	**1993550030**
USB cable 3.0			
0.5 m	IE-USB-3.0-A-A-0.5M	1	**2581730005**
1.8 m	IE-USB-3.0-A-A-1.8M	1	**2581730018**
3.0 m	IE-USB-3.0-A-A-3M	1	**2581730030**
5.0 m	IE-USB-3.0-A-A-5M	1	**2581730050**

	Type	Qty.	Order No.
	IE-FISP-V4	2	**9204370000**
	SM 27/18 MC NE WS	80	**1699860000**
	ESG 9/11 K MC NE WS	200	**1857440000**
	SM-H 27/18 SW	25	**1716630000**

Note

IP67 plug-in connectors
Overview

IP67 plug-in connectors	PushPull V14 - RJ45	M.2
	PushPull V14 - Hybrid	M.7
	PushPull V14 - FO	M.10
	Bayonet V1 Metal-RJ45	M.12
	Bayonet V1 Metal-FO	M.14
	Bayonet V1 Plastic-RJ45	M.16
	PushPull V4 – RJ45	M.19
	PushPull V4 – FO	M.23
	RockStar® V5 – RJ45	M.25
	SnapIn V6 – RJ45	M.27
	M12 Single Pair Ethernet (SPE)	M.30
	M12 D-coded	M.32
	M12 X-Type	M.41
	Inserts	M.49
	PushPull Power	M.59

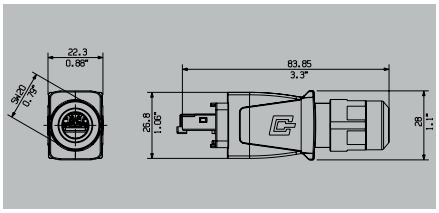
Plug PushPull V14 - RJ45 PROFINET

- 4-wire, RJ45 plug field attachable with colour coding on the plug

4-wire, field-attachable

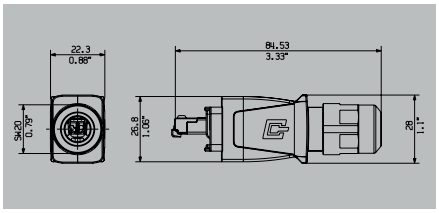
PROFINET printing





4-wire, crimp





Technical data

Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm	5.5 mm / 7.5 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-51	IEC 60603-7, IEC 61076-3-117 Var. 14
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.57 mm / 0.64 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 23 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.57 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 23 / AWG 22
Approvals	CULUS	CULUS
Note	Other approvals for individual parts of the set available	

Ordering data - Sets

	Type	Qty.	Order No.
RJ45	IE-PS-V14M-RJ45-FH-P	10	**1012170000**
Note			

	Type	Qty.	Order No.
	IE-PS-V14M-RJ45-TH-P	10	**2768740000**

Ordering data - Empty housings

	Type	Qty.	Order No.
	IE-PH-V14M-RJ	10	**1011560000**
Note			

	Type	Qty.	Order No.
	IE-PH-V14M-RJ	10	**1011560000**

Accessories

	Type	Qty.	Order No.
Dust protection cap			
Protective cap	IE-PP-V14P	10	**1058280000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Plug insert for V14 PROFINET crimp			
Replacement crimp inserts			
Tools			
Pressing tool			
Note	Plug inserts can also be ordered separately. Refer to Inserts.		

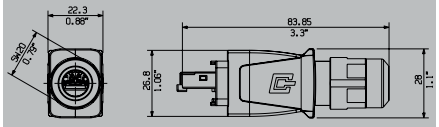
	Type	Qty.	Order No.
	IE-PP-V14P	10	**1058280000**
	ESG 9/11 K MC NE WS	200	**1857440000**
	IE-PI-RJ45-TH-P	10	**2768720000**
	IE-CWZ-RJ45-TH-P	1	**2614210000**

Plug PushPull V14 - RJ45

- 8-wire, RJ45 plug field attachable with colour coding on the plug

8-wire, crimp





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67
Housing main material	Zinc diecast
Contact surface	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-51
Connection diameter, flexible, min. / max.	0.46 mm / 0.61 mm
Connection cross-section, flexible, min. / max.	AWG 27/7 / AWG 24/7
Connection diameter, solid, min. / max.	0.36 mm / 0.51 mm
Connection cross-section, solid, min. / max.	AWG 26/1 / AWG 24/1
Approvals	CULUS
Note	

Ordering data - Sets

	Type	Qty.	Order No.
RJ45 tool-free	IE-PS-V14M-RJ45-TH	10	**1012160000**

Note

Ordering data - Empty housings

	Type	Qty.	Order No.
	IE-PH-V14M-RJ	10	**1011560000**

Note

Accessories

	Type	Qty.	Order No.
Dust protection cap			
Protective cap	IE-PP-V14P	10	**1058280000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Tools			
Pressing tool	TT 8 RS MP 8	1	**9202800000**

Note

Plug inserts can also be ordered separately. Refer to Inserts.

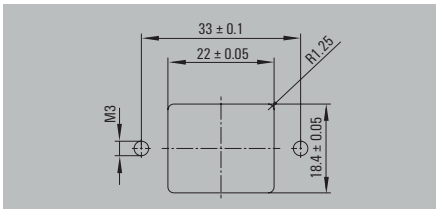
PushPull V14 - RJ45 flange

Module

4-wire

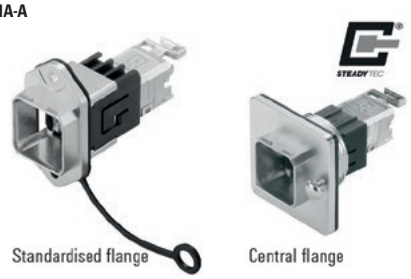
PROFINET printing

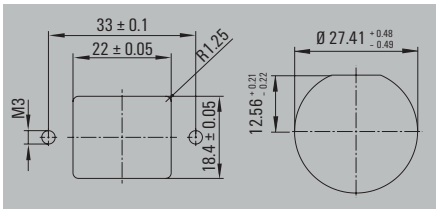




8-wire

TIA-A





Technical data

Category	Cat.5 (ISO/IEC 11801)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-51	IEC 61076-3-117 Var. 14, IEC 60603-7-51
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Approvals	CULUS	CULUS
Note	Other approvals for individual parts of the set available	Other approvals for individual parts of the set available

Ordering data - Sets

	Type	Qty.	Order No.	Type	Qty.	Order No.
Standardised flange	IE-BSS-V14M-RJ45-FJ-P	10	**1085260000**	IE-BSS-V14M-RJ45-FJ-A	10	**1012320000**
Central flange				IE-BSC-V14M-RJ45-FJ-A	10	**1058270000**
Note						

Ordering data - Empty housings

	Type	Qty.	Order No.	Type	Qty.	Order No.
Standardised flange	IE-BHS-V14M-RJA	10	**1011540000**	IE-BHS-V14M-RJA	10	**1011540000**
Central flange	IE-BHC-V14M-RJA	10	**1047950000**	IE-BHC-V14M-RJA	10	**1047950000**
Device flange	IE-BHD-V14M	10	**1047940000**	IE-BHD-V14M	10	**1047940000**
Note						

Accessories

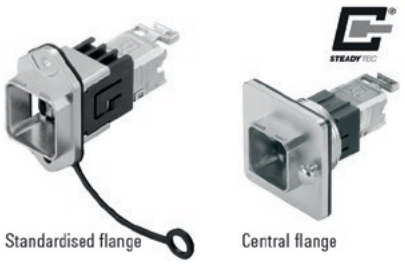
Dust protection cap	Type	Qty.	Order No.	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	**1058310000**	IE-BP-V14P	10	**1058310000**

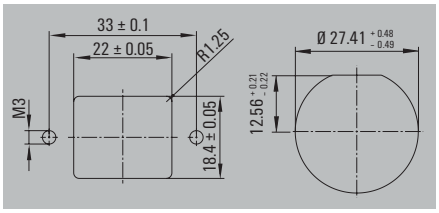
Note	Plug inserts can also be ordered separately. Refer to Inserts.	Plug inserts can also be ordered separately, see Inserts

PushPull V14 - RJ45 flange

Coupling

8-wire





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67
Housing main material	Zinc diecast
Contact surface	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-51
Connection diameter, flexible, min. / max.	
Connection cross-section, flexible, min. / max.	
Connection diameter, solid, min. / max.	
Connection cross-section, solid, min. / max.	
Approvals	CULUS
Note	Other approvals for individual parts of the set available

Ordering data - Sets

	Type	Qty.	Order No.
Standardised flange	IE-BSS-V14M-RJ45-C	10	**1012310000**
Central flange	IE-BSC-V14M-RJ45-C	10	**1058250000**

Note

Ordering data - Empty housings

	Type	Qty.	Order No.
Standardised flange	IE-BHS-V14M-RJA	10	**1011540000**
Central flange	IE-BHC-V14M-RJA	10	**1047950000**
Device flange	IE-BHD-V14M	10	**1047940000**

Note

Accessories

Dust protection cap	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	**1058310000**

Note

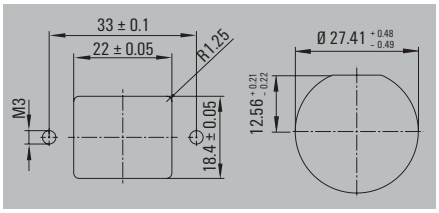
Plug inserts can also be ordered separately. Refer to Inserts.

Flange-mounted empty housing / PushPull device flange V14

- IP67

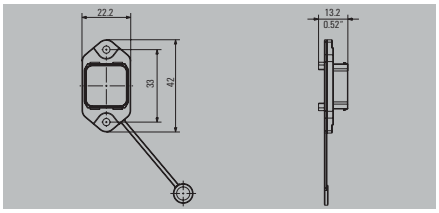
Empty housing





Device flange





Technical data

Category		
Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Contact surface		
Sheath diameter, min. / max.		
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14	IEC 61076-3-117 Var. 14
Connection diameter, flexible, min. / max.		
Connection cross-section, flexible, min. / max.		
Connection diameter, solid, min. / max.		
Connection cross-section, solid, min. / max.		
Approvals	CULUS	CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Standardised flange	IE-BHS-V14M-RJA	10	**1011540000**			
Central flange	IE-BHC-V14M-RJA	10	**1047950000**			
Device flange				IE-BHD-V14M	10	**1047940000**
Note						

Accessories

Dust protection cap	Type	Qty.	Order No.	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	**1058310000**	IE-BP-V14P	10	**1058310000**

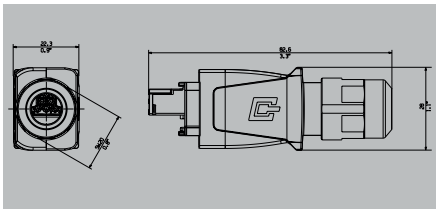
Note		
	Plug inserts can also be ordered separately. Refer to Inserts.	Plug inserts can also be ordered separately. Refer to Inserts.

Plug PushPull V14 - Hybrid

Hybrid

Socket contacts





Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP67
Housing main material	Zinc diecast
Contact surface	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connection 1 / 2	Hybrid (Q10) / Crimp
Connector standard	IEC 61076-3-119 CDV, IEC 61076-3-117 Var. 14
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 20
Connection diameter, flexible, min. / max.	0.08 mm² / 0.75 mm²
Rated current (hybrid connector)	3 A per contact
Volume resistance	<10 mΩ
Approvals	CULUS
Note	Other approvals for individual parts of the set available

Ordering data - Sets

Type	Qty.	Order No.
IE-PS-V14M-HYB-10P	10	**1072910000**

Note: Order contacts separately

Ordering data - Empty housings

Type	Qty.	Order No.
IE-PH-V14M-RJ	10	**1011560000**

Note

Accessories

	Type	Qty.	Order No.
Crimping contact (sockets)			
0.08...0.2 mm²	IE-PIC-HYB-S-0,2-300	300	**1135150000**
0.2...0.5 mm²	IE-PIC-HYB-S-0,5-300	300	**1096180000**
0.75 mm²	IE-PIC-HYB-S-0,75-300	300	**1068950000**
Tools			
Pressing tool	HTF HYB	1	**1119580000**
Cable			
Hybrid cable, 100 m	IE-C5DHAG-100	1	**2763660000**
Hybrid cable, 500 m	IE-C5DHAG-500	1	**2763460000**
Dust protection cap			
Protective cap	IE-PP-V14P	10	**1058280000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**

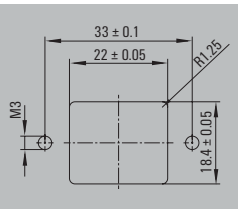
Note: Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V14 - Hybrid

Standardised flange

Pin contacts





Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP67
Housing main material	Zinc diecast
Seal material	EPDM
Contact surface	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connection 1 / 2	Hybrid (Q10) / Crimp
Connector standard	IEC 61076-3-119 CDV, IEC 61076-3-117 Var. 14
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 20
Connection diameter, flexible, min. / max.	0.08 mm² / 0.75 mm²
Rated current (hybrid connector)	3 A per contact
Volume resistance	<10 mΩ
Approvals	CULUS
Note	Other approvals for individual parts of the set available

Ordering data - Sets

Type	Qty.	Order No.
IE-BSS-V14M-HYB-10P-FJ	10	**1072900000**
Note	Order contacts separately	

Ordering data - Empty housings

	Type	Qty.	Order No.
Standardised flange	IE-BHS-V14M-RJA	10	**1011540000**
Note			

Accessories

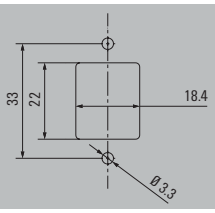
	Type	Qty.	Order No.
Crimping contact (pins)			
0.08...0.2 mm²	IE-BIC-HYB-P-0,2-300	300	**1135160000**
0.2...0.5 mm²	IE-BIC-HYB-P-0,5-300	300	**1096150000**
0.75 mm²	IE-BIC-HYB-P-0,75-300	300	**1068970000**
Tools			
Pressing tool	HTF HYB	1	**1119580000**
Cable			
Hybrid cable, 100 m	IE-C5DHAG-100	1	**2763660000**
Hybrid cable, 500 m	IE-C5DHAG-500	1	**2763460000**
Dust protection cap			
Protective cap	IE-BP-V14P	10	**1058310000**

Note	Plug inserts can also be ordered separately. Refer to Inserts.

V14 flange adapter

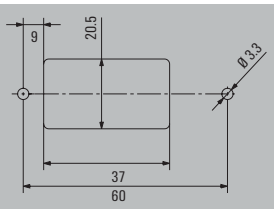
Straight





Angled





Technical data

Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Seal material	EPDM	EPDM
Type of mounting	2 screws, M3 (not included)	2 screws, M3 (not included)
Ambient temperature (operational)	-40...70 °C	-40...70 °C
Note		

Ordering data

Type	Qty.	Order No.
IE-AD-BHS-V14M-RJA	1	**1302000000**

Note: Flange and plug inserts must be ordered separately, see Inserts/Flanges

Type	Qty.	Order No.
IE-BHS-V14M-RJA-45	10	**1296710000**

Note: Flange inserts must be ordered separately, see Inserts

Accessories

Type	Qty.	Order No.

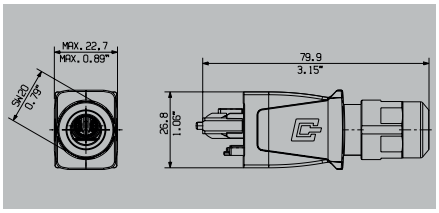
Type	Qty.	Order No.

Note

PushPull V14 plug - fibre-optic

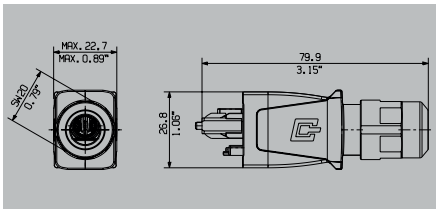
Without kink prevention, crimp





Without kink prevention, reconnectable





Technical data

Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Sheath diameter, min. / max.	5 mm / 10 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40...70 °C	-40...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24	IEC 61076-3-117 Var. 14, IEC 61754-24
Approvals	CULUS	
Note		

Ordering data - Sets

	Type	Qty.	Order No.	Type	Qty.	Order No.
POF	IE-PS-V14M-2SC-POF	10	**1191550000**	IE-PS-V14M-2SC-POF-QA	10	**2568260000**
Note						

Ordering data - Empty housings

	Type	Qty.	Order No.	Type	Qty.	Order No.
	IE-PH-V14M-FO	10	**1058100000**	IE-PH-V14M-FO	10	**1058100000**
Note						

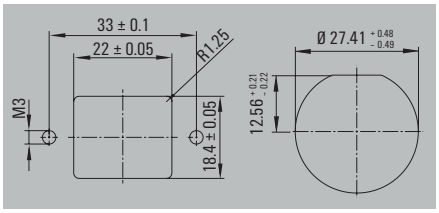
Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Inserts						
POF	IE-PI-SCRJ-POF	10	**1067410000**	IE-PI-SCRJ-POF-QA	10	**2564960000**
Dust protection cap						
Protective cap	IE-PP-V14P	10	**1058280000**	IE-PP-V14P	10	**1058280000**
Tools						
Tool set POF, crimp	TOOL SET IE-POF	1	**1208930000**			
Mounting tool, POF	HTX-IE-POF	1	**1208870000**			
MULTI-STRIPAX IE-POF	MULTI-STRIPAX IE-POF	1	**1208880000**	MULTI-STRIPAX IE-POF	1	**1208880000**
Cevlar scissors	SCISSORS KEVLAR	1	**1208910000**	SCISSORS KEVLAR	1	**1208910000**
Replacement ferrule						
	IE-SCRJ-IP67-POF-100	100	**1278430000**			
Marking tags						
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**
Note	Plug inserts can also be ordered separately, see Inserts			Plug inserts can also be ordered separately, see Inserts		

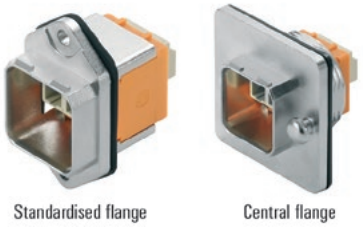
Flange PushPull V14 - fibre-optic

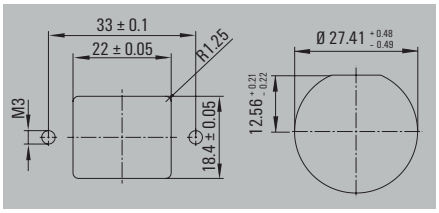
SC-RJ





LC Duplex coupling





Technical data

Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Plugging cycles	500	500
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Insertion loss	≤ 0.5 dB	≤ 0.4 dB
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24	IEC 61076-3-117 Var. 14, IEC 61754-20
Approvals	CULUS	
Note		

Ordering data - Sets

	Type	Qty.	Order No.	Type	Qty.	Order No.
Central flange Singlemode	IE-BSC-V14M-SCRJ-SM-C	10	**1062600000**	IE-BSC-V14M-LCD-SM-C	10	**1062620000**
Standardised flange Singlemode	IE-BSS-V14M-SCRJ-SM-C	10	**1058140000**	IE-BSS-V14M-LCD-SM-C	10	**1058150000**
Central flange Multimode/POF	IE-BSC-V14M-SCRJ-MM-C	10	**1062590000**	IE-BSC-V14M-LCD-MM-C	10	**1062610000**
Standardised flange Multimode/POF	IE-BSS-V14M-SCRJ-MM-C	10	**1058120000**	IE-BSS-V14M-LCD-MM-C	10	**1058130000**
Note						

Ordering data - Empty housings

	Type	Qty.	Order No.	Type	Qty.	Order No.
Device flange	IE-BHD-V14M	10	**1047940000**	IE-BHD-V14M	10	**1047940000**
Note						

Accessories

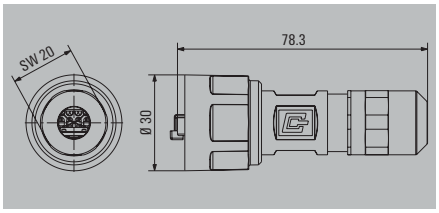
Dust protection cap	Type	Qty.	Order No.	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	**1058310000**	IE-BP-V14P	10	**1058310000**

Note	Plug inserts can also be ordered separately. Refer to Inserts.	Plug inserts can also be ordered separately. Refer to Inserts.

Plug bayonet V1 Metal - RJ45

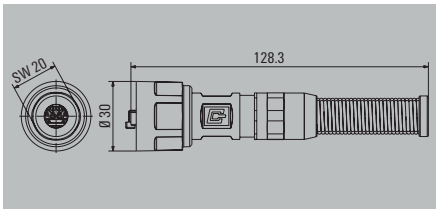
Without kink prevention





With kink prevention





Technical data

	Without kink prevention	With kink prevention
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Connector standard	IEC 61076-3-106 Var. 1, IEC 60603-7-51	IEC 61076-3-106 Var. 1, IEC 60603-7-51
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

	Without kink prevention			With kink prevention		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
RJ45 without tools. AWG 26-22. TIA-A/-B/-PROFINET	IE-PS-V01M-RJ45-FH	10	**1963120000**	IE-PS-V01M-RJ45-FH-BP	10	**1963130000**
RJ45 Crimp. AWG 27-24	IE-PS-V01M-RJ45-TH	10	**1963140000**	IE-PS-V01M-RJ45-TH-BP	10	**1963150000**
Note						

Ordering data - Empty housings

	Without kink prevention			With kink prevention		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	IE-PH-V01M	10	**1962550000**	IE-PH-V01M-BP	10	**1962560000**
Note						

Accessories

	Without kink prevention			With kink prevention		
Dust protection cap	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Plug housing protective cap	IE-PP-V01P	10	**1965690000**	IE-PP-V01P	10	**1965690000**
Marking tags						
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**

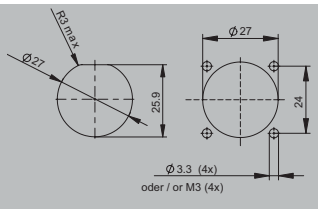
	Without kink prevention	With kink prevention
Note	Plug inserts can also be ordered separately. Refer to Inserts.	Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 Metal - RJ45

Module

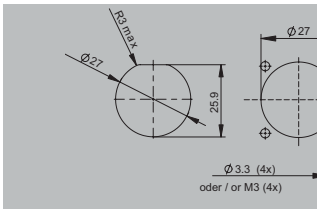
TIA-A





Coupling





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over nickel	Gold over nickel
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1, IEC 60603-7-51	IEC 61076-3-106 Var. 1, IEC 60603-7-51
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

Type	Qty.	Order No.
IE-BS-V01M-RJ45-FJ-A	10	**1963480000**

Type	Qty.	Order No.
IE-BS-V01M-RJ45-C	10	**1963470000**

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V01M	10	**1963540000**

Type	Qty.	Order No.
IE-BH-V01M	10	**1963540000**

Note

Accessories

Dust protection cap

Flange-mounted housing protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	**1965700000**

Type	Qty.	Order No.
IE-BP-V01P	10	**1965700000**

Note

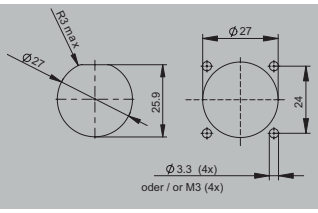
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal - fibre-optic-SC

Standardised flange





Technical data

Protection degree	IP67
Housing main material	Zinc diecast
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1, IEC 61754-24
Approvals	

Note

Ordering data - Sets

	Type	Qty.	Order No.
Singlemode	IE-BS-V01M-SCRJ-SM	10	**1221020000**
Multimode/POF	IE-BS-V01M-SCRJ-MM	1	**1221010000**

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BHD-V01M-SCA	10	**1221030000**

Note

Accessories

Dust protection cap	Type	Qty.	Order No.
Flange-mounted housing protective cap	IE-BP-V01P	10	**1965700000**

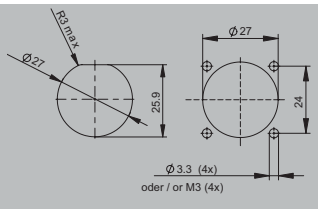
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal - fibre-optic-LC

Standardised flange





Technical data

Protection degree	IP67
Housing main material	Zinc diecast
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1, IEC 61754-20
Approvals	

Note

Ordering data - Sets

	Type	Qty.	Order No.
Singlemode	IE-BS-V01M-LCD-SM-C	10	**1963430000**
Multimode	IE-BS-V01M-LCD-MM-C	10	**1964440000**

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V01M	10	**1963540000**

Note

Accessories

Dust protection cap

	Type	Qty.	Order No.
Flange-mounted housing protective cap	IE-BP-V01P	10	**1965700000**

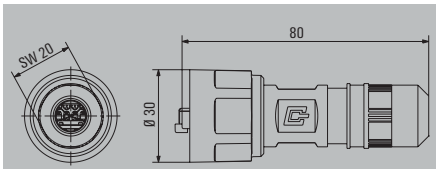
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Plug bayonet V1 Plastic - RJ45

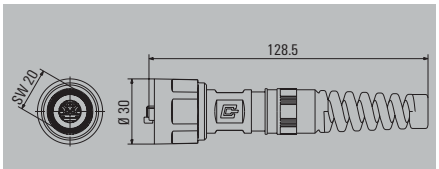
Without kink prevention





With kink prevention





Technical data

	Without kink prevention	With kink prevention
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	PA UL 94 V0	PA UL 94 V0
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Connector standard	IEC 61076-3-106 Var. 1, IEC 60603-7-51	IEC 61076-3-106 Var. 1, IEC 60603-7-51
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

	Type	Qty.	Order No.	Type	Qty.	Order No.
RJ45 without tools. AWG 26-22. TIA-A/-B/-PROFINET RJ45 Crimp. AWG 27-24	IE-PS-V01P-RJ45-FH	10	**1012490000**	IE-PS-V01P-RJ45-FH-BP	10	**1012570000**
	IE-PS-V01P-RJ45-TH	10	**1012470000**	IE-PS-V01P-RJ45-TH-BP	10	**1012560000**
Note						

Ordering data - Empty housings

	Type	Qty.	Order No.	Type	Qty.	Order No.
	IE-PH-V01P	10	**1012440000**	IE-PH-V01P-BP	10	**1012460000**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Dust protection cap						
Plug housing protective cap	IE-PP-V01P	10	**1965690000**	IE-PP-V01P	10	**1965690000**
Marking tags						
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**

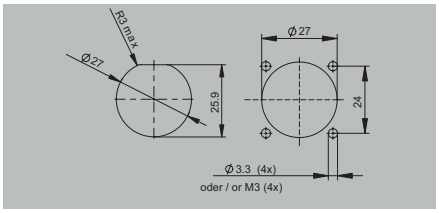
Note	Plug inserts can also be ordered separately. Refer to Inserts.	Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 Plastic - RJ45

Module

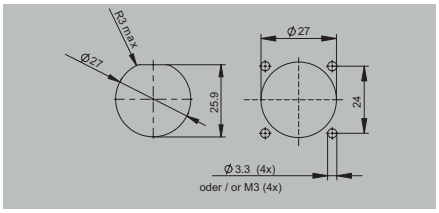
TIA-A





Coupling





Technical data

	Module	Coupling
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	PA UL 94 V0	PA UL 94 V0
Contact surface	Gold over nickel	Gold over nickel
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1, IEC 60603-7-51	IEC 61076-3-106 Var. 1, IEC 60603-7-51
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

Type	Qty.	Order No.
IE-BS-V01P-RJ45-FJ-A	10	**1012380000**

Note

Type	Qty.	Order No.
IE-BS-V01P-RJ45-C	10	**1012370000**

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V01P	10	**1016960000**

Note

Type	Qty.	Order No.
IE-BH-V01P	10	**1016960000**

Accessories

Dust protection cap

Flange-mounted housing protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	**1965700000**

Type	Qty.	Order No.
IE-BP-V01P	10	**1965700000**

Note

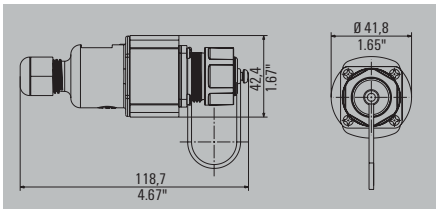
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Cable coupling bayonet V1
Plastic - RJ45

Cable coupling





Technical data

Protection degree	IP67
Housing main material	PA UL 94 V0
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1
Sheath diameter, min. / max.	6 mm / 9.5 mm
Approvals	

Note

Ordering data

Variant 1	Type	Qty.	Order No.
Cable coupling	IE-CC-V01P	10	**1061820000**

Note

RJ45 modules can be ordered separately

Accessories

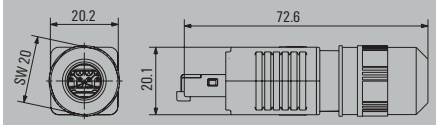
Inserts, Data	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**

Note

Plug PushPull V4 - RJ45

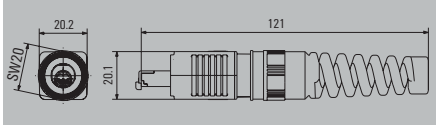
Without kink prevention





With kink prevention





Technical data

	Without kink prevention	With kink prevention
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	PA UL 94 V0	PA UL 94 V0
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 10 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connection cross-section, flexible, min. / max.	AWG 27/7 / AWG 24/7	AWG 27/7 / AWG 24/7
Connection diameter, flexible, min. / max.	0.46 mm / 0.61 mm	0.46 mm / 0.61 mm
Connection cross-section, solid, min. / max.	AWG 26/1 / AWG 24/1	AWG 26/1 / AWG 24/1
Connection diameter, solid, min. / max.	0.36 mm / 0.51 mm	0.36 mm / 0.51 mm
Connector standard	IEC 61076-3-106 Var. 4, IEC 60603-7-51	IEC 61076-3-106 Var. 4, IEC 60603-7-51
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

	Without kink prevention			With kink prevention		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
RJ45 without tools. AWG 26-22. TIA-A/-B/-PROFINET	IE-PS-V04P-RJ45-FH	10	**1963160000**	IE-PS-V04P-RJ45-FH-BP	10	**1963170000**
RJ45 without tools. AWG 26-22 . TIA-B	IE-PS-V04P-RJ45-FH-B	10	**1271240000**			
RJ45 Crimp. AWG 27-24	IE-PS-V04P-RJ45-TH	10	**1963180000**	IE-PS-V04P-RJ45-TH-BP	1	**1963190000**
Note						

Ordering data - Empty housings

	Without kink prevention			With kink prevention		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	IE-PH-V04P	10	**1962520000**	IE-PH-V04P-BP	10	**1962530000**
Note						

Accessories

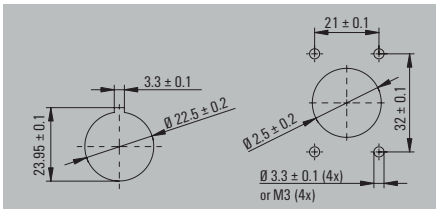
	Without kink prevention			With kink prevention		
Dust protection cap	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Plug housing protective cap	IE-PP-V04P	10	**1963890000**	IE-PP-V04P	10	**1963890000**
Marking tags						
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**

Note	Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - RJ45

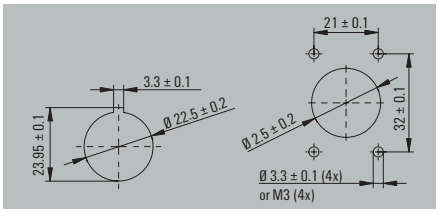
Module





Coupling





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	PA UL 94 V0	PA UL 94 V0
Contact surface	Gold over nickel	Gold over nickel
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 4, IEC 60603-7-51	IEC 61076-3-106 Var. 4, IEC 60603-7-51
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	
Approvals	CULUS	CULUS
Note	Other approvals for individual parts of the set available	

Ordering data - Sets

	Type	Qty.	Order No.	Type	Qty.	Order No.
RJ45 module TIA-A	IE-BS-V04P-RJ45-FJ-A	10	**1963500000**			
RJ45 module TIA-B	IE-BS-V04P-RJ45-FJ-B	1	**1963730000**			
Coupling				IE-BS-V04P-RJ45-C	10	**1963490000**
Note						

Ordering data - Empty housings

	Type	Qty.	Order No.	Type	Qty.	Order No.
Empty enclosure	IE-BH-V04P	10	**1963520000**	IE-BH-V04P	10	**1963520000**
Device flange	IE-BHD-V04P	200	**2027660000**	IE-BHD-V04P	200	**2027660000**
Note						

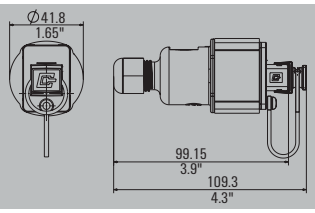
Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Dust protection cap						
Flange-mounted housing protective cap	IE-BP-V04P	10	**1963900000**	IE-BP-V04P	10	**1963900000**
Marking tags						
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**	ESG 9/11 K MC NE WS	200	**1857440000**
Fixing tool						
	IE-FISP-V4	2	**9204370000**	IE-FISP-V4	2	**9204370000**
Note	Plug inserts can also be ordered separately. Refer to Inserts.			Plug inserts can also be ordered separately. Refer to Inserts.		

Cable coupling PushPull V4 - RJ45

Cable coupling





Technical data

Protection degree	IP67
Housing main material	PA UL 94 V0
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 4
Sheath diameter, min. / max.	6 mm / 9.5 mm
Approvals	
Note	

Ordering data

	Type	Qty.	Order No.
Cable coupling	IE-CC-V04P	10	**1045960000**
Note	RJ45 modules can be ordered separately		

Accessories

Inserts, Data	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**

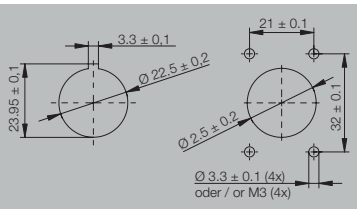
Note	Plug inserts can also be ordered separately. Refer to Inserts.

Flange-mounted empty housing / PushPull V4 device flange

- IP67

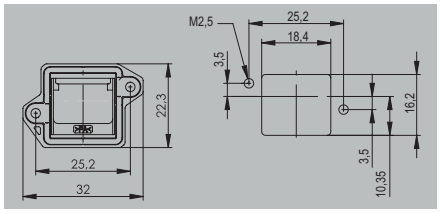
Empty housing





Device flange





Technical data

Protection degree	IP67	IP67
Housing main material	PA UL 94 V0	PA UL 94 V0
Plugging cycles	750	
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 4	IEC 61076-3-106 Var. 4
Sheath diameter, min. / max.	5 mm / 10 mm	
Approvals	CULUS	CULUS
Note		

Ordering data

	Type	Qty.	Order No.
Empty enclosure	IE-BH-V04P	10	1963520000
Device flange	IE-BHD-V04P	200	2027660000
Note			

Accessories

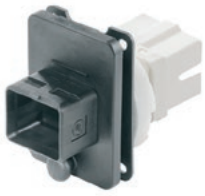
	Type	Qty.	Order No.
Dust protection cap			
Flange-mounted housing protective cap	IE-BP-V04P	10	1963900000
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	1857440000
Fixing tool			
	IE-FISP-V4	2	9204370000

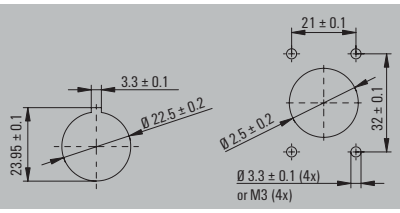
	Type	Qty.	Order No.
	IE-BP-V04P	10	1963900000
	ESG 9/11 K MC NE WS	200	1857440000
	IE-FISP-V4	2	9204370000

Note	
	Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - fibre-optic-SC

Standardised flange





Technical data

Protection degree	IP67
Housing main material	PA UL 94 V0
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 4, IEC 61754-4, IEC 61754-24
Approvals	
Note	

Ordering data - Sets

	Type	Qty.	Order No.
Singlemode	IE-BS-V04P-SCRJ2SC-SM-C	10	**1963420000**
Multimode	IE-BS-V04P-SCRJ2SC-MM-C	10	**1964470000**

Note

Ordering data - Empty housings

	Type	Qty.	Order No.
Empty enclosure	IE-BH-V04P	10	**1963520000**

Note

Accessories

	Type	Qty.	Order No.
Dust protection cap			
Flange-mounted housing protective cap	IE-BP-V04P	10	**1963900000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Fixing tool			
	IE-FISP-V4	2	**9204370000**

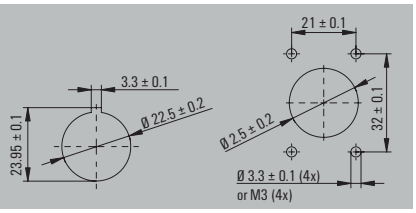
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - fibre-optic-LC

Standardised flange





Technical data

Protection degree	IP67
Housing main material	PA UL 94 V0
Plugging cycles	500
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 4, IEC 61754-20
Approvals	

Note

Ordering data - Sets

	Type	Qty.	Order No.
Singlemode	IE-BS-V04P-LCD-SM-C	10	**1963450000**
Multimode	IE-BS-V04P-LCD-MM-C	10	**1964460000**

Note

Ordering data - Empty housings

	Type	Qty.	Order No.
Empty enclosure	IE-BH-V04P	10	**1963520000**

Note

Accessories

	Type	Qty.	Order No.
Dust protection cap			
Flange-mounted housing protective cap	IE-BP-V04P	10	**1963900000**
Marking tags			
MultiCard, white	ESG 9/11 K MC NE WS	200	**1857440000**
Fixing tool			
	IE-FISP-V4	2	**9204370000**

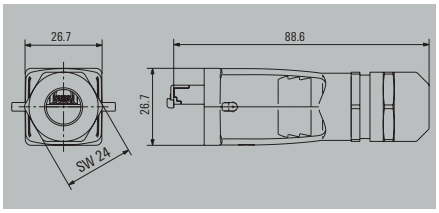
Note

Plug inserts can also be ordered separately. Refer to Inserts.

RockStar® heavy-duty connector plug V5 - RJ45

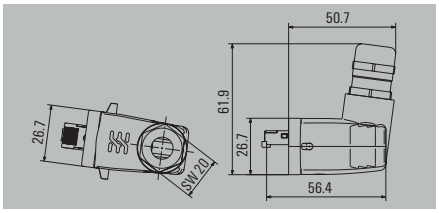
Straight V5 - RJ45 plug





V5 - RJ45 plug, angled





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67
Housing main material	diecast aluminium	diecast aluminium
Contact surface	Gold over nickel	Gold over nickel
Sheath diameter, min. / max.	5 mm / 12 mm	5 mm / 10 mm
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 5, IEC 60603-7-51	IEC 61076-3-106 Var. 5, IEC 60603-7-51
Approvals	CULUS	
Note		Other approvals for individual parts of the set available

Ordering data - Sets

	Type	Qty.	Order No.
RJ45 without tools. AWG 26-22. TIA-A/-B/-PROFINET	IE-PS-V05M-RJ45-FH	10	**1963200000**
RJ45 without tools. AWG 26-22 . TIA-B	IE-PS-V05M-RJ45-FH-B	10	**1271250000**
RJ45 Crimp. AWG 27-24	IE-PS-V05M-RJ45-TH	10	**1963110000**

	Type	Qty.	Order No.
	IE-PS-V05M-A-RJ45-FH	10	**1077300000**

Note

Ordering data - Empty housings

	Type	Qty.	Order No.
	IE-PH-V05M	10	**1962540000**

Type	Qty.	Order No.

Note

Accessories

Dust protection cap	Type	Qty.	Order No.
Plug housing protective cap	IE-PP-V05M	10	**1968920000**
Spare insert holder	IE-PH-AD-V05M-RJ45	1	**1993540000**

Type	Qty.	Order No.
IE-PP-V05M	10	**1968920000**

Note

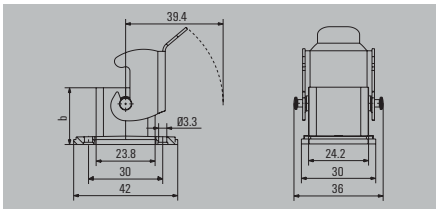
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

RockStar® heavy-duty connector flange V5 - RJ45

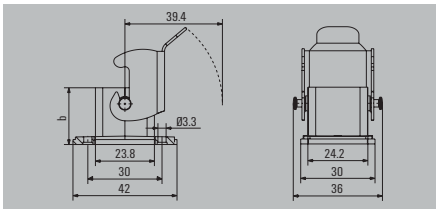
Module





Coupling





Technical data

	Module	Coupling
Protection degree	IP67	IP67
Housing main material	diecast aluminium	diecast aluminium
Contact surface	Gold over nickel	Gold over nickel
Plugging cycles	750	750
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 5, IEC 60603-7-51	IEC 61076-3-106 Var. 5, IEC 60603-7-51
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	
Approvals	CULUS	CULUS
Note		

Ordering data - Sets

	Type	Qty.	Order No.
TIA-A Cat. 6_A	IE-BS-V05M-RJ45-FJ-A	10	**1963460000**
PROFINET Cat. 5	IE-BS-V05M-RJ45-FJ-P	10	**1963700000**
Coupling			
Note			

	Type	Qty.	Order No.
	IE-BS-V05M-RJ45-C	10	**1963510000**

Ordering data - Empty housings

	Type	Qty.	Order No.
	IE-BH-V05M	10	**1963530000**
Note			

	Type	Qty.	Order No.
	IE-BH-V05M	10	**1963530000**

Accessories

Dust protection cap	Type	Qty.	Order No.
Flange-mounted housing protective cap	IE-BP-V05M	10	**1968930000**

	Type	Qty.	Order No.
	IE-BP-V05M	10	**1968930000**

Note	
	Plug inserts can also be ordered separately. Refer to Inserts.

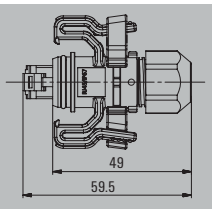
Plug inserts can also be ordered separately. Refer to Inserts.

Plug SnapIn V6 - RJ45

- Cat. 6
- IP67

Without kink prevention





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67
Shielding	360° shield contact
Housing main material	PA 66, UL 94: V-0
Contact surface	Gold over nickel
Colour	Light Grey
Plugging cycles	750
Wiring	EIA/TIA T568 A
Type of mounting	Floor-mounted, for exposed connections, Wall mounting
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 6, IEC 60603-7-5
Approvals	DETNORVER

Note

Ordering data

Type	Qty.	Order No.
IE-P-IP67	1	**8808380000**

Note

Accessories

Plug-in connector

Type	Qty.	Order No.
IE-PM-RJ45-TH	100	**1963580000**

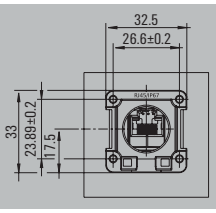
Note

Flange SnapIn V6 - RJ45

- Cat. 6
- IP67

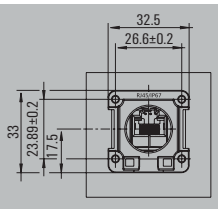
Module





Coupling





Technical data

	Module	Coupling
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6 (ISO/IEC 11801)
Protection degree	IP67	IP67
Shielding	360° shield contact	360° shield contact
Housing main material	PA 66, UL 94: V-0	PA 66, UL 94: V-0
Contact surface	Gold over nickel	Gold over nickel
Colour	Light Grey	Light Grey
Plugging cycles	750	750
Type of mounting	Cabinet, Distribution box	Cabinet, Distribution box
Wiring	Colour-coded pin assignment according to EIA/TIA T568 A ., EIA/TIA T568 B	
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 6, IEC 60603-7-5	IEC 61076-3-106 Var. 6, IEC 60603-7-5
Approvals	DETNORVER	DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
straight	IE-XM-RJ45/IDC-IP67	1	**8808440000**
angled. upwards			
angled. downwards			

	Type	Qty.	Order No.
	IE-XM-RJ45/RJ45-IP67	1	**8808450000**
	IE-XM-6U-RJ45/RJ45-IP67	1	**8829440000**
	IE-XM-6D-RJ45/RJ45-IP67	1	**8829450000**

Note

Accessories

Flange insert	Type	Qty.	Order No.
RJ45 module A. straight	IE-XRJ45/IDC	1	**8808330000**
RJ45 coupling. straight			

Type	Qty.	Order No.
IE-XR-RJ45/RJ45-2	24	**8952950000**

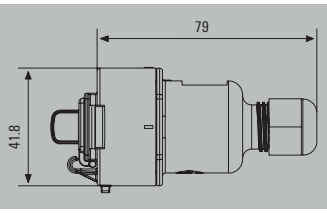
Note

Cable coupling SnapIn V6 - RJ45

- Cat. 6
- IP67

Cable coupling





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67
Shielding	360° shield contact
Housing main material	PA 66, UL 94: V-0
Contact surface	Gold over nickel
Colour	Light Grey
Plugging cycles	750
Type of mounting	Floor-mounted, for exposed connections, Wall mounting
Wiring	Colour-coded pin assignment according to EIA/TIA T568 A ., EIA/TIA T568 B
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 6, IEC 60603-7-5
Sheath diameter, min. / max.	6 mm / 9.5 mm
Approvals	DETNORVER
Note	

Ordering data

	Type	Qty.	Order No.
Cable coupling	IE-C-IP67	1	**8813090000**

Note

Accessories

Type	Qty.	Order No.

Note

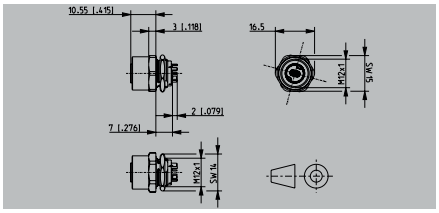
Single Pair Ethernet, PCB socket, panel mount

- One-piece design with fixing flange
- 180° (vertical)
- Shield contacts integrated
- Only one pair of wires for data and power
- Shock and vibration proof
- Most compact design

M12 socket, front panel mounting

Female contact

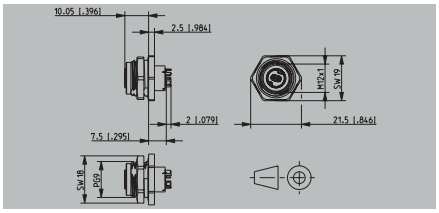




M12 socket, rear panel mounting

Female contact





Technical data

Category	T1-B	T1-B
Ambient temperature (operational)	-40...85 °C	-40...85 °C
Protection degree	IP67 with housing	IP67 with housing
Pollution severity		
Connection thread		
Number of poles	2	2
Type of connection	Socket connector	Socket connector
Outgoing elbow	180°	180°
Contact material	CuZn	CuZn
Contact surface	Ni/Au	Ni/Au
Contact carrier material	PA	PA
Operational voltage range	≤ 50 V AC, ≤ 60 V DC	≤ 50 V AC, ≤ 60 V DC
Rated current		
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ
Dielectric strength, contact / contact	1000 V DC	1000 V DC
Dielectric strength, contact / shield	2250 V DC	2250 V DC
Connector standard	IEC 63171-7 ED2	IEC 63171-7 ED2
UL 94 flammability rating	V-0	V-0
Note		

Ordering data

	Type	Qty.	Order No.
Tray	SPE M12F DC FPM16 RV 2.0 6 TY	1000	3228130000
Note	Product compliant with IEC 63171-7 ED2 will be available after the standard is published.		

	Type	Qty.	Order No.
	SPE M12F DC BPM16 RV 2.0 6 TY	1000	3228140000
	Product compliant with IEC 63171-7 ED2 will be available after the standard is published.		

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

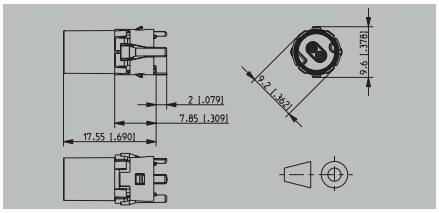
PCB socket insert IP67

- Without fixing flange
- 180° (vertical)
- Shield contacts integrated
- Only one pair of wires for data and power
- Shock and vibration proof
- Most compact design

M12 socket

Female contact





Technical data

Category	T1-B
Ambient temperature (operational)	-40...85 °C
Protection degree	IP67 with housing
Pollution severity	
Connection thread	
Number of poles	2
Type of connection	Socket connector
Outgoing elbow	180°
Contact material	CuZn
Contact surface	Ni/Au
Contact carrier material	PA
Operational voltage range	≤ 50 V AC, ≤ 60 V DC
Insulation resistance	≥ 100 MΩ
Dielectric strength, contact / contact	1000 V DC
Dielectric strength, contact / shield	2250 V DC
Connector standard	IEC 63171-7 ED2
UL 94 flammability rating	V-0

Note

Ordering data

	Type	Qty.	Order No.
THR, Tape-on-Reel	SPE M12F DD RV 2.0 6 TY	10	3180870000

Note

Product compliant with IEC 63171-7 ED2 will be available after the standard is published.

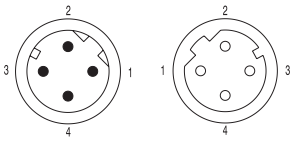
Accessories

Type	Qty.	Order No.

Note

M12 plug, Tension-clamp connection, D-coded





Male Male

SAIS M / SAIB M

Straight



SAISW M / SAIBW M

angled



Ordering data

Male			
	4-pole. PG 9		
Female			
	4-pole. PG 9		
Note			

Type	Qty.	Order No.
SAISGZ-M-4D-6/8-M12	1	**1892120001**
SAIBGZ-M-4D-6/8-M12	1	**1892130001**

Type	Qty.	Order No.
SAISWZ-M-4D-6/8-M12	1	**1803930001**
SAIBWZ-M-4D-6/8-M12	1	**1139330000**

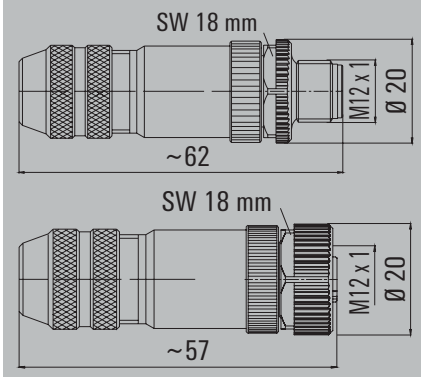
Technical data

Type of connection	Tension-clamp connection
Housing main material	CuZn
Ambient temperature (operational)	-40 °C...
Connector standard	IEC 61076-2-101
Connection thread	M12
Cable diameter	6...8 mm (PG9)
Conductor cross-section min. / max.	0.25 mm² / 0.5 mm²
Nominal current	4 A
Nominal voltage	250 V
Temperature range of housing	-40 ... +85 ° C
Protection degree	IP67
Contact surface	Gold-plated
Note	

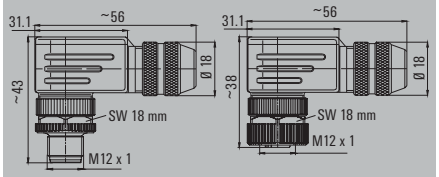
Tension-clamp connection	
CuZn	
-40 °C...	
IEC 61076-2-101	
M12	
6...8 mm (PG9)	
0.25 mm² / 0.5 mm²	
4 A	
250 V	
-40 ... +85 ° C	
IP67	
Gold-plated	

Tension-clamp connection	
CuZn	
-40 °C...	
IEC 61076-2-101	
M12	
6...8 mm (PG9)	
0.25 mm² / 0.5 mm²	
4 A	
250 V	
-40 ... +85 ° C	
IP67	
Gold-plated	

Dimensioned drawing



Dimensioned drawing



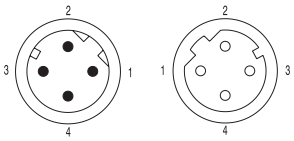
M12 plug,
Screw connection,
D-coded



SAIS M / SAIB M

Straight





Male **Male**

Ordering data

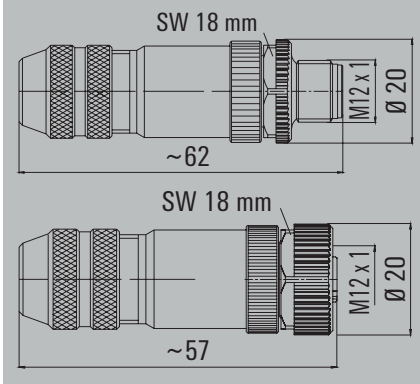
Male			
	4-pole. PG 9		
Female			
	4-pole. PG 9	SAIBGS-M-4D-6/8-M12	1	**1892130000**
Note			

Type	Qty.	Order No.
SAISGS-M-4D-6/8-M12	1	**1892120000**

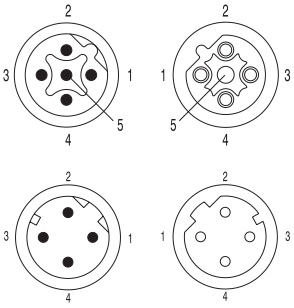
Technical data

Type of connection	Screw connection
Housing main material	CuZn
Ambient temperature (operational)	-40 °C...85 °C
Connector standard	IEC 61076-2-101
Connection thread	M12
Cable diameter	6...8 mm (PG9)
Conductor cross-section min. / max.	0.14 mm² / 0.75 mm²
Nominal current	4 A
Nominal voltage	250 V
Temperature range of housing	-40 ... +85 ° C
Protection degree	IP67
Contact surface	Gold-plated
Note	

Dimensioned drawing



PUSH IN M12
with shield connection
D coded



SAISP-M / SAIBP-M

Straight



SAISWP-M / SAIBWP-M

Angled



Ordering data

Male			
	D-coded, 4-pole		
Female			
	D-coded, 4-pole		
Note			

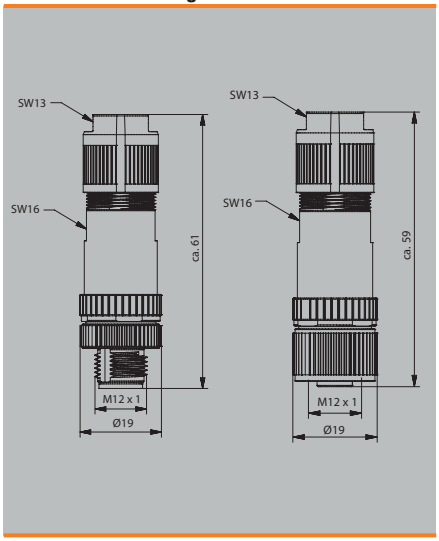
Type	Qty.	Order No.
SAISGP-M-4D-4/8-M12	1	**2681680000**
SAIBGP-M-4D-4/8-M12	1	**2681700000**
Other versions on request		

Type	Qty.	Order No.
SAISWP-M-4D-4/8-M12	1	**2681690000**
SAIBWP-M-4D-4/8-M12	1	**2681710000**
Other versions on request		

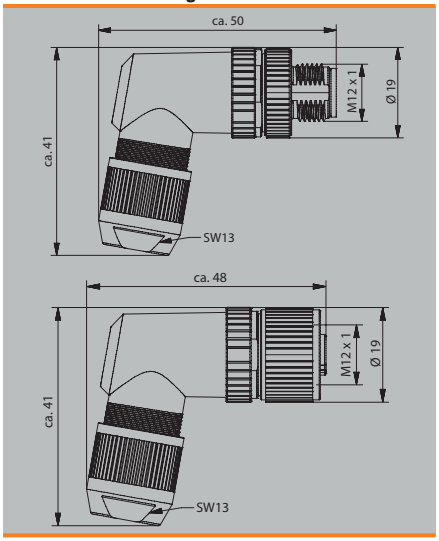
Technical data

Type of connection	PUSH IN	PUSH IN
Housing main material	PA 66	PA 66
Connection thread	M12	M12
Cable diameter	4...8 mm	4...8 mm
Conductor cross-section min. / max.	0.14...0.75 mm²	0.14...0.75 mm²
Nominal current	4 A	4 A
Nominal voltage	48 V	48 V
Temperature range of housing	-40 ... +85 ° C	-40 ... +85 ° C
Protection degree	IP67	IP67
Contact surface	Ni/Au	Ni/Au
Note		

Dimensioned drawing



Dimensioned drawing



Crimp connection M12 with shield connection D-coded

SAIS C / SAIB C

straight





SAIS C / SAIB C

Panel feed-through





Ordering data

Male			
	4-pole		
Female			
	4-pole		
Note			

Type	Qty.	Order No.
SAISGC-M-4D-4/9-M12-CG	1	**2664810000**
SAIBGC-M-4D-4/9-M12-CG	1	**2672420000**
Contacts must be ordered separately		

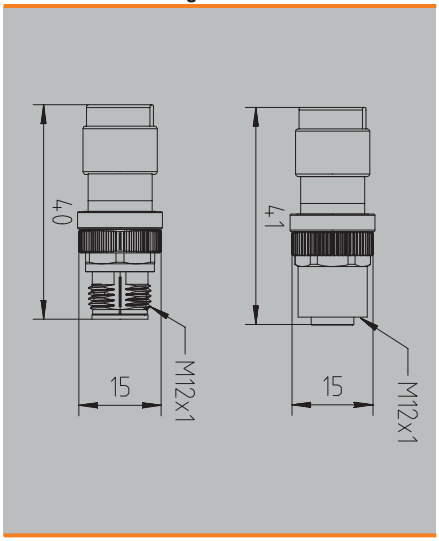
Type	Qty.	Order No.
SAISGC-M-4D-4/9-M12-WDF	1	**2664790000**
SAIBGC-M-4D-4/9-M12-WDF-CG	1	**2664780000**
Contacts must be ordered separately		

Technical data

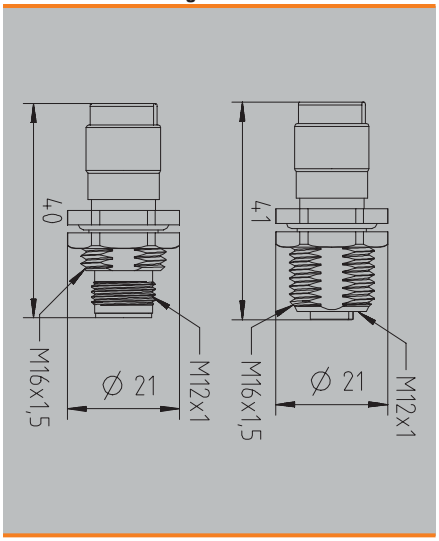
Type of connection	Crimp connection
Housing main material	Cu alloy Ni plated
Connection thread	M12
Cable diameter	4...9 mm
Conductor cross-section min. / max.	0.08...0.82 mm²
Nominal current	4 A
Nominal voltage	50 V
Temperature range of housing	-40 ... +85 ° C
Protection degree	IP67
Contact surface	Gold-plated
Note	Crimping tool: SAI-TMCSK - 1381690000; Locator: SAI-TMC-PD - 1381700000

Crimp connection	
Cu alloy Ni plated	
M12	
4...9 mm	
0.08...0.82 mm²	
4 A	
50 V	
-40 ... +85 ° C	
IP67	
Ni/Au	
Crimping tool: SAI-TMCSK - 1381690000; Locator: SAI-TMC-PD - 1381700000	

Dimensioned drawing



Dimensioned drawing



Crimp connection M12 with shield connection D-coded

SAISC / SAIBC

angled





Ordering data

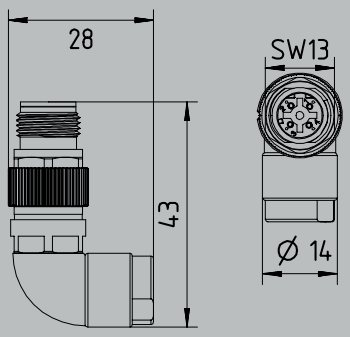
Male	
	4-pole
Female	
	4-pole
Note	

Type	Qty.	Order No.
SAISWC-M-4D-4/9-M12-CG	1	**2702690000**
SAIBWC-M-4D-4/9-M12-CG	1	**2702700000**
Contacts must be ordered separately		

Technical data

Type of connection	Crimp connection
Housing main material	Cu alloy Ni plated
Connection thread	M12
Cable diameter	4...9 mm
Conductor cross-section min. / max.	0.08...0.82 mm²
Nominal current	2 A
Nominal voltage	50 V
Temperature range of housing	-40 ... +85 ° C
Protection degree	IP67
Contact surface	Gold-plated
Note	Crimping tool: SAI-TMCSK - 1381690000; Locator: SAI-TMC-PD - 1381700000

Dimensioned drawing



Crimp contact M12

SAI - KSC / KBC

straight



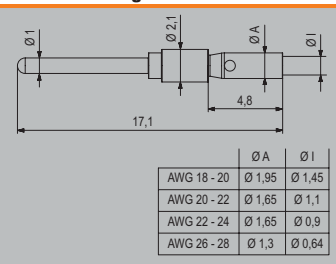
Ordering data

Male		Type	Qty.	Order No.
	AWG 18-20	SAI-M12-KSC-18/20	100	**2664840000**
	AWG 20-22	SAI-M12-KSC-20/22	100	**2664850000**
	AWG 22-24	SAI-M12-KSC-22/24	100	**2673710000**
	AWG 26-28	SAI-M12-KSC-26/28	100	**2673720000**
Female				
	AWG 18-20	SAI-M12-KBC-18/20	100	**2664860000**
	AWG 20-22	SAI-M12-KBC-20/22	100	**2664870000**
	AWG 22-24	SAI-M12-KBC-22/24	100	**2673730000**
	AWG 26-28	SAI-M12-KBC-26/28	100	**2673740000**
Note				

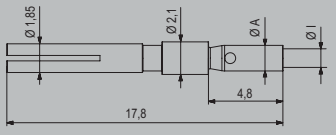
Technical data

Type of connection	Crimp connection
Contact material	Copper alloy
Connection thread	
Cable diameter	
Conductor cross-section min. / max.	0.52...0.82 mm²
Nominal current	7 A
Nominal voltage	
Temperature range of housing	
Protection degree	
Contact surface	Gold-plated
Note	

Dimensioned drawing



	Ø A	Ø I
AWG 18 - 20	Ø 1,95	Ø 1,45
AWG 20 - 22	Ø 1,65	Ø 1,1
AWG 22 - 24	Ø 1,65	Ø 0,9
AWG 26 - 28	Ø 1,3	Ø 0,64



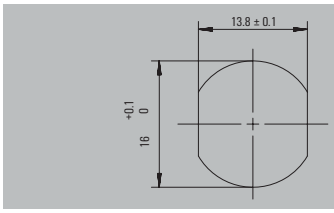
	Ø A	Ø I
AWG 18 - 20	Ø 1,65	Ø 1,45
AWG 20 - 22	Ø 1,65	Ø 1,1
AWG 22 - 24	Ø 1,65	Ø 0,9
AWG 26 - 28	Ø 1,3	Ø 0,64

Adapter, wall bushing / coupling M12

- Cat. 5
- IP67
- D-coding

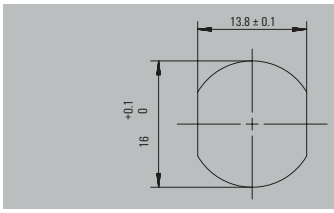
Adapter M12-RJ45, female





Adapter M12-RJ45, male





Technical data

	Adapter M12-RJ45, female	Adapter M12-RJ45, male
Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Protection degree	IP67	IP67
Housing main material	PA 66	PA 66
Shielding	Yes	Yes
Ambient temperature (operational)	-25 °C...80 °C	-25 °C...80 °C
Connector standard	IEC 60603-7-5, IEC 61076-2-101	IEC 60603-7-5, IEC 61076-2-101
Approvals	CULUS	CULUS
Note		

Ordering data

Adaptor		**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	straight	IE-M12-ADAP S	1	**8901620000**	IE-AD-M12DRJ45-MF-180	1	**1514970000**
	angled	IE-M12-ADAP A	1	**8901630000**	IE-AD-M12DRJ45-MF-90	1	**1514940000**
Coupling							
Note							

Accessories

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**

Note		

Adapter, wall bushing / coupling M12

- Cat. 5
- IP67
- D-coding

Coupling M12-M12



Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP67
Housing main material	Fiberglass-reinforced polyamide, Brass, nickel-plated
Shielding	360° shield contact
Ambient temperature (operational)	-40 °C...105 °C
Connector standard	IEC 61076-2-101
Approvals	
Note	

Ordering data

Adaptor	**Type**	**Qty.**	**Order No.**
straight			
angled			
Coupling			
	IE-M12-COUP	1	**8901640000**
Note			

Accessories

Type	**Qty.**	**Order No.**

Note

M12 PCB connection element

- Cat. 5
- For installation into the end device
- D-coded

Standard assembly



Additional fastening mechanism



Technical data

	Standard assembly	Additional fastening mechanism
Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Protection degree	IP65 in acc. with DIN EN 60529	IP65 in acc. with DIN EN 60529
Composition	Reflow compatible	Reflow compatible
Housing main material	CuZn, Polyamide, nickel-plated	CuZn, Polyamide, nickel-plated
Shielding	360° shield contact	360° shield contact
Ambient temperature (operational)	-25...85 °C	-25...85 °C
Connector standard	IEC 61076-2-101	IEC 61076-2-101
Approvals		

Note

Ordering data

Connection element

straight

angled

Standard assembly			Additional fastening mechanism		
Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
IE-M12-PCBCE	60	**8902810000**	IE-M12-PCBCE-PANEL	10	**8902820000**
			IE-M12-PCBCE-PANEL-A	10	**1393470000**

Note

Accessories

Standard assembly			Additional fastening mechanism		
Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**

Note

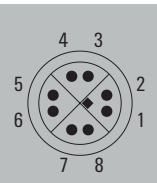
M12 plug
M12 X-type Cat. 6_A

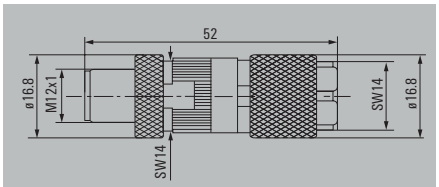
Plug, AWG 26-22

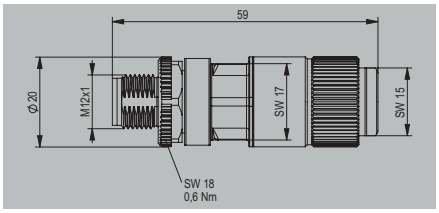


Plug, AWG 27-22









Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67 plugged	IP67 plugged
Connection 1 / 2	M12 / IDC	M12 / IDC
Housing main material	Zinc diecast	Zinc diecast
Connection thread	M12	M12
Contact material / Contact surface	Brass / Gold-plated	Brass, tinned / Gold-plated
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Connector standard	IEC 61076-2-109	IEC 61076-2-109
Current-carrying capacity (at 50 °C)		
Nominal voltage	48 V	50 V
Insulation resistance	100 MΩ	100 MΩ
Plugging cycles	≥ 100	≥ 100
Composition		
Wall thickness, min. / max.		
Shielding	360° all-round enclosure	360° all-round enclosure
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.46 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26/7 / AWG 22/7	AWG 27/7 / AWG 22/7
Connection diameter, solid, min. / max.	0.41 mm / 0.64 mm	0.51 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 26/1 / AWG 22/1	AWG 24/1 / AWG 22/1
Insulation cross-section, max.	1.6 mm	1.6 mm
Sheath diameter min. / max.	5 mm / 9.7 mm	5.5 mm / 9 mm
Approvals	CCLINK; CULUS	CCLINK; CULUS
Note		

Ordering data

	Type	Qty.	Order No.
Plugs	IE-PS-M12X-P-FH	10	1324020000
Note			

	Type	Qty.	Order No.
	IE-PS-M12X-P-AWG22/27FH	1	2007500000

Accessories

Type	Qty.	Order No.

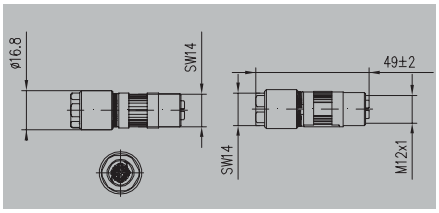
Type	Qty.	Order No.

Note

M12 plug / flange
M12 X-type Cat. 6_A

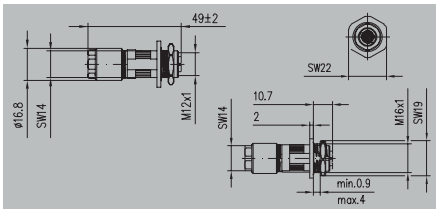
Plug, female





Flange





Technical data

	Plug, female	Flange
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Protection degree	IP67 plugged	IP67 plugged
Connection 1 / 2	M12 / IDC	M12 / IDC
Housing main material	Zinc diecast	Zinc diecast
Connection thread	M12	M12
Contact material / Contact surface	Brass / Gold-plated	CuZn / Gold-plated
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Connector standard	IEC 61076-2-109	IEC 61076-2-109
Current-carrying capacity (at 50 °C)		
Nominal voltage	48 V	48 V
Insulation resistance	100 MΩ	100 MΩ
Plugging cycles	≥ 100	≥ 100
Composition		
Wall thickness, min. / max.		0.9 mm / 4 mm
Shielding	360° all-round enclosure	360° all-round enclosure
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Insulation cross-section, max.	1.6 mm	1.6 mm
Sheath diameter min. / max.	5 mm / 9.7 mm	5 mm / 9.7 mm
Approvals	CCLINK; CULUS	CCLINK; CULUS
Note		

Ordering data

	Type	Qty.	Order No.
Plugs	IE-PS-M12X-S-FH	1	**1516330000**
Note			

Type	Qty.	Order No.
IE-BS-M12X-S-FH	1	**1516340000**

Accessories

Tools	Type	Qty.	Order No.
Tool set	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**
Cable gland tool, M 12	SCREWTY- M12 F	1	**1900020000**
Cable gland tool with torque function, M 12	SCREWTY-M12 F-DM	1	**1900021000**

Type	Qty.	Order No.
SCREWTY SET	1	**1910000000**
SCREWTY SET -DM	1	**1920000000**
SCREWTY- M12 F	1	**1900020000**
SCREWTY-M12 F-DM	1	**1900021000**

Note

Crimp connection M12 with shield connection X-Type

IE-PS-M12X-180

straight





IE-PS-M12X-90

angled





Ordering data

Male	
	8-pole
Female	
	8-pole
Note	

Type	Qty.	Order No.
IE-PS-M12X-180-P-TH-CG	1	**2664820000**
IE-PS-M12X-180-S-TH-CG	1	**2672440000**

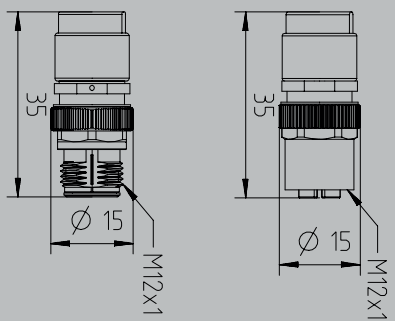
Type	Qty.	Order No.
IE-PS-M12X-90-P-TH-CG	1	**2702710000**
IE-PS-M12X-90-S-TH-CG	1	**2702720000**

Technical data

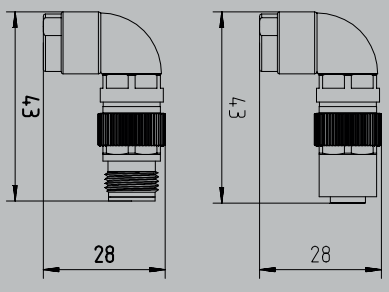
Type of connection	Crimp connection
Housing main material	Cu alloy Ni plated
Connection thread	M12
Cable diameter	
Conductor cross-section min. / max.	0.14...0.34 mm²
Nominal current	0.5 A
Nominal voltage	48 V
Temperature range of housing	
Protection degree	IP67
Contact surface	Ni/Au
Note	

Crimp connection	
Cu alloy Ni plated	
M12	
0.14...0.34 mm²	
2 A	
30 V	
IP67	
Ni/Au	

Dimensioned drawing



Dimensioned drawing



Crimp connection M12 with shield connection X-Type

IE-BS-M12X-180

Panel feed-through, straight



IE-BS-M12X-90

Panel feed-through, angled



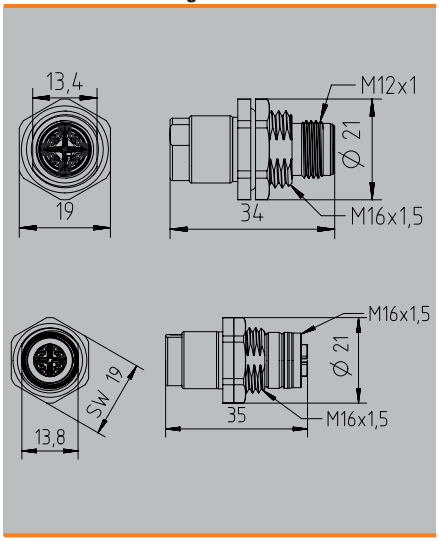
Ordering data

Male					
	8-pole, Back panel mounting	IE-BS-M12X-180-P-TH	1	2747880000	IE-BS-M12X-90-P-TH	1	2747910000
Female							
	8-pole, Back panel mounting	IE-BS-M12X-180-S-TH	1	2747900000	IE-BS-M12X-90-S-TH	1	2747920000
Note							

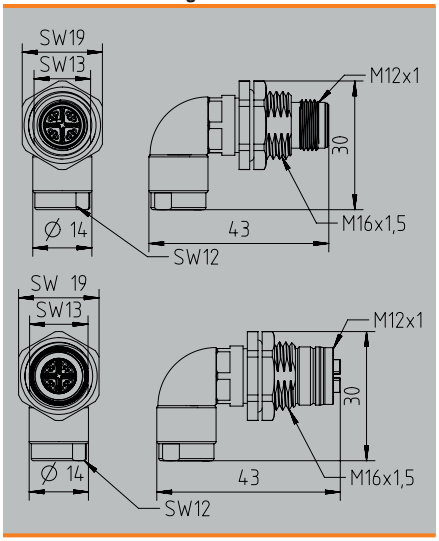
Technical data

Type of connection	Crimp connection	Crimp connection
Housing main material	Cu alloy Ni plated	Cu alloy Ni plated
Connection thread	M12	M12
Cable diameter	4...9 mm	4...9 mm
Conductor cross-section min. / max.	0.14...0.34 mm²	0.14...0.34 mm²
Nominal current	0.5 A	0.5 A
Nominal voltage	48 V	48 V
Temperature range of housing		
Protection degree	IP67	IP67
Contact surface	Ni/Au	Ni/Au
Note		

Dimensioned drawing



Dimensioned drawing



Crimp contact M12
X-Type



Contacts



Ordering data

Male		Type	Qty.	Order No.
	AWG 22-26	IE-PIC-M12X-P-22/26	100	**2664880000**
Female				
	AWG 22-26	IE-PIC-M12X-S-22/26	100	**2673440000**
Note				

Technical data

Type of connection	Crimp connection
Housing main material	
Connection thread	without
Cable diameter	
Conductor cross-section min. / max.	0.34…0.14 mm²
Nominal current	1 A
Nominal voltage	
Temperature range of housing	
Protection degree	IP00
Contact material	Copper alloy, Gold-plated
Note	

Dimensioned drawing

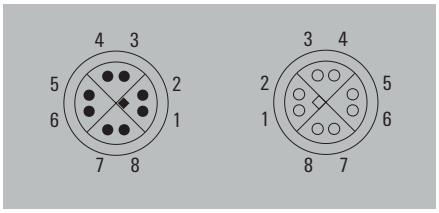
Adapter / Coupling M12
M12 X-type Cat. 6_A

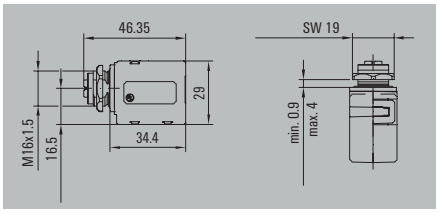
Adapter M12 X-Type-RJ45

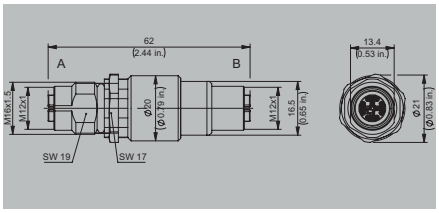


Coupling M12 X-Type









Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67	IP67 plugged
Connection 1 / 2	RJ45 / M12	M12 / M12
Housing main material	Zinc diecast	Brass, Copper-tin-zinc alloy
Connection thread	M12	M12 / M12
Contact material / Contact surface	Copper alloy / Gold-plated	CuSn / Au (Gold)
Ambient temperature (operational)	-25 °C...85 °C	-40 °C...85 °C
Connector standard	IEC 61076-2-109, IEC 60603-7-51	IEC 61076-2-109
Current-carrying capacity	@	0.5A @ 40°C
Nominal voltage	50 V	50 V
Insulation resistance	100 MΩ	≥ 100 MΩ
Plugging cycles	≥ 100 (M12), 750 (RJ45)	≥ 100
Composition	M12 socket to RJ45 socket	M12 socket to M12 socket
Wall thickness, min. / max.	0.9 mm / 3 mm	/ 4.5 mm
Shielding	360° shield contact	Yes
Connection diameter, flexible, min. / max.		
Connection cross-section, flexible, min. / max.		
Connection diameter, solid, min. / max.		
Connection cross-section, solid, min. / max.		
Insulation cross-section, max.		
Sheath diameter min. / max.		
Approvals	CULUS	
Note		

Ordering data

	Type	Qty.	Order No.
Adapter 90°	IE-AD-M12XRJ45-90	1	**1400610000**
Adapter 180°	IE-AD-M12XRJ45-180	1	**1400620000**
Coupling			
Note			

Type	Qty.	Order No.
IE-BS-M12X-S-C	1	**2731010000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

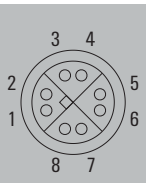
PCB socket
M12 X-type Cat. 6_A

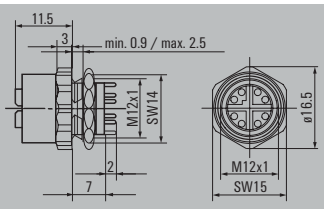
PCB socket

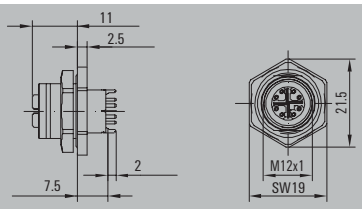


PCB socket, back panel mounting









Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67, when screwed in	IP67, when screwed in
Connection 1 / 2	M12 / Solder connection	M12 / Solder connection
Housing main material	CuZn	CuZn
Connection thread	M12	M12
Contact material / Contact surface	Cu-alloy / Gold over nickel	Cu-alloy / Gold over nickel
Ambient temperature (operational)	-40 °C...85 °C	-40 °C...85 °C
Connector standard	IEC 61076-2-109	IEC 61076-2-109
Current-carrying capacity	0.5A @ 40°C	0.5A @ 40°C
Nominal voltage	48 V	48 V
Insulation resistance	100 MΩ	100 MΩ
Plugging cycles	≥ 100	≥ 100
Composition	Reflow compatible	Back panel mounting
Wall thickness, min. / max.	0.9 mm / 2.5 mm	0.9 mm / 2.5 mm
Shielding	360° all-round enclosure	360° all-round enclosure
Approvals	CULUS	CULUS
Note		

Ordering data

	Type	Qty.	Order No.
pre-assembled	IE-PCB-M12X-S-180	10	**1324010000**
2-part version	IE-PCB2-M12X-S-180	10	**1393080000**

Type	Qty.	Order No.
IE-PCBR-M12X-S-180	10	**1427670000**
IE-PCBR2-M12X-S-180	10	**1444650000**

Note

Accessories

Type	Qty.	Order No.

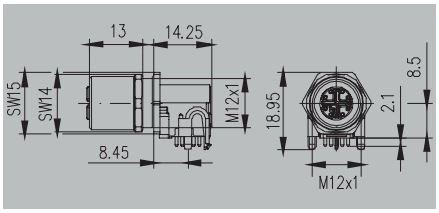
Type	Qty.	Order No.

Note

PCB socket
M12 X-type Cat. 6_A

PCB socket, angled





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67, when screwed in
Connection 1 / 2	M12 / Solder connection
Housing main material	CuZn
Connection thread	M12
Contact material / Contact surface	Cu-alloy / Gold over nickel
Ambient temperature (operational)	-40 °C...85 °C
Connector standard	IEC 61076-2-109
Current-carrying capacity	0.5A @ 40°C
Nominal voltage	48 V
Insulation resistance	100 MΩ
Plugging cycles	≥ 100
Composition	Reflow compatible
Wall thickness, min. / max.	1 mm / 2.5 mm
Shielding	360° all-round enclosure
Approvals	CULUS

Note

Ordering data

Type	Qty.	Order No.
IE-PCB-M12X-S-90	10	**2168220000**
pre-assembled 2-part version		

Note

Accessories

Type	Qty.	Order No.

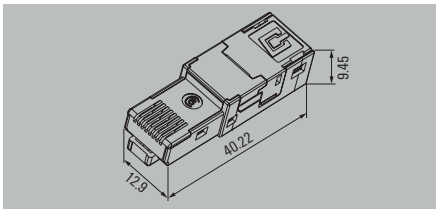
Note

RJ45 plug inserts, tool free

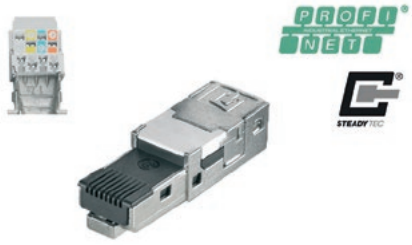
- Cat. 6_A
- IP20
- For housing variants 1, 4, 5 and 14

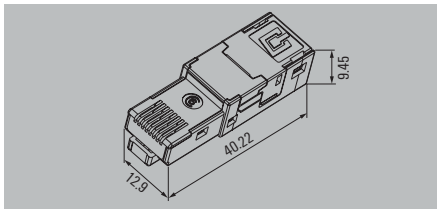
8-wire





4-wire





Technical data

	8-wire	4-wire
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.5 (ISO/IEC 11801)
Protection degree	IP67 with housing	IP67 with housing
Plugging cycles	750	750
Shielding	360° all-round enclosure	360° all-round enclosure
Housing main material	Zinc diecast	Zinc diecast
Contact material		
Contact surface	Gold over Nickel, Au ≥ 0.8 µm	Gold over Nickel, Au ≥ 0.8 µm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm	0.48 mm / 0.76 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm	0.4 mm / 0.64 mm
Wire connection cross-section, finely stranded	Approval of the cable by Weidmüller necessary	Approval of the cable by Weidmüller necessary
Insulation diameter, min. / max.	0.85 mm...1.6 mm	0.85 mm...1.6 mm
Humidity		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Insulation resistance	500 MΩ	500 MΩ
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC	≥ 1500 V AC/DC
Current-carrying capacity (at 50 °C)	1 A	1 A
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Transmission rate	10 Gbit/s	100 MBit/s
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Approvals	CULUS; CURUS	CULUS; CURUS
Note	Approvals available on request	

Ordering data

tool-free	Type	Qty.	Order No.	Type	Qty.	Order No.
TIA-A/B/PROFINET	IE-PI-RJ45-FH	10	**1962730000**			
TIA-A	IE-PI-RJ45-FH-A	10	**1132010000**			
TIA-B	IE-PI-RJ45-FH-B	10	**1132020000**			
PROFINET				IE-PI-RJ45-FH-P	10	**1132030000**
Note						

Accessories

Type	Qty.	Order No.	Type	Qty.	Order No.

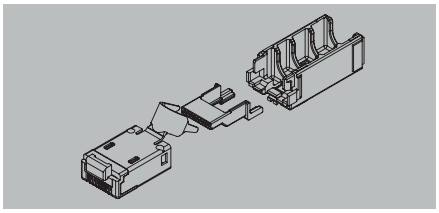
Note

RJ45 plug inserts, crimp

- Cat. 6_A
- IP20
- For housing variants 1, 4, 5 and 14

8-wire





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67 with housing
Plugging cycles	750
Shielding	360° all-round enclosure
Housing main material	Brass, PC UL 94 V0
Contact material	Phosphorus bronze
Contact surface	Gold over Nickel, Au ≥ 0.8 µm, Ni 2.54 µm
Connection cross-section, flexible, min. / max.	AWG 27/7 / AWG 24/7
Connection diameter, flexible, min. / max.	0.46 mm / 0.61 mm
Connection cross-section, solid, min. / max.	AWG 26/1 / AWG 24/1
Connection diameter, solid, min. / max.	0.4 mm / 0.51 mm
Insulation diameter, min. / max.	0.85 mm...1.05 mm
Humidity	0...93 % rel. humidity
Ambient temperature (operational)	-40 °C...70 °C
Insulation resistance	500 MΩ
Contact resistance	≤ 20 mΩ
Dielectric strength, contact / contact	≥ 1000 V AC/DC
Dielectric strength, contact / shield	≥ 1500 V AC/DC
Current-carrying capacity (at 50 °C)	1 A
PoE / PoE+	conforming to IEEE 802.3af
Transmission rate	10 Gbit/s
Connector standard	IEC 60603-7-51
Approvals	CURUS

Note

Ordering data

Crimp

Type	Qty.	Order No.
IE-PI-RJ45-TH	10	**1962720000**

Note

Accessories

Tools

Pressing tool

Type	Qty.	Order No.
TT 8 RS MP 8	1	**9202800000**

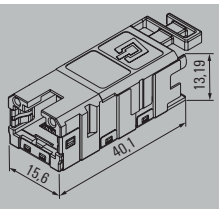
Note

RJ45 flange inserts, module

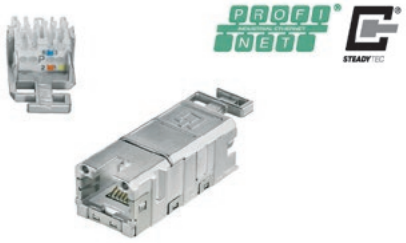
- Completely in Cat. 6_A
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

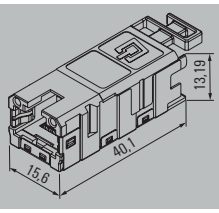
8-wire





4-wire





Technical data

	8-wire	4-wire
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.5 (ISO/IEC 11801)
Protection degree	IP67 with housing	IP67 with housing
Plugging cycles	750	750
Shielding	360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding	360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding
Housing main material	Zinc diecast	Zinc diecast
Contact surface	Gold over Nickel, Au ≥ 0.8 µm	Gold over Nickel, Au ≥ 0.8 µm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22	AWG 24 / AWG 22
Insulation diameter, min. / max.	0.85 mm...1.6 mm	0.85 mm...1.6 mm
Connector standard	IEC 60603-7-51	IEC 60603-7-51
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
PoE / PoE+	conforming to IEEE 802.3bt	conforming to IEEE 802.3bt
Approvals	CULUS	CULUS; DETNORVER
Note	Connection of WM Cat. 7 AWG 27/7 LSZH possible	

Ordering data

tool-free

Type	Qty.	Order No.	Type	Qty.	Order No.
TIA-A. Cat. 6_A	IE-BI-RJ45-FJ-A	10	**1962850000**		
TIA-B. Cat. 6_A	IE-BI-RJ45-FJ-B	10	**1963840000**		
PROFINET Cat. 5				IE-BI-RJ45-FJ-P	10	**1963830000**

Note

Accessories

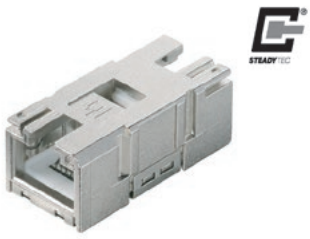
Type	Qty.	Order No.	Type	Qty.	Order No.

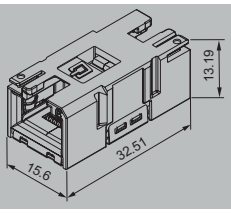
Note

Flange inserts, coupling

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®
- SPE coupling for FrontCom® only

RJ45, 8-wire, Cat. 6_A





Technical data

Category	Cat.6A / Class EA (ISO/IEC 11801 2010)
Protection degree	IP67 with housing
Plugging cycles	750
Shielding	360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding
Housing main material	Zinc diecast
Contact surface	Gold over Nickel, Au ≥ 0.8 µm
Connection cross-section, flexible, min. / max.	
Connection cross-section, solid, min. / max.	
Insulation diameter, min. / max.	...
Connector standard	IEC 60603-7-51
Ambient temperature (operational)	-40 °C...70 °C
PoE / PoE+	conforming to IEEE 802.3af
Approvals	CULUS; DETNORVER
Note	

Ordering data

tool-free		Type	Qty.	Order No.
	Coupling	IE-BI-RJ45-C	10	**1962840000**
Note				

Accessories

Type	Qty.	Order No.

Note

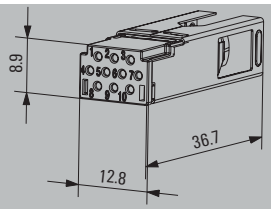
Plug inserts Hybrid

- Cat. 5
- IP20
- For housing variants 1 (metal) and 14

Crimp

Socket contacts





Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP67 with housing
Plugging cycles	500
Shielding	360° all-round enclosure
Housing main material	Nickel silver, PA 66
Contact surface	Gold over nickel
Number of poles	10
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 20
Connection diameter, flexible, min. / max.	0.08 mm² / 0.75 mm²
Insulation diameter, min. / max.	1...2.2 mm
Ambient temperature (operational)	-40 °C...70 °C
Volume resistance	<10 mΩ
Rated current	3 A per contact
Nominal voltage	24 V
Contact resistance	≤ 5 mΩ
Approvals	CULUS
Note	

Ordering data

Type	Qty.	Order No.
IE-PI-HYB-10P	1	**1068990000**
Contacts should be ordered separately		

Note

Accessories

Crimping contact (sockets)	Type	Qty.	Order No.
0.08...0.2 mm²	IE-PIC-HYB-S-0,2-300	300	**1135150000**
0.2...0.5 mm²	IE-PIC-HYB-S-0,5-300	300	**1096180000**
0.75 mm²	IE-PIC-HYB-S-0,75-300	300	**1068950000**
Tools			
Pressing tool	HTF HYB	1	**1119580000**

Note

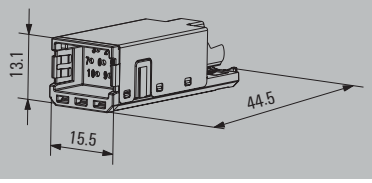
Flange inserts Hybrid

- Cat. 5
- IP20
- For housing variants 1 (metal) and 14

Module

Pin contacts





Technical data

Category	Cat.5 (ISO/IEC 11801)
Protection degree	IP67 with housing
Plugging cycles	500
Shielding	360° all-round enclosure
Housing main material	Zinc diecast, Nickel silver, PA 66
Contact surface	Gold over nickel
Number of poles	10
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 20
Connection diameter, flexible, min. / max.	0.08 mm² / 0.75 mm²
Insulation diameter, min. / max.	1...2.2 mm
Rated current	3 A per contact
Nominal voltage	24 V
Contact resistance	≤ 10 mΩ
Volume resistance	<10 mΩ
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CULUS
Note	

Ordering data

Type	Qty.	Order No.
IE-BI-HYB-10P	10	**1069010000**
Contacts should be ordered separately		

Note

Accessories

Crimping contact (pins)	Type	Qty.	Order No.
0.08...0.2 mm²	IE-BIC-HYB-P-0,2-300	300	**1135160000**
0.2...0.5 mm²	IE-BIC-HYB-P-0,5-300	300	**1096150000**
0.75 mm²	IE-BIC-HYB-P-0,75-300	300	**1068970000**
Tools			
Pressing tool	HTF HYB	1	**1119580000**

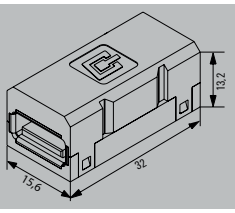
Note

Flange inserts USB

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

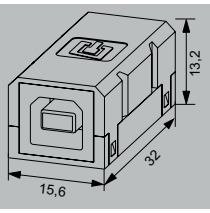
Coupling USB A/A





Coupling USB A/B





Technical data

	Coupling USB A/A	Coupling USB A/B
Protection degree	IP67 with housing	IP67 with housing
Shielding	360° all-round enclosure	360° all-round enclosure
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connection 1 / 2	USB A / USB A	USB A / USB B
Connector standard	IEC 61076-3-107	IEC 61076-3-107
Approvals	CULUS; DETNORVER	CULUS; DETNORVER
Note		

Ordering data

	Type	Qty.	Order No.
USB 2.0	IE-BI-USB-A	1	**1019570000**
USB 3.0	IE-BI-USB-3.0-A	1	**1487920000**
Note			

Type	Qty.	Order No.
IE-BI-USB-AB	1	**1131380000**

Accessories

USB cable 2.0	Type	Qty.	Order No.
0.5 m	IE-USB-A-A-0.5M	1	**1993550005**
1.0 m	IE-USB-A-A-1.0M	1	**1993550010**
1.5 m	IE-USB-A-A-1.5M	1	**1993550015**
1.8 m	IE-USB-A-A-1.8M	1	**1993550018**
3.0 m	IE-USB-A-A-3.0M	1	**1993550030**
USB cable 3.0			
0.5 m	IE-USB-3.0-A-A-0.5M	1	**2581730005**
1.8 m	IE-USB-3.0-A-A-1.8M	1	**2581730018**
3.0 m	IE-USB-3.0-A-A-3M	1	**2581730030**
5.0 m	IE-USB-3.0-A-A-5M	1	**2581730050**

Type	Qty.	Order No.

Note

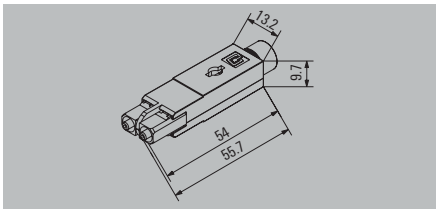
Plug inserts SC

- IP20
- For variant 1, 4 and 14 housings

Plug insert SC, POF

only for V14

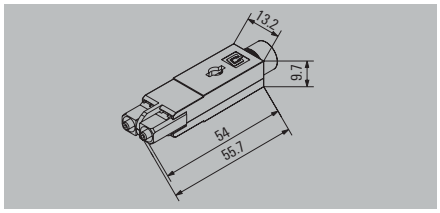




Connector insert SC, POF, reconnectable

only for V14





Technical data

Protection degree	IP67 with housing	IP67 with housing
Housing main material	Zinc diecast, PA	PA 66
Plugging cycles	1000	≥ 500
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61754-24	IEC 61754-24
Approvals	UL	
Note		

Ordering data

	Type	Qty.	Order No.
POF	IE-PI-SCRJ-POF	10	**1067410000**
Note			

Type	Qty.	Order No.
IE-PI-SCRJ-POF-QA	10	**2564960000**

Accessories

Tools	Type	Qty.	Order No.
Tool set POF, crimp	TOOL SET IE-POF	1	**1208930000**
Mounting tool, POF	HTX-IE-POF	1	**1208870000**
MULTI-STRIPAX IE-POF	MULTI-STRIPAX IE-POF	1	**1208880000**
Cevlar scissors	SCISSORS KEVLAR	1	**1208910000**
Replacement ferrule			
	IE-SCRJ-IP67-POF-100	100	**1278430000**

Type	Qty.	Order No.
MULTI-STRIPAX IE-POF	1	**1208880000**
SCISSORS KEVLAR	1	**1208910000**

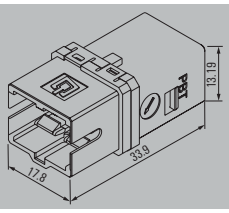
Note

Flange inserts SC

- IP20
- SC-RJ on 2 SC
- For variant 1, 4 and 14 housings

Flange inserts SC





Technical data

Protection degree	IP67 with housing
Housing main material	PA
Plugging cycles	1000
Ambient temperature (operational)	-40 °C...70 °C
Approvals	

Note

Ordering data

Flange insert	Type	Qty.	Order No.
Singlemode	IE-BI-SCRJ2SC-SM-C	10	**1962870000**
Multimode/POF	IE-BI-SCRJ2SC-MM-C	10	**1964430000**

Note

Accessories

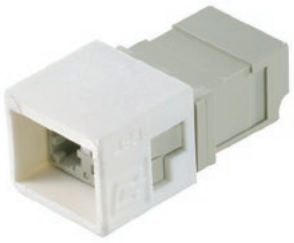
Type	Qty.	Order No.

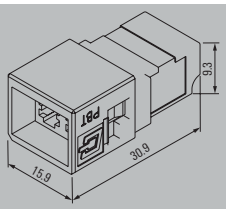
Note

Flange inserts LC

- IP20
- For variant 1, 4 and 14 housings

Flange inserts LC





Technical data

Protection degree	IP67 with housing
Housing main material	PBT diecast zinc
Plugging cycles	1000
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61754-20
Approvals	

Note

Ordering data

Flange insert	Type	Qty.	Order No.
Singlemode	IE-BI-LCD-SM-C	10	**1962880000**
Multimode	IE-BI-LCD-MM-C	10	**1964420000**

Note

Accessories

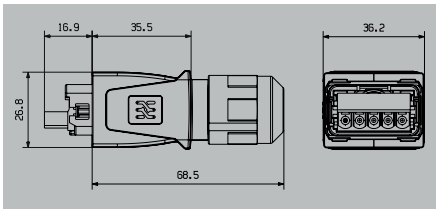
Type	Qty.	Order No.

Note

Plug PushPull Power

Plug Power 24 V





Technical data

General data	
Protection degree	IP65, IP67
Connector standard	in accordance with PROFINET specification, IEC 61076-3-126
Ambient temperature (operational)	-40 °C...70 °C
Number of poles	5
Wire connection cross-section, flexible, min./max.	0.75 mm² / 2.5 mm²
Sheath diameter, min. / max.	8 mm / 13 mm
Approvals	UR
Material properties	
Housing base material	Zinc diecast, nickel-plated
Sealing material	NBR
Cable sealing material	EPDM
Contact material / Contact surface	Copper alloy / Gold over nickel
UL 94 flammability rating	V-2
Pollution severity level	2
Plugging cycles	≥ 100
Electrical properties*	
Current-carrying capacity at 50 °C	16 A
Rated voltage	24 V
Note	For cables with an outer diameter of 6-8 mm, order an additional reducing seal.

Ordering data - Sets

	Type	Qty.	Order No.
Tension clamp connection	IE-PS-VAPM-5P-2.5	1	**2465440000**
SNAP IN connection	IE-PS-VAPM-5P-2.5-QT	1	**2912590000**
Note	When using wire end ferrules, we recommend the length of 10 mm.		

Ordering data - Empty housings

	Type	Qty.	Order No.
Note			

Accessories

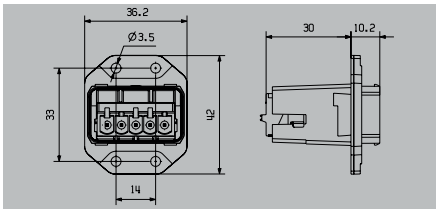
	Type	Qty.	Order No.
Reducing seal insert 6–8 mm	IE-REDU-6-8-PS-VAPM	10	**2531330000**

Note

Flanges PushPull Power

Flange Power 24 V





Technical data

General data	
Protection degree	IP67
Connector standard	in accordance with PROFINET specification, IEC 61076-3-126
Ambient temperature (operational)	-40 °C...70 °C
Number of poles	5
Wire connection cross section, finely stranded, min. / max.	0.75 mm² / 2.5 mm²
Connection 1	Tension clamp
Approvals	UR
Installation	4 screws
Material properties	
Housing base material	Zinc diecast, nickel-plated
Sealing material	NBR
Cable sealing material	EPDM
Contact carrier material	PA
Contact material / Contact surface	Copper alloy / Gold over nickel
UL 94 flammability rating	V-2
Pollution severity level	2
Plugging cycles	≥ 100
Electrical properties*	
Current-carrying capacity at 50 °C	16 A
Rated voltage	24 V
Note	

Ordering data - Sets

Type	Qty.	Order No.
IE-BSS-VAPM-24V	1	2493480000

Note

Wir empfehlen die Verwendung von 10-mm-Aderendhülsen.

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BHD-VAPM	1	2493490000

Device flange

Note

Accessories

Dust protection cap

Type	Qty.	Order No.
IE-BP-VAPP	10	1068930000
IE-BP-VAPP-DC	10	2494060000

IP54 protective cap

Dust cap

Note

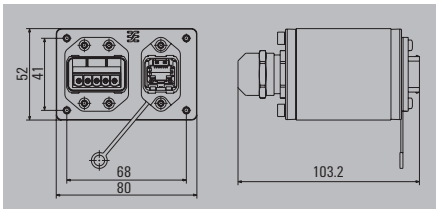
IP65 connection components / FreeCon connecting components
Overview

IP65 connection components / FreeCon connecting components	FreeCon Passive V14	N.2
	FreeCon Active PROFINET	N.8
	V1 junction boxes	N.11
	V4 junction boxes	N.13
	V5 junction boxes	N.15
	V6 junction boxes	N.16

FreeCon V14 - junction box

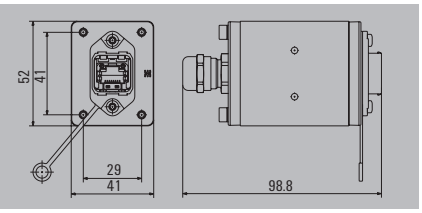
Double junction box, Power / RJ45





Single junction box, RJ45





Technical data

General data		
Housing main material	Aluminium profile, Cover: die-cast zinc, painted	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65	IP65
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-5	IEC 61076-3-117 Var. 14, IEC 60603-7-5
Approvals	CULUS	CULUS
Technical specifications power connector		
Housing base material	Zinc diecast, nickel-plated	
Sealing material	NBR	
Contact material	Copper alloy	
Contact carrier material	PA	
Contact surface	Gold over nickel	
Plugging cycles	≤ 100	
Number of poles	5	
Sheath diameter, min. / max.	6 mm / 12 mm	
Wire connection cross section, stranded, min. / max.	0.75 mm² / 2.5 mm²	
Connection	Tension clamp	
Electrical properties power connector		
Current-carrying capacity at 50 °C	16 A	
Rated voltage	24 V	
Technical specifications for RJ45 module		
Housing base material	Zinc diecast	Zinc diecast
Contact surface	Gold over nickel	Gold over nickel
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22	AWG 26 / AWG 22
Plugging cycles (RJ45 module)	750	750
Connection 1	IDC	IDC
Sheath diameter, min./max.	5 mm / 10 mm	5 mm / 10 mm
Electrical properties for RJ45 module		
Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Insulation resistance	> 500 MΩ	> 500 MΩ
Dielectric strength, contact – contact, max.	≤ 1000 V DC	≤ 1000 V DC
Dielectric strength, contact – contact, min.	≤ 1500 V DC	≤ 1500 V DC
Current carrying capacity	1 A	1 A
Note		

Ordering data

Type	Qty.	Order No.
IE-CD-V14MRJ/VAPM24V-FJ	1	**1068830000**

Type	Qty.	Order No.
IE-CD-V14MRJ-FJ	1	**1068880000**

Note

Accessories

Mounting foot

Type	Qty.	Order No.
IE-CD-MA	10	**1099580000**

Type	Qty.	Order No.
IE-CD-MA	10	**1099580000**

Dust protection cap

	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	**1058310000**
IP54 protective cap	IE-BP-VAPP	10	**1068930000**

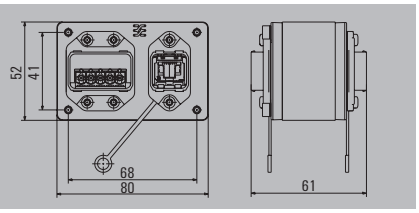
Type	Qty.	Order No.
IE-BP-V14P	10	**1058310000**

Note

FreeCon V14 - coupling

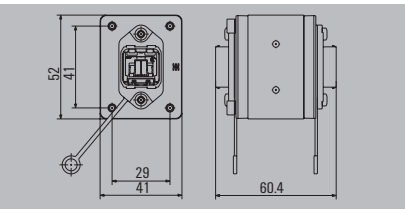
Double coupling, Power / RJ45





Single coupling, RJ45





Technical data

General data		
Housing main material	Aluminium profile, Cover: die-cast zinc, painted	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65	IP65
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-5	IEC 61076-3-117 Var. 14, IEC 60603-7-5
Approvals	CULUS	CULUS
Technical specifications power connector		
Housing base material	Zinc diecast, nickel-plated	
Sealing material	NBR	
Contact material	Copper alloy	
Contact carrier material	PA	
Contact surface	Gold over nickel	
Plugging cycles	≥ 100	
Number of poles	5	
Electrical properties power connector		
Current-carrying capacity at 50 °C	16 A	
Rated voltage	24 V	
Technical data for RJ45 coupling		
Housing base material	Zinc diecast	Zinc diecast
Electrical properties RJ45 coupling		
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	Cat.6A / Class EA (ISO/IEC 11801 2010)
Contact resistance	≤ 20 mΩ	≤ 20 mΩ
Contact surface	Gold over nickel	Gold over nickel
Insulation resistance	> 500 MΩ	> 500 MΩ
Dielectric strength, contact – contact, min.	≥ 1000 V DC	≥ 1000 V DC
Dielectric strength, contact – shielding, max.	≥ 1500 V DC	≥ 1500 V DC
Current carrying capacity	1 A	1 A
Note		

Ordering data

Type	Qty.	Order No.
IE-CD-V14MRJ/VAPM24V-C-MA	1	1068820000
Note		
Including mounting foot		

Type	Qty.	Order No.
IE-CD-V14MRJ-C-MA	1	1068870000
Note		
Including mounting foot		

Accessories

Dust protection cap	Type	Qty.	Order No.
Protective cap	IE-BP-V14P	10	1058310000
IP54 protective cap	IE-BP-VAPP	10	1068930000

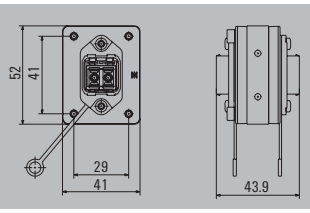
Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Note

FreeCon V14 - single coupling

Single coupling, SCRJ





Technical data

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65
Ambient temperature (operational)	-40...70 °C
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24
Approvals	CULUS
Technical specifications - fibre-optic coupler	
Housing base material (fibre-optic coupling)	PA
Plugging cycles (fibre-optic coupling)	≥ 500
Seal material (fibre-optic coupling)	NBR
Connection 1 / 2	SCRJ / SCRJ
Insertion attenuation (fibre-optic coupling)	<0.2 dB
Fibre type	Multimode, POF
Note	

Ordering data

Type	Qty.	Order No.
IE-CD-V14MSCRJ-MM-C-MA	1	1318150000

Note

Accessories

Dust protection cap

Protective cap

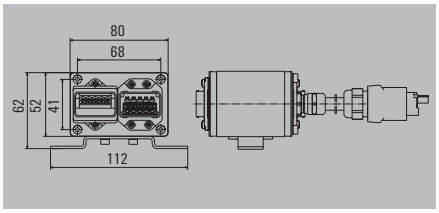
Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Note

FreeCon V14 - Power

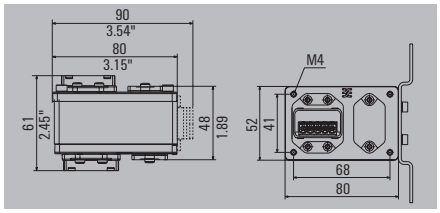
Y-distributor, Power





Single coupling, Power





Technical data

General data		
Housing main material	Aluminium profile, Cover: die-cast zinc, painted	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65	IP65, If thread-locking fluid is used
Ambient temperature (operational)	-40...70 °C	-40...70 °C
Connector standard	in accordance with PROFINET specification	in accordance with PROFINET specification
Approvals	CULUS	CULUS
Technical specifications power connector		
Housing base material	Zinc diecast, nickel-plated	Zinc diecast, nickel-plated
Sealing material	NBR	NBR
Cable sealing material	TPE	TPE
Contact material	Copper alloy	Copper alloy
Contact carrier material	PA	PA
Contact surface	Gold over nickel	Gold over nickel
UL 94 flammability rating	V-0	V-0
Plugging cycles	≥ 100	≥ 100
Pollution severity level	2	2
Number of poles	5	5
Electrical properties power connector		
Current-carrying capacity	16A @ 20°C	16A @ 20°C
Rated voltage	24 V	24 V
Note		

Ordering data

	Type	Qty.	Order No.
	IE-CD-VAPM24V-Y-MA	1	1297010000
Note			

	Type	Qty.	Order No.
	IE-CD-VAPM24V-C-MA	1	1397690000

Accessories

Dust protection cap	Type	Qty.	Order No.
IP54 protective cap	IE-BP-VAPP	10	1068930000

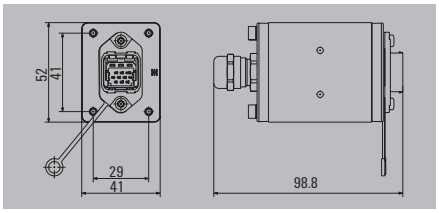
	Type	Qty.	Order No.
	IE-BP-VAPP	10	1068930000

Note

FreeCon V14 - junction box

Single junction box, Hybrid





Technical data

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65
Ambient temperature (operational)	-40 °C...70 °C
Approvals	CULUS
Technical specifications hybrid connector	
Housing base material	Zinc diecast (flange), PA 66
Sealing material	NBR
Contact material	Copper alloy
Contact surface	Gold over nickel
Plugging cycles	500
Pole count	10
Connection cross-section, flexible, min. / max.	AWG 27 / AWG 20
Connection cross-section, flexible, min. / max.	0.08 mm² / 0.75 mm²
Electrical properties hybrid connector	
Rated current (hybrid connector)	3 A per contact
Rated voltage (DIN EN 61984)	24 V
Contact resistance	≤ 10 mΩ

Note

Ordering data

Type	Qty.	Order No.
IE-CD-V14MHYB-10P-FJ	1	**1068850000**

Note

Contacts should be ordered separately

Accessories

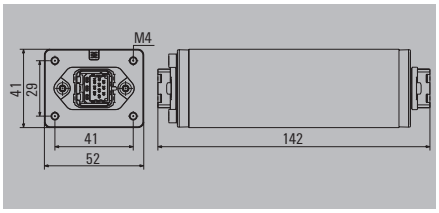
Mounting foot		
IE-CD-MA	10	**1099580000**
Crimping contact (pins)		
0.08...0.2 mm²		
IE-BIC-HYB-P-0,2-300	300	**1135160000**
0.2...0.5 mm²		
IE-BIC-HYB-P-0,5-300	300	**1096150000**
0.75 mm²		
IE-BIC-HYB-P-0,75-300	300	**1068970000**
Tools		
Pressing tool		
HTF HYB	1	**1119580000**
Dust protection cap		
Protective cap		
IE-BP-V14P	10	**1058310000**

Note

FreeCon V14 - single coupling

Single coupling, hybrid





Technical data

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, painted
Protection degree	IP65
Ambient temperature (operational)	-40...70 °C
Approvals	CULUS
Technical specifications hybrid connector	
Housing base material	Zinc diecast (flange), PA 66
Sealing material	NBR
Contact material	Copper alloy
Contact surface	Gold over nickel
Plugging cycles	500
Pole count	10
Electrical properties hybrid connector	
Rated current (hybrid connector)	3 A per contact
Rated voltage (DIN EN 61984)	24 V
Contact resistance	≤ 10 mΩ
Note	

Ordering data

Type	Qty.	Order No.
IE-CD-V14MHYB-10P-C-MA	1	1068840000

Note

Accessories

Dust protection cap

Protective cap

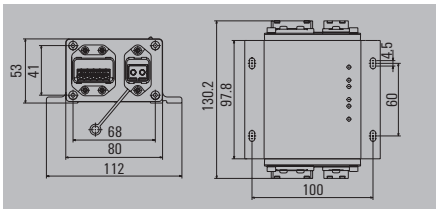
Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Note

FreeCon Active PROFINET with diagnostics functionality

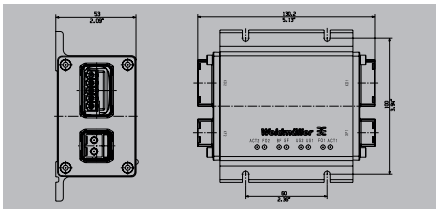
POF repeater





POF repeater II





Technical data

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, painted
Data interface	PROFINET PushPull SCRJ POF (V14)
Power interface	PROFINET PushPull Power
Protection degree	IP65
Ambient temperature (operational)	-20 °C...55 °C
Network standard	IEC 61158, IEC 61784
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24
Electrical data	
Operating voltage	24 V DC
Operational voltage range	18...30 V DC
Current consumption	200 mA typical
Baud rate	100 MB
Protocol	PROFINET IRT
LED indicator	FO1: port active, FO2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2
Approvals	CE; CULUS
Note	

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, electroplated
Data interface	PROFINET PushPull SCRJ POF (V14)
Power interface	PROFINET PushPull Power
Protection degree	IP65
Ambient temperature (operational)	-20 °C...55 °C
Network standard	IEC 61158, IEC 61784
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24
Electrical data	
Operating voltage	24 V DC
Operational voltage range	18...30 V DC
Current consumption	200 mA typical
Baud rate	100 MB
Protocol	PROFINET IRT
LED indicator	FO1: port active, FO2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, ACT1: activity Port1, ACT2: activity Port2
Approvals	CE; CULUS
Note	

Ordering data

Type	Qty.	Order No.
IE-CDR-V14MSCPOF/VAPM-C	1	**1253240000**
Note		
Delivery incl. protective caps		

Type	Qty.	Order No.
IE-CDR-V14MSCPOF/VAPM-C II	1	**2455360000**
Further development of 1253240000, IE-CDR-V14MSCPOF/VAPM-C. For commissioning, the new GSDML file (see Downloads) must be installed.		

Accessories

Type	Qty.	Order No.

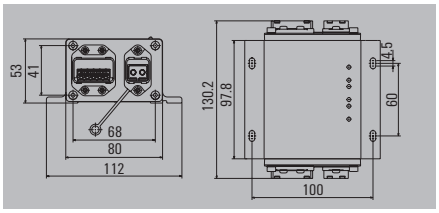
Type	Qty.	Order No.

Note

FreeCon Active PROFINET with diagnostics functionality

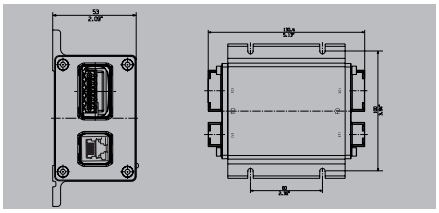
POF media converter





POF media converter II





Technical data

General data		
Housing main material	Aluminium profile, Cover: die-cast zinc, painted	Aluminium profile, Cover: die-cast zinc, electroplated
Data interface	PROFINET PushPull SCRJ POF (V14), PROFINET PushPull RJ45 (V14)	PROFINET PushPull SCRJ POF (V14), PROFINET PushPull RJ45 (V14)
Power interface	PROFINET PushPull Power	PROFINET PushPull Power
Protection degree	IP65	IP65
Ambient temperature (operational)	-20 °C...55 °C	-20 °C...55 °C
Network standard	IEC 61158, IEC 61784	IEC 61158, IEC 61784
Connector standard	IEC 61076-3-117 Var. 14, IEC 61754-24, IEC 60603-7-51	IEC 61076-3-117 Var. 14, IEC 61754-24, IEC 60603-7-51
Electrical data		
Operating voltage	24 V DC	24 V DC
Operational voltage range	18...30 V DC	18...30 V DC
Current consumption	200 mA typical	200 mA typical
Baud rate	100 MB	100 MB
Protocol	PROFINET IRT	PROFINET IRT
LED indicator	P1: port active, P2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2	P1: port active, P2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, ACT1: activity Port1, ACT2: activity Port2
Approvals	CE; CULUS	CULUS
Note		Further development of 1324440000, IE-CDM-V14MRJSCP/VAPM-C. For commissioning, the new GSDML file (see Downloads) must be installed.

Ordering data

Type	Qty.	Order No.
IE-CDM-V14MRJSCP/VAPM-C	1	**1324440000**
Note	Delivery incl. protective caps	

Type	Qty.	Order No.
IE-CDM-V14MRJSCP/VAPM-C II	1	**2588270000**

Accessories

Type	Qty.	Order No.

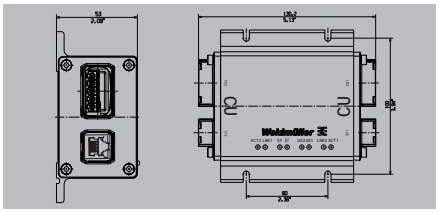
Type	Qty.	Order No.

Note

FreeCon Active PROFINET with diagnostics functionality

Copper repeater





Technical data

General data	
Housing main material	Aluminium profile, Cover: die-cast zinc, electroplated
Data interface	PROFINET PushPull RJ45 (V14)
Power interface	PROFINET PushPull Power
Protection degree	IP65
Ambient temperature (operational)	-20 °C...55 °C
Network standard	IEC 61158, IEC 61784
Connector standard	IEC 61076-3-117 Var. 14
Electrical data	
Operating voltage	24 V DC
Operational voltage range	18...30 V DC
Current consumption	100 mA
Baud rate	100 MBit/s
Protocol	PROFINET IRT
LED indicator	ACT1: activity Port1, ACT2: activity Port2, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, LNK1: port active, LNK2: port active
Approvals	CULUS
Note	

Ordering data

Type	Qty.	Order No.
IE-CDR-V14MRJ/VAPM-C	1	2581810000
Delivery incl. protective caps		

Note

Accessories

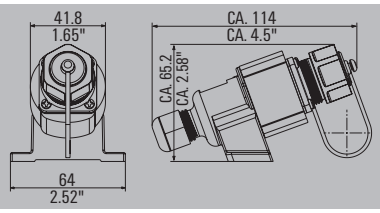
Type	Qty.	Order No.

Note

V1 junction boxes - plastic

Single junction box





Technical data

Protection degree	IP67
Housing main material	PA UL 94 V0
Plugging cycles	750
Ambient temperature (operational)	-40 °C...70 °C
Connector standard	IEC 61076-3-106 Var. 1
Sheath diameter min. / max.	6 mm / 9.5 mm
Approvals	
Note	

Ordering data

Variant 1	Type	Qty.	Order No.
Pre-assembled cable	IE-OP-V01P-1S	10	**1061830000**
Note	Order RJ45 modules separately		

Accessories

Inserts, Data	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**

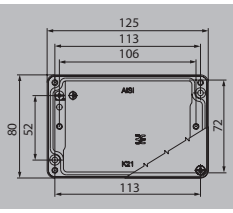
Note

V1 junction boxes - metal

- IP67
- For wall or floor mounting

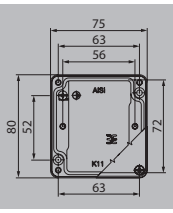
Double junction box





Single junction box





Technical data

	Double junction box	Single junction box
Protection degree	IP67	IP67
Housing main material	AL-Si 12	AL-Si 12
Colour	grey	grey
Type of mounting	Floor-mounted, Wall mounting	Floor-mounted, Wall mounting
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Plugging cycles	750	750
Connector standard	IEC 61076-3-106 Var. 1	IEC 61076-3-106 Var. 1
Sheath diameter min. / max.	5 mm / 10 mm	5 mm / 10 mm
Approvals		
Note		

Ordering data

Variant 1	Type	Qty.	Order No.
2 ports. straight	IE-OM-V01M-K21-2S	1	**1966330000**
1 port. straight			
Note	RJ45 modules can be ordered separately		

Type	Qty.	Order No.
IE-OM-V01M-K11-1S	1	**1966300000**
RJ45 modules can be ordered separately		

Accessories

Inserts, Data	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**

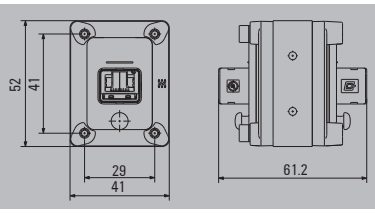
Type	Qty.	Order No.
IE-BI-RJ45-FJ-B	10	**1963840000**
IE-BI-RJ45-FJ-P	10	**1963830000**
IE-BI-RJ45-FJ-A	10	**1962850000**

Note

FreeCon V4 junction boxes

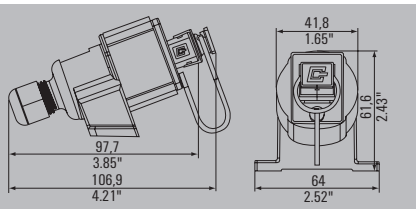
Single coupling, RJ45





Single junction box





Technical data

General data		
Plugging cycles	750	750
Housing main material	Aluminium profile, Cover: die-cast zinc, painted	PA
Contact surface	Gold over nickel	Gold over nickel
UL 94 flammability rating		V-0
Connector standard	IEC 61076-3-106 Var. 4, IEC 60603-7-5	IEC 61076-3-106 Var. 4
Protection degree	IP65	IP67
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Sheath diameter min. / max.		6 mm / 9.5 mm
Approvals	CULUS	
Electrical properties for RJ45 module		
Category	Cat.6A / Class EA (ISO/IEC 11801 2010)	
Contact resistance	≤ 20 mΩ	
Insulation resistance	> 500 MΩ	
Dielectric strength, contact – contact, min.	≥ 1000 V DC	
Dielectric strength, contact – shielding, max.	≥ 1500 V DC	
Current carrying capacity	1 A	
Material properties RJ45 coupling		
Housing base material	Zinc diecast	
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Pre-assembled cable				IE-OP-V04P-1S	10	1045780000
Coupling	IE-CD-V04PRJ-C-MA	1	1122710000			
Note	Including mounting foot			Order RJ45 modules separately, IP 67 protective cap included in delivery		

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Dust protection cap						
Flange-mounted housing protective cap	IE-BP-V04P	10	1963900000	IE-BP-V04P	10	1963900000
Inserts, Data						
RJ45 module PROFINET				IE-BI-RJ45-FJ-P	10	1963830000
RJ45 module EIA/TIA T568 A				IE-BI-RJ45-FJ-A	10	1962850000
RJ45 module EIA/TIA T568 B				IE-BI-RJ45-FJ-B	10	1963840000

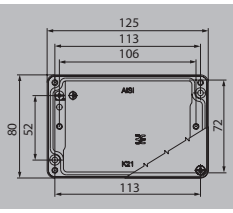
Note

V4 junction boxes

- IP67
- For wall or floor mounting

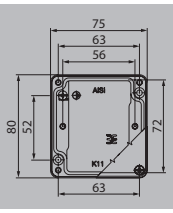
Double junction box





Single junction box





Technical data

	Double junction box	Single junction box
Protection degree	IP67	IP67
Housing main material	AL-Si 12	AL-Si 12
Colour	grey	grey
Type of mounting	Floor-mounted, Wall mounting	Floor-mounted, Wall mounting
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Plugging cycles	750	750
Connector standard	IEC 61076-3-106 Var. 4	IEC 61076-3-106 Var. 4
Sheath diameter min. / max.	5 mm / 10 mm	5 mm / 10 mm
Approvals		
Note		

Ordering data

Variant 4	Type	Qty.	Order No.	Type	Qty.	Order No.
2 ports. straight	IE-OM-V04P-K21-2S	1	**1966250000**			
1 port. straight				IE-OM-V04P-K11-1S	1	**1966220000**
Note	RJ45 modules can be ordered separately			RJ45 modules can be ordered separately		

Accessories

Inserts, Data	Type	Qty.	Order No.	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**	IE-BI-RJ45-FJ-A	10	**1962850000**

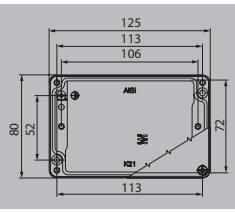
Note

V5 junction boxes

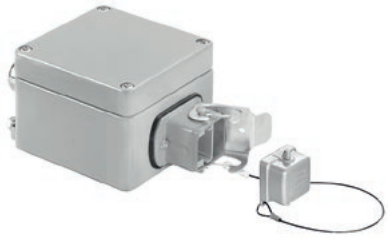
- IP67
- For wall or floor mounting

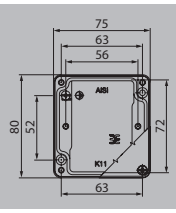
Double junction box





Single junction box





Technical data

Protection degree	IP67	IP67
Housing main material	AL-Si 12	AL-Si 12
Colour	grey	grey
Type of mounting	Floor-mounted, Wall mounting	Floor-mounted, Wall mounting
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Plugging cycles	750	750
Connector standard	IEC 61076-3-106 Var. 5	IEC 61076-3-106 Var. 5
Sheath diameter min. / max.	5 mm / 10 mm	5 mm / 10 mm
Approvals		
Note		

Ordering data

Variant 5	Type	Qty.	Order No.	Type	Qty.	Order No.
2 ports. straight	IE-OM-V05M-K21-2S	1	**1966290000**			
1 port. straight				IE-OM-V05M-K11-1S	1	**1966260000**
Note	RJ45 modules can be ordered separately			RJ45 modules can be ordered separately		

Accessories

Inserts, Data	Type	Qty.	Order No.	Type	Qty.	Order No.
RJ45 module EIA/TIA T568 B	IE-BI-RJ45-FJ-B	10	**1963840000**	IE-BI-RJ45-FJ-B	10	**1963840000**
RJ45 module PROFINET	IE-BI-RJ45-FJ-P	10	**1963830000**	IE-BI-RJ45-FJ-P	10	**1963830000**
RJ45 module EIA/TIA T568 A	IE-BI-RJ45-FJ-A	10	**1962850000**	IE-BI-RJ45-FJ-A	10	**1962850000**

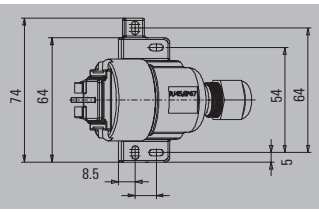
Note

V6 junction boxes

- Cat. 6
- IP67

Single junction box, RJ45





Technical data

Protection degree	IP67
Housing main material	PA 66, UL 94: V-0
Colour	Light Grey
Type of mounting	Floor-mounted, for exposed connections, Wall mounting
Composition	Screw-on junction box including RJ45 module with IDC connection
Wiring	EIA/TIA T568 A, EIA/TIA T568 B
Ambient temperature (operational)	-40 °C...70 °C
Plugging cycles	750
Connector standard	IEC 61076-3-106 Var. 6
Sheath diameter min. / max.	6 mm / 9.5 mm
Approvals	DETNORVER

Note

Ordering data

Type	Qty.	Order No.
IE-S-IP67	1	8808370000

Note

Accessories

Tools	Type	Qty.	Order No.
Pressing tool	TT 8 RS MP 8	1	9202800000

Note

Copper cabling solutions
Overview

Copper cabling solutions	Introduction AdvancedLine and CabinetLine	0.2
	Overview – Copper cables	0.4
	Raw cables – Single Pair Ethernet (SPE) cable	0.6
	Raw cables – Installation cable	0.8
	Raw cables – Connection cable	0.10
	Raw cables – Dragline cable	0.16
	Raw cables – PROFINET cable	0.17
	Raw cables – Hybrid cable	0.19
	Assembled cables – Patch cable	0.23
	Assembled cables – Smart Meter patch cable	0.30
	Assembled cables – PROFINET cable	0.33
	Assembled cables – PROFINET cable PushPull Power	0.37
	Assembled cables – PROFINET cable M12	0.38
	Assembled cables – EtherNet/IP	0.46
	Assembled cables – EtherCat P cable M8	0.48
	Assembled cables – PROFINET cable M8, D-coded	0.52
	Assembled cables – Railway cable M12	0.57
	Assembled cables – Railway cable RJ45	0.62
	Assembled cables – USB cable	0.63

The ideal solution, whatever your needs
Our AdvancedLine and CabinetLine product ranges

AdvancedLine



The AdvancedLine from Weidmüller offers all combinations of cables that are possible with the extensive range of plug connections.

This means flexibility and robustness through the high quality of the used components. The range comprises standard cables and customer-specific versions.

- High-quality cables with very good technical characteristics
- Suitable for demanding IP20 to IP67 applications
- Suitable for temperatures from -40 to +70 °C
- High-quality shielding

CabinetLine



The new CabinetLine range of patch cables from Weidmüller is available in a variety of colours for visually differentiating between various networks.

Additional benefits:
All CabinetLine cables are fitted with Weidmüller TM marking sleeves for clearly labelling cables and ports. CabinetLine is available in many different colours in combination with LSZH sheathing material and transmission power Cat. 6_A.
CabinetLine is also available in the colour green and Cat. 5 with PUR or PVC sheathing material. All variants are fitted with protected clips which facilitate, e.g., pulling through a cable duct.

- For applications in switching cabinets and simple environmental conditions
- Suitable for temperatures from –20 to +60 °C
- Simple shielding

Overview of copper cables
Solutions for every environment

Copper cables should be your first choice for applications in offices and harsh industrial environments.

Advantages:
- Available in many different variations and lengths
- Robust
- Easy to assemble
- RJ45 connections are the most popular

Assembled cables

Industrial patch cables / CabinetLine



...not only for office applications, but also in switching cabinets for industrial applications

- Cat. 6_A
- With LSZH sheathing – low smoke and zero halogens
- In straight and crossover versions

System cable for railway applications



...pre-assembled cable for flexible wiring on railway vehicles for both interior and exterior installations.

- In Cat. 5
- Also for PROFINET
- With Radox sheath

Industrial system cables



...pre-assembled cables for flexible installation in machines and plants in industrial applications and difficult environments

- Cat. 5 or Cat. 6_A
- With PUR sheathing

Smart meter patch cable RJ45 6 kV/4 kV and RJ12



Patch Cables for Smart Metering Applications conforming to standards to DIN-VDE 0603 and VDE-AR-N 4100:2019-04

- 6 kV/4 kV impulse withstand voltage
- IP30 RJ45 connector

Industrial trailing cables



...pre-assembled cable for constant motion, e.g., with draglines

- Cat. 5
- Available for PROFINET as well
- With PUR sheathing

Raw cables

Industrial installation cables, horizontal cables



...for stationary, permanent installation in cable ducts and cable trays

- Cat. 5 or Cat. 7
- Available for PROFINET as well
- With PUR or PVC sheathing

Industrial trailing cables



...for applications subjected to constant movement

- Cat. 5
- Available for PROFINET as well
- With PUR sheathing

Industrial connecting cables



...for flexible installation in machines and plants in industrial applications and difficult environments

- Cat. 5 or Cat. 7
- Available for PROFINET as well
- With PUR or PVC sheathing

Industrial Single Pair Ethernet raw cables



For flexible installation in machines and plants in industrial environment / in harsh environments

- T1-B
- Jacket in PUR or LSZH

Ordering data for copper cables, raw cable

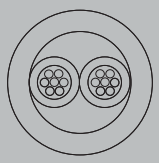
Type	Cat./Class	Colour	AWG	Outer diameter	Length 100 m	305 m	500 m	1000 m
Industrial Single Pair Ethernet raw cables/SPElink®								
IE-S1DS2UE-*	T1-B	black	AWG22/7	PUR	2926110000		2924340000	
IE-S1DS2LE-*	T1-B	black	AWG22/7	LSZH	2926120000		2924350000	
IE-S1ES2UE-*	T1-B	black	AWG26/7	PUR	2926130000		2924360000	
IE-S1ES2LE-*	T1-B	black	AWG26/7	LSZH	2926140000		2924370000	
Industrial installation cables								
IE-C5CS8UG-xxx	Cat. 5	green	AWG24/1	PUR	8813160000		2762870000	
IE-C5CS8VG-xxx	Cat. 5	green	AWG24/1	PVC	8813150000		2763440000	
IE-C7BS8UG-xxx	Cat. 7	green	AWG23/1	PUR	8813140000		2763530000	
IE-C7BS8VG-xxx	Cat. 7	green	AWG23/1	PVC	8813130000		2763540000	
IE-C5AS4V-xxx	Cat. 5 PROFINET	green	AWG22/1	PVC	8899000000		2763430000	
Industrial connecting cables								
IE-C5ES8UG-xxx	Cat. 5	green	AWG26/7	PUR	8813200000		2763500000	
IE-C5ES8VG-xxx	Cat. 5	green	AWG26/7	PVC	8813190000		2763510000	
IE-C7ES8UG-xxx	Cat. 7	green	AWG26/7	PUR	8813180000		2763550000	
IE-C7ES8VG-xxx	Cat. 7	green	AWG26/7	PVC	8813170000		2763560000	
IE-C5DS4V-xxx	Cat. 5 PROFINET	green	AWG22/7	PVC	8898990000		2763470000	
IE-C5DHAG-xxx	Cat. 5 PROFINET	green	AWG22/7	PVC	2763660000		2763460000	
IE-C7FS8LD-305M	Cat. 7	grey	AWG27/7	LSZH		1273090000		
IE-C7FS8LB-305M	Cat. 7	blue	AWG27/7	LSZH		1326540000		
IE-C7FS8LE-305M	Cat. 7	black	AWG27/7	LSZH		1344690000		
IE-C7FS8LG-305M	Cat. 7	green	AWG27/7	LSZH		1344680000		
IE-C7FS8LR-305M	Cat. 7	red	AWG27/7	LSZH		1287910000		
IE-C7FS8LV-305M	Cat. 7	violet	AWG27/7	LSZH		2779910000		
IE-C7FS8LM-305M	Cat. 7	magenta	AWG27/7	LSZH		1333160000		
IE-C7FS8LO-305M	Cat. 7	orange	AWG27/7	LSZH		2661080000		
IE-C7FS8LY-305M	Cat. 7	yellow	AWG27/7	LSZH		1344670000		
Industrial trailing cables								
IE-C5ED8UG-xxx	Cat. 5	green	AWG26/7	PUR	8813210000		2763490000	2781890000
IE-C5ED8UB-xxx	Cat. 5	blue	AWG26/7	PUR	8960670000		2763480000	2781880000
IE-C5DD4UG-xxx	Cat. 5 PROFINET	green	AWG22/7	PUR	8899010000		2763450000	
IE-C5IT4UGx	Cat. 5 PROFINET	green	AWG22/19	PUR	2764770000		2763520000	

Raw cables
Single Pair Ethernet

- AWG 22

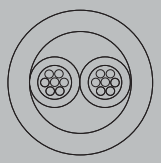
PUR





LSZH





Technical data

	PUR	LSZH
Product type	System cable	System cable
Category	T1-B	T1-B
Shielding	S/FTP	S/FTP
Cross-section	1 x 2 x AWG 22/7 - 0.35 mm²	1 x 2 x AWG 22/7 - 0.35 mm²
Sheath diameter, max.	5.3 mm	5.1 mm
Material sheath	PUR	LSZH
Sheathing colour	black	black
Insulation diameter	1.7 mm	1.7 mm
Min. bending radius, repetitive	56 mm	56 mm
Min. bending radius, once only	22 mm	22 mm
Ambient temperature (operational)	-40 °C...80 °C	-20 °C...60 °C
Installation temperature	...	...
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1
Resistance to spread of flame	in acc. with IEC 60332-1-2	in acc. with IEC 60332-1-2
Approvals		

Note

Ordering data

	Type	Qty.	Order No.
100.0 m	IE-S1DS2UE-100	1	**2926110000**
500.0 m	IE-S1DS2UE-500	1	**2924340000**

Note

	Type	Qty.	Order No.
	IE-S1DS2LE-100	1	**2926120000**
	IE-S1DS2LE-500	1	**2924350000**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

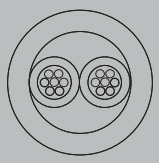
Note

Raw cables
Single Pair Ethernet

- AWG 26

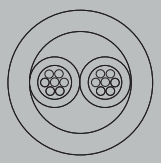
PUR





LSZH





Technical data

	PUR	LSZH
Product type	System cable	System cable
Category	T1-B	T1-B
Shielding	S/FTP	S/FTP
Cross-section	1 x 2 x AWG 26/7 - 0.132 mm²	1 x 2 x AWG 26/7 - 0.132 mm²
Sheath diameter, max.	4.3 mm	3.7 mm
Material sheath	PUR	LSZH
Sheathing colour	black	black
Insulation diameter	1.15 mm	1.15 mm
Min. bending radius, repetitive	56 mm	56 mm
Min. bending radius, once only	28 mm	28 mm
Ambient temperature (operational)	-40 °C...80 °C	-20 °C...60 °C
Installation temperature	...	...
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1
Resistance to spread of flame	in acc. with IEC 60332-1-2	in acc. with IEC 60332-1-2
Approvals		

Note

Ordering data

	PUR			LSZH		
	Type	Qty.	Order No.	Type	Qty.	Order No.
100.0 m	IE-S1ES2UE-100	1	**2926130000**	IE-S1ES2LE-100	1	**2926140000**
500.0 m	IE-S1ES2UE-500	1	**2924360000**	IE-S1ES2LE-500	1	**2924370000**

Note

Accessories

PUR			LSZH		
Type	Qty.	Order No.	Type	Qty.	Order No.

Note

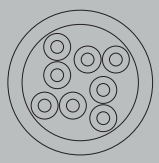
Raw cables

Installation cable Cat. 5

- In lengths of 100 or 500 metres

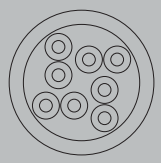
PUR





PVC





Technical data

	PUR	PVC
Product type	Installation cable	Installation cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Cross-section	4*2*AWG 24/1 - 4*2*0.205 mm²	4*2*AWG 24/1 - 4*2*0.205 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PVC
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive	10 x cable diameter	10 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...75 °C	-40 °C...80 °C
Installation temperature	-20 °C...60 °C	0 °C...50 °C
Storage temperature	-40 °C...75 °C	-40 °C...75 °C
Abrasion resistance	very good	good
Halogen	halogen-free, acc. to IEC 60754-2	yes (PVC cable)
Resistance to spread of flame	in acc. with IEC 60332-1, EN 13501-6 class FCa	in acc. with IEC 60332-1, EN 13501-6 class ECa
Resistance to oils	in acc. with IEC 60811-2-1	No
Approvals	CE	CE
Note		

Ordering data

	PUR			PVC		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
100.0 m	IE-C5CS8UG-100	1	**8813160000**	IE-C5CS8VG-100	1	**8813150000**
500.0 m	IE-C5CS8UG-500	1	**2762870000**	IE-C5CS8VG-500	1	**2763440000**
Note						

Accessories

	PUR			PVC		
Tools	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**

Note

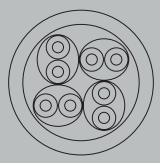
Raw cables

Installation cable Cat. 7

- In lengths of 100 or 500 metres

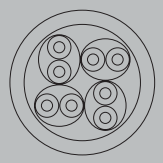
PUR





PVC





Technical data

	PUR	PVC
Product type	Installation cable	Installation cable
Category	Cat.7 (ISO/IEC 11801)	Cat.7 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Cross-section	4*2*AWG 23/1 - 4*2*0.255 mm²	4*2*AWG 23/1 - 4*2*0.255 mm²
Sheath diameter, max.	8 mm	8 mm
Material sheath	PUR	PVC
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.4 mm	1.4 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	4 x cable diameter	4 x cable diameter
Ambient temperature (operational)	-40 °C...75 °C	-40 °C...75 °C
Installation temperature	-20 °C...60 °C	0 °C...50 °C
Storage temperature	-40 °C...75 °C	-40 °C...75 °C
Abrasion resistance	very good	good
Halogen	halogen-free, acc. to IEC 60754-2	yes (PVC cable)
Resistance to spread of flame	in acc. with IEC 60332-1, EN 13501-6 class FCa	in acc. with IEC 60332-1, EN 13501-6 class FCa
Resistance to oils	in acc. with IEC 60811-2-1	No
Approvals	CE	CE
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
100.0 m	IE-C7BS8UG-100	1	**8813140000**	IE-C7BS8VG-100	1	**8813130000**
500.0 m	IE-C7BS8UG-500	1	**2763530000**	IE-C7BS8VG-500	1	**2763540000**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Tools						
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**

Note

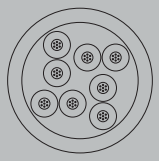
Raw cables

Connecting cable Cat. 5

- In lengths of 100 or 500 metres

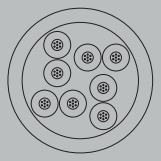
PUR





PVC





Technical data

	PUR	PVC
Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	6.3 mm	6.1 mm
Material sheath	PUR	PVC
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive	10 x cable diameter	10 x cable diameter
Min. bending radius, once only	4 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...75 °C	-40 °C...75 °C
Installation temperature	-10 °C...60 °C	0 °C...50 °C
Storage temperature	-40 °C...75 °C	-40 °C...75 °C
Abrasion resistance	very good	good
Halogen	halogen-free, acc. to IEC 60754-2	yes (PVC cable)
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	No
Standard, assembly	UL-Style 20963 (80°C/30V)	
Approvals	CE	CE
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
100.0 m	IE-C5ES8UG-100	1	**8813200000**	IE-C5ES8VG-100	1	**8813190000**
500.0 m	IE-C5ES8UG-500	1	**2763500000**	IE-C5ES8VG-500	1	**2763510000**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**

Note

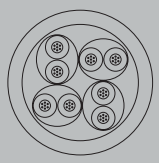
Raw cables

Connecting cable Cat. 7

- In lengths of 100 or 500 metres

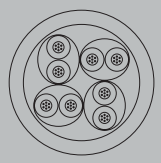
PUR





PVC





Technical data

	PUR	PVC
Product type	System cable	System cable
Category	Cat.7 (ISO/IEC 11801)	Cat.7 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	6.5 mm	6.5 mm
Material sheath	PUR	PVC
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive	10 x cable diameter	10 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...75 °C
Installation temperature	-15 °C...60 °C	0 °C...50 °C
Storage temperature	-40 °C...80 °C	-40 °C...75 °C
Abrasion resistance	very good	good
Halogen	halogen-free, acc. to IEC 60754-2	yes (PVC cable)
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	No
Standard, assembly	UL-Style 20963 (80°C/30V)	UL-Style 2879 (80°C/30V)
Approvals	CE	CE
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
100.0 m	IE-C7ES8UG-100	1	**8813180000**	IE-C7ES8VG-100	1	**8813170000**
500.0 m	IE-C7ES8UG-500	1	**2763550000**	IE-C7ES8VG-500	1	**2763560000**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**

Note

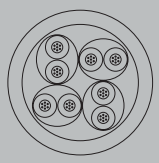
Raw cables

Connecting cable Cat. 7

- 305 m / 1,000 ft

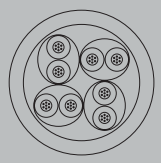
LSZH grey





LSZH blue





Technical data

	LSZH grey	LSZH blue
Product type	System cable	System cable
Category	Cat.7 (ISO/IEC 11801)	Cat.7 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter	6.0 mm	6.0 mm
Material sheath	LSZH	LSZH
Sheathing colour	light grey (RAL 7035)	blue (RAL 5015)
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive		
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Halogen	No	No
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	No	No
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
305 m / 1000 ft	IE-C7FS8LD-305M	1	1273090000	IE-C7FS8LB-305M	1	1326540000
Note						

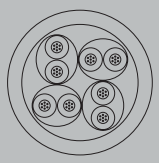
Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Tools						
Sheathing strippers, For UTP and STP data cables	AM 12	1	9030060000	AM 12	1	9030060000
Sheathing strippers, For coaxial and round data cables	IE-CST	1	9204350000	IE-CST	1	9204350000
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	1689470001	VT SF 5/21 MC NE WS V0	160	1689470001
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	1730560001	VT SF 6/21 MC NE WS V0	160	1730560001
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687	TM-I 18 MC NE GE	320	1718431687
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	1719840000	TM 4/12 HF/HB	500	1719840000
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	1719850000	TM 4/18 HF/HB	500	1719850000

Note

LSZH black





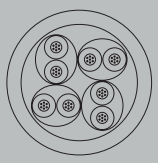
System cable
Cat.7 (ISO/IEC 11801)
S/FTP
4*2*AWG 27/7 - 4*2*0.1 mm²
6.0 mm
LSZH
black
1 mm
5 x cable diameter
-20 °C...60 °C
0 °C...50 °C
No
in acc. with IEC 60332-1
No
CCLINK; CE; CULUS

Type	Qty.	Order No.
IE-C7FS8LE-305M	1	**1344690000**

Type	Qty.	Order No.
AM 12	1	**9030060000**
IE-CST	1	**9204350000**
VT SF 5/21 MC NE WS V0	160	**1689470001**
VT SF 6/21 MC NE WS V0	160	**1730560001**
TM-I 12 MC NE GE	320	**1718411687**
TM-I 18 MC NE GE	320	**1718431687**
TM 4/12 HF/HB	500	**1719840000**
TM 4/18 HF/HB	500	**1719850000**

LSZH green





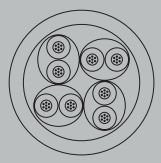
System cable
Cat.7 (ISO/IEC 11801)
S/FTP
4*2*AWG 27/7 - 4*2*0.1 mm²
6.0 mm
LSZH
green
1 mm
5 x cable diameter
-20 °C...60 °C
0 °C...50 °C
No
in acc. with IEC 60332-1
No
CCLINK; CE; CULUS

Type	Qty.	Order No.
IE-C7FS8LG-305M	1	**1344680000**

Type	Qty.	Order No.
AM 12	1	**9030060000**
IE-CST	1	**9204350000**
VT SF 5/21 MC NE WS V0	160	**1689470001**
VT SF 6/21 MC NE WS V0	160	**1730560001**
TM-I 12 MC NE GE	320	**1718411687**
TM-I 18 MC NE GE	320	**1718431687**
TM 4/12 HF/HB	500	**1719840000**
TM 4/18 HF/HB	500	**1719850000**

LSZH red





System cable
Cat.7 (ISO/IEC 11801)
S/FTP
4*2*AWG 27/7 - 4*2*0.1 mm²
6.0 mm
LSZH
red
1 mm
5 x cable diameter
-20 °C...60 °C
0 °C...50 °C
No
in acc. with IEC 60332-1
No
CCLINK; CE; CULUS

Type	Qty.	Order No.
IE-C7FS8LR-305M	1	**1287910000**

Type	Qty.	Order No.
AM 12	1	**9030060000**
IE-CST	1	**9204350000**
VT SF 5/21 MC NE WS V0	160	**1689470001**
VT SF 6/21 MC NE WS V0	160	**1730560001**
TM-I 12 MC NE GE	320	**1718411687**
TM-I 18 MC NE GE	320	**1718431687**
TM 4/12 HF/HB	500	**1719840000**
TM 4/18 HF/HB	500	**1719850000**

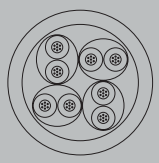
Raw cables

Connecting cable Cat. 7

- 305 m / 1,000 ft

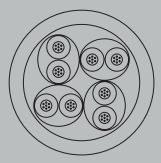
LSZH magenta





LSZH violet





Technical data

	LSZH magenta	LSZH violet
Product type	System cable	System cable
Category	Cat.7 (ISO/IEC 11801)	Cat.7 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter	6.0 mm	6.0 mm
Material sheath	LSZH	LSZH
Sheathing colour	Magenta	violet
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive		
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Halogen	No	No
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	No	No
Approvals	CCLINK; CE; CULUS	CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
305 m / 1000 ft	IE-C7FS8LM-305M	1	**1333160000**	IE-C7FP8LV-305M	1	**2779910000**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

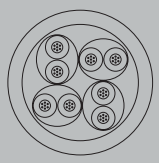
Raw cables

Connecting cable Cat. 7

- 305 m / 1,000 ft

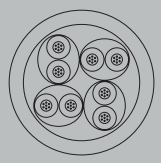
LSZH yellow





LZSH orange





Technical data

	LSZH yellow	LZSH orange
Product type	System cable	System cable
Category	Cat.7 (ISO/IEC 11801)	Cat.7 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter	6.0 mm	6.0 mm
Material sheath	LSZH	LSZH
Sheathing colour	yellow	orange
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive		
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Halogen	No	No
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	No	No
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.
305 m / 1000 ft	IE-C7FS8LY-305M	1	**1344670000**
Note			

	Type	Qty.	Order No.
	IE-C7FS8LO-305M	1	**2661080000**

Accessories

Tools			
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**

	Type	Qty.	Order No.
	AM 12	1	**9030060000**
	IE-CST	1	**9204350000**
	TM-I 12 MC NE GE	320	**1718411687**
	TM-I 18 MC NE GE	320	**1718431687**
	TM 4/12 HF/HB	500	**1719840000**
	TM 4/18 HF/HB	500	**1719850000**
	VT SF 5/21 MC NE WS V0	160	**1689470001**
	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

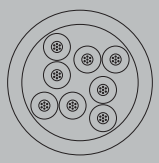
Raw cables

Dragline cable Cat. 5

- In lengths of 100, 500 or 1000 metres

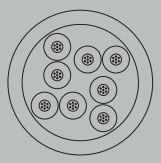
PUR green





PUR blue





Technical data

	PUR green	PUR blue
Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	6.8 mm	6.8 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	blue (RAL 5015)
Insulation diameter	0.95 mm	0.95 mm
Min. bending radius, repetitive	60 mm	60 mm
Min. bending radius, once only		
Bending cycles	5 Mio	5 Mio
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	-40 °C...80 °C	-40 °C...80 °C
Storage temperature	-40 °C...80 °C	-40 °C...80 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Standard, assembly	UL-Style 20963 (80°C/30V)	UL-Style 20963 (80°C/30V)
Approvals		
Note		

Ordering data

	PUR green			PUR blue		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
100.0 m	IE-C5ED8UG-100	1	**8813210000**	IE-C5ED8UB-100	1	**8960670000**
500.0 m	IE-C5ED8UG-500	1	**2763490000**	IE-C5ED8UB-500	1	**2763480000**
1000.0 m	IE-C5ED8UG-1000	1	**2781890000**	IE-C5ED8UB-1000	1	**2781880000**
Note						

Accessories

Tools	PUR green			PUR blue		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**

Note

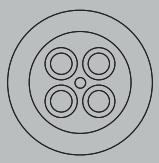
Raw cables

PROFINET cable

- In lengths of 100 or 500 metres

Installation cable type A, PVC





Technical data

Product type	Installation cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP
Cross-section	4*AWG 22/1 - 0.33 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PVC
Sheathing colour	green (RAL 6018)
Insulation diameter	1.5 mm
Min. bending radius, repetitive	8 x cable diameter
Min. bending radius, once only	4 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C
Installation temperature	-40 °C...80 °C
Storage temperature	-40 °C...80 °C
Abrasion resistance	good
Resistance to spread of flame	in acc. with IEC 60332-1 / UL 1685
Standard, assembly	UL-Style 21694
Approvals	CE
Note	

Ordering data

	Type	Qty.	Order No.
100.0 m	IE-C5AS4VG-100	1	**8899000000**
500.0 m	IE-C5AS4VG-500	1	**2763430000**

Note

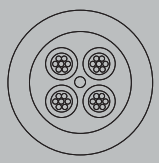
Accessories

	Type	Qty.	Order No.
Tools			
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**

Note

Connection cable type B, PVC





Technical data

Product type	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PVC
Sheathing colour	green (RAL 6018)
Insulation diameter	1.56 mm
Min. bending radius, repetitive	7.5 x cable diameter
Min. bending radius, once only	3.5 *diameter
Ambient temperature (operational)	-40 °C...80 °C
Installation temperature	-40 °C...80 °C
Storage temperature	-40 °C...80 °C
Abrasion resistance	good
Resistance to spread of flame	in acc. with IEC 60332-1 / UL 1685
Standard, assembly	UL-Style 21694

Ordering data

Type	Qty.	Order No.
IE-C5DS4VG-100	1	**8898990000**
IE-C5DS4VG-500	1	**2763470000**

Accessories

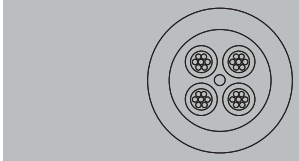
Type	Qty.	Order No.
AM 12	1	**9030060000**
IE-CST	1	**9204350000**
VT SF 5/21 MC NE WS V0	160	**1689470001**
VT SF 6/21 MC NE WS V0	160	**1730560001**
TM-I 12 MC NE GE	320	**1718411687**
TM-I 18 MC NE GE	320	**1718431687**
TM 4/12 HF/HB	500	**1719840000**
TM 4/18 HF/HB	500	**1719850000**

Raw cables
PROFINET cable

- In lengths of 100 or 500 metres

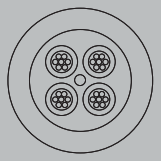
Dragline cable type C, PUR





Torsion cable type C, PUR





Technical data

	Dragline cable type C, PUR	Torsion cable type C, PUR
Product type	Dragline cable	Torsion cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	S/UTP
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/19 - 0.38 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.51 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	10 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Bending cycles	3 Mio	
Torsion cycles		1 mill.
Torsion resistance		180 °/m
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...80 °C
Installation temperature	-20 °C...60 °C	-40 °C...80 °C
Storage temperature	-50 °C...70 °C	-40 °C...80 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Standard, assembly		UL Style 21161
Approvals		
Note		

Ordering data

Cat. 5 PROFINET. PUR	Type	Qty.	Order No.	Type	Qty.	Order No.
100.0 m	IE-C5DD4UG-100	1	**8899010000**	IE-C5IT4UG-100	1	**2764770000**
500.0 m	IE-C5DD4UG-500	1	**2763450000**	IE-C5IT4UG-500	1	**2763520000**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**
Note						

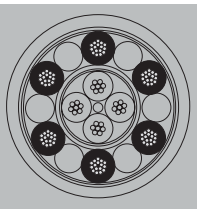
Raw cables

Hybrid cable

- In lengths of 100 or 500 metres

PVC





Technical data

Product type	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP
Cross-section	4*AWG 22/7 - 0.32 mm², 6*0.5 mm²
Sheath diameter, max.	9.8 mm
Material sheath	PVC
Sheathing colour	green (RAL 6018)
Insulation diameter	1.6 mm / 1.75 mm
Min. bending radius, repetitive	
Min. bending radius, once only	10 x cable diameter
Ambient temperature (operational)	-30 °C...75 °C
Installation temperature	0 °C...50 °C
Storage temperature	-40 °C...70 °C
Abrasion resistance	good
Halogen	Yes
Resistance to spread of flame	in acc. with IEC 60332-1 / UL 1685
Resistance to oils	limited
Standard, assembly	
Approvals	CE
Note	

Ordering data

	Type	Qty.	Order No.
100.0 m	IE-C5DHAG-100	1	**2763660000**
500.0 m	IE-C5DHAG-500	1	**2763460000**

Note

Accessories

Tools	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**

Note

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH grey





Technical data

Product type	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm
Material sheath / Colour	LSZH / grey
Insulation diameter	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C
Installation temperature	0 °C...50 °C
Storage temperature	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS
Note	

Ordering data

	Type	Qty.	Order No.
0.2 m	IE-C6FP8LD0002M40M40-D	1	**1165940002**
0.5 m	IE-C6FP8LD0005M40M40-D	1	**1165940005**
1.0 m	IE-C6FP8LD0010M40M40-D	1	**1165940010**
1.5 m	IE-C6FP8LD0015M40M40-D	1	**1165940015**
2.0 m	IE-C6FP8LD0020M40M40-D	1	**1165940020**
3.0 m	IE-C6FP8LD0030M40M40-D	1	**1165940030**
5.0 m	IE-C6FP8LD0050M40M40-D	1	**1165940050**
7.5 m	IE-C6FP8LD0075M40M40-D	1	**1165940075**
10.0 m	IE-C6FP8LD0100M40M40-D	1	**1165940100**
15.0 m	IE-C6FP8LD0150M40M40-D	1	**1165940150**
20.0 m	IE-C6FP8LD0200M40M40-D	1	**1165940200**
25.0 m	IE-C6FP8LD0250M40M40-D	1	**1165940250**
Note	Other lengths available on request		

Accessories

Tools	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap			
Protective cap	IE-PP-RJ45	10	**2552580000**
Cable routing			
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**
Note			

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH blue



LSZH black







Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / blue	LSZH / black
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.2 m	IE-C6FP8LB0002M40M40-B	1	**1165900002**	IE-C6FP8LE0002M40M40-E	1	**1251610002**
0.5 m	IE-C6FP8LB0005M40M40-B	1	**1165900005**	IE-C6FP8LE0005M40M40-E	1	**1251610005**
1.0 m	IE-C6FP8LB0010M40M40-B	1	**1165900010**	IE-C6FP8LE0010M40M40-E	1	**1251610010**
1.5 m	IE-C6FP8LB0015M40M40-B	1	**1165900015**	IE-C6FP8LE0015M40M40-E	1	**1251610015**
2.0 m	IE-C6FP8LB0020M40M40-B	1	**1165900020**	IE-C6FP8LE0020M40M40-E	1	**1251610020**
3.0 m	IE-C6FP8LB0030M40M40-B	1	**1165900030**	IE-C6FP8LE0030M40M40-E	1	**1251610030**
5.0 m	IE-C6FP8LB0050M40M40-B	1	**1165900050**	IE-C6FP8LE0050M40M40-E	1	**1251610050**
10.0 m	IE-C6FP8LB0100M40M40-B	1	**1165900100**	IE-C6FP8LE0100M40M40-E	1	**1251610100**
15.0 m	IE-C6FP8LB0150M40M40-B	1	**1165900150**	IE-C6FP8LE0150M40M40-E	1	**1251610150**
20.0 m	IE-C6FP8LB0200M40M40-B	1	**1165900200**	IE-C6FP8LE0200M40M40-E	1	**1251610200**
25.0 m	IE-C6FP8LB0250M40M40-B	1	**1165900250**	IE-C6FP8LE0250M40M40-E	1	**1251610250**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**
Note						

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH green



LSZH red







Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / green	LSZH / red
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.2 m	IE-C6FP8LG0002M40M40-G	1	**1251590002**	IE-C6FP8LR0002M40M40-R	1	**1166030002**
0.5 m	IE-C6FP8LG0005M40M40-G	1	**1251590005**	IE-C6FP8LR0005M40M40-R	1	**1166030005**
1.0 m	IE-C6FP8LG0010M40M40-G	1	**1251590010**	IE-C6FP8LR0010M40M40-R	1	**1166030010**
1.5 m	IE-C6FP8LG0015M40M40-G	1	**1251590015**	IE-C6FP8LR0015M40M40-R	1	**1166030015**
2.0 m	IE-C6FP8LG0020M40M40-G	1	**1251590020**	IE-C6FP8LR0020M40M40-R	1	**1166030020**
3.0 m	IE-C6FP8LG0030M40M40-G	1	**1251590030**	IE-C6FP8LR0030M40M40-R	1	**1166030030**
5.0 m	IE-C6FP8LG0050M40M40-G	1	**1251590050**	IE-C6FP8LR0050M40M40-R	1	**1166030050**
10.0 m	IE-C6FP8LG0100M40M40-G	1	**1251590100**	IE-C6FP8LR0100M40M40-R	1	**1166030100**
15.0 m	IE-C6FP8LG0150M40M40-G	1	**1251590150**	IE-C6FP8LR0150M40M40-R	1	**1166030150**
20.0 m	IE-C6FP8LG0200M40M40-G	1	**1251590200**	IE-C6FP8LR0200M40M40-R	1	**1166030200**
25.0 m	IE-C6FP8LG0250M40M40-G	1	**1251590250**	IE-C6FP8LR0250M40M40-R	1	**1166030250**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**
Note						

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH magenta



LSZH violet







Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / Magenta	LSZH / violet
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.2 m	IE-C6FP8LM0002M40M40-M	1	1201270002	IE-C6FP8LV0002M40M40-V	1	2701550002
0.5 m	IE-C6FP8LM0005M40M40-M	1	1201270005	IE-C6FP8LV0005M40M40-V	1	2701550005
1.0 m	IE-C6FP8LM0010M40M40-M	1	1201270010	IE-C6FP8LV0010M40M40-V	1	2701550010
1.5 m	IE-C6FP8LM0015M40M40-M	1	1201270015	IE-C6FP8LV0015M40M40-V	1	2701550015
2.0 m	IE-C6FP8LM0020M40M40-M	1	1201270020	IE-C6FP8LV0020M40M40-V	1	2701550020
3.0 m	IE-C6FP8LM0030M40M40-M	1	1201270030	IE-C6FP8LV0030M40M40-V	1	2701550030
5.0 m	IE-C6FP8LM0050M40M40-M	1	1201270050	IE-C6FP8LV0050M40M40-V	1	2701550050
10.0 m	IE-C6FP8LM0100M40M40-M	1	1201270100	IE-C6FP8LV0100M40M40-V	1	2701550100
15.0 m	IE-C6FP8LM0150M40M40-M	1	1201270150	IE-C6FP8LV0150M40M40-V	1	2701550150
20.0 m	IE-C6FP8LM0200M40M40-M	1	1201270200	IE-C6FP8LV0200M40M40-V	1	2701550200
25.0 m						
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	9030060000	AM 12	1	9030060000
Sheathing strippers, For coaxial and round data cables	IE-CST	1	9204350000	IE-CST	1	9204350000
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687	TM-I 18 MC NE GE	320	1718431687
Dust protection cap						
Protective cap	IE-PP-RJ45	10	2552580000	IE-PP-RJ45	10	2552580000
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	2704480000	IE-CABLE-BENDER-90	50	2704480000
Note						

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH yellow



LSZH orange







Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / yellow	LSZH / orange
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.2 m	IE-C6FP8LY0002M40M40-Y	1	**1251580002**	IE-C6FP8L00002M40M40-O	1	**2563810002**
0.5 m	IE-C6FP8LY0005M40M40-Y	1	**1251580005**	IE-C6FP8L00005M40M40-O	1	**2563810005**
1.0 m	IE-C6FP8LY0010M40M40-Y	1	**1251580010**	IE-C6FP8L00010M40M40-O	1	**2563810010**
1.5 m	IE-C6FP8LY0015M40M40-Y	1	**1251580015**	IE-C6FP8L00015M40M40-O	1	**2563810015**
2.0 m	IE-C6FP8LY0020M40M40-Y	1	**1251580020**	IE-C6FP8L00020M40M40-O	1	**2563810020**
3.0 m	IE-C6FP8LY0030M40M40-Y	1	**1251580030**	IE-C6FP8L00030M40M40-O	1	**2563810030**
5.0 m	IE-C6FP8LY0050M40M40-Y	1	**1251580050**	IE-C6FP8L00050M40M40-O	1	**2563810050**
10.0 m	IE-C6FP8LY0100M40M40-Y	1	**1251580100**	IE-C6FP8L00100M40M40-O	1	**2563810100**
15.0 m	IE-C6FP8LY0150M40M40-Y	1	**1251580150**	IE-C6FP8L00150M40M40-O	1	**2563810150**
20.0 m	IE-C6FP8LY0200M40M40-Y	1	**1251580200**	IE-C6FP8L00200M40M40-O	1	**2563810200**
25.0 m	IE-C6FP8LY0250M40M40-Y	1	**1251580250**	IE-C6FP8L00250M40M40-O	1	**2563810250**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**
Note						

Assembled cables

Patch cable CabinetLine Cat. 6 angled

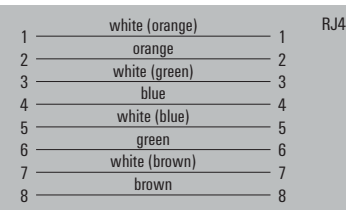
LSZH grey 270°





LSZH grey 90°





Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 270°, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90°, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / grey	LSZH / grey
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C6FP8LD0005M40W40-D	1	**1233160005**	IE-C6FP8LD0005M40V40-D	1	**1248280005**
1.0 m	IE-C6FP8LD0010M40W40-D	1	**1233160010**	IE-C6FP8LD0010M40V40-D	1	**1248280010**
1.2 m	IE-C6FP8LD0012M40W40-D	1	**1233160012**	IE-C6FP8LD0012M40V40-D	1	**1248280012**
1.5 m	IE-C6FP8LD0015M40W40-D	1	**1233160015**	IE-C6FP8LD0015M40V40-D	1	**1248280015**
2.0 m	IE-C6FP8LD0020M40W40-D	1	**1233160020**	IE-C6FP8LD0020M40V40-D	1	**1248280020**
3.0 m	IE-C6FP8LD0030M40W40-D	1	**1233160030**	IE-C6FP8LD0030M40V40-D	1	**1248280030**
5.0 m	IE-C6FP8LD0050M40W40-D	1	**1233160050**	IE-C6FP8LD0050M40V40-D	1	**1248280050**
10.0 m	IE-C6FP8LD0100M40W40-D	1	**1233160100**	IE-C6FP8LD0100M40V40-D	1	**1248280100**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**

Note

Assembled cables

Patch cable CabinetLine Cat. 6 angled

LSZH 90° left



RJ45		RJ45
1	white (orange)	1
2	orange	2
3	white (green)	3
4	blue	4
5	white (blue)	5
6	green	6
7	white (brown)	7
8	brown	8

LSZH 90° right



RJ45		RJ45
1	white (orange)	1
2	orange	2
3	white (green)	3
4	blue	4
5	white (blue)	5
6	green	6
7	white (brown)	7
8	brown	8

Technical data

Product type	Patch cable	Patch cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90° left, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90° right, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm	5.9 mm
Material sheath / Colour	LSZH / grey	LSZH / grey
Insulation diameter	1.04 mm	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Installation temperature	0 °C...50 °C	0 °C...50 °C
Storage temperature	-20 °C...60 °C	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS	CCLINK; CE; CULUS
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C6FP8LD0005M40L40-D	1	**2703320005**	IE-C6FP8LD0005M40R40-D	1	**2703330005**
1.0 m	IE-C6FP8LD0010M40L40-D	1	**2703320010**	IE-C6FP8LD0010M40R40-D	1	**2703330010**
1.2 m	IE-C6FP8LD0012M40L40-D	1	**2703320012**	IE-C6FP8LD0012M40R40-D	1	**2703330012**
1.5 m	IE-C6FP8LD0015M40L40-D	1	**2703320015**	IE-C6FP8LD0015M40R40-D	1	**2703330015**
2.0 m	IE-C6FP8LD0020M40L40-D	1	**2703320020**	IE-C6FP8LD0020M40R40-D	1	**2703330020**
3.0 m	IE-C6FP8LD0030M40L40-D	1	**2703320030**	IE-C6FP8LD0030M40R40-D	1	**2703330030**
5.0 m	IE-C6FP8LD0050M40L40-D	1	**2703320050**	IE-C6FP8LD0050M40R40-D	1	**2703330050**
10.0 m	IE-C6FP8LD0100M40L40-D	1	**2703320100**	IE-C6FP8LD0100M40R40-D	1	**2703330100**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**

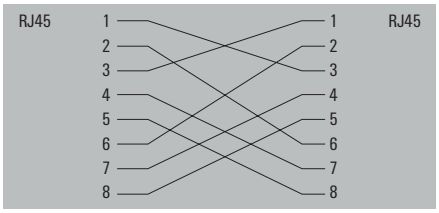
Note

Assembled cables

Patch cable CabinetLine Cat. 6 crossover

LSZH grey





Technical data

Product type	Patch cable, crossover
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at
Cross-section	4*2*AWG 27/7 - 4*2*0.1 mm²
Sheath diameter, max.	5.9 mm
Material sheath / Colour	LSZH / grey, yellow
Insulation diameter	1.04 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 4 x cable diameter
Ambient temperature (operational)	-20 °C...60 °C
Installation temperature	0 °C...50 °C
Storage temperature	-20 °C...60 °C
Halogen	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
Approvals	CCLINK; CE; CULUS
Note	

Ordering data

	Type	Qty.	Order No.
0.3 m	IE-C6FP8LD0003M40X40-Y	1	**1312160003**
0.4 m	IE-C6FP8LD0004M40X40-Y	1	**1312160004**
0.5 m	IE-C6FP8LD0005M40X40-Y	1	**1312160005**
1.0 m	IE-C6FP8LD0010M40X40-Y	1	**1312160010**
2.0 m	IE-C6FP8LD0020M40X40-Y	1	**1312160020**
3.0 m	IE-C6FP8LD0030M40X40-Y	1	**1312160030**
5.0 m	IE-C6FP8LD0050M40X40-Y	1	**1312160050**
10.0 m	IE-C6FP8LD0100M40X40-Y	1	**1312160100**
15.0 m	IE-C6FP8LD0150M40X40-Y	1	**1312160150**
20.0 m	IE-C6FP8LD0200M40X40-Y	1	**1312160200**
Note	Other lengths available on request		

Accessories

	Type	Qty.	Order No.
Tools			
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap			
Protective cap	IE-PP-RJ45	10	**2552580000**
Cable routing			
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**

Note

Assembled cables

Patch cable CabinetLine Cat. 5 straight

PVC green



PUR green



RJ45		RJ45
1	white (orange)	1
2	orange	2
3	white (green)	3
4	blue	4
5	white (blue)	5
6	green	6
7	white (brown)	7
8	brown	8

Technical data

	PVC green	PUR green
Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801)	Cat.5 (ISO/IEC 11801)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	5.8 mm	6 mm
Material sheath	PVC	PUR
Sheathing colour	green (RAL 6018)	green
Insulation diameter	0.98 mm	0.98 mm
Min. bending radius, repetitive	10 x cable diameter	10 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...75 °C	-40 °C...85 °C
Abrasion resistance	good	very good
Halogen	Yes	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils		EN 50305
Approvals	CE; UKCA	CE; CULUS; UKCA
Note		

Ordering data

	PVC green			PUR green		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
0.5 m	IE-C5ES8VG0005M40M40-G	1	**1166020005**	IE-C5ES8UG0005M40M40-G	1	**1166000005**
1.0 m	IE-C5ES8VG0010M40M40-G	1	**1166020010**	IE-C5ES8UG0010M40M40-G	1	**1166000010**
1.5 m	IE-C5ES8VG0015M40M40-G	1	**1166020015**	IE-C5ES8UG0015M40M40-G	1	**1166000015**
2.0 m	IE-C5ES8VG0020M40M40-G	1	**1166020020**	IE-C5ES8UG0020M40M40-G	1	**1166000020**
3.0 m	IE-C5ES8VG0030M40M40-G	1	**1166020030**	IE-C5ES8UG0030M40M40-G	1	**1166000030**
5.0 m	IE-C5ES8VG0050M40M40-G	1	**1166020050**	IE-C5ES8UG0050M40M40-G	1	**1166000050**
10.0 m	IE-C5ES8VG0100M40M40-G	1	**1166020100**	IE-C5ES8UG0100M40M40-G	1	**1166000100**
15.0 m	IE-C5ES8VG0150M40M40-G	1	**1166020150**	IE-C5ES8UG0150M40M40-G	1	**1166000150**
20.0 m	IE-C5ES8VG0200M40M40-G	1	**1166020200**	IE-C5ES8UG0200M40M40-G	1	**1166000200**
Note	Other lengths available on request			Other lengths available on request		

Accessories

Tools	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**

Note

Assembled cables

Patch cable CabinetLine Cat. 6 straight

PUR green





Technical data

Product type	System cable
Category	<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
Shielding	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Connector standard	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at
Cross-section / Insulation diameter, min. / max.	4*2*AWG 27/7 - 4*2*0.1 mm² / 1.02 mm
Sheath diameter, max.	6.4 mm
Material sheath / Sheathing colour	PUR / green
Min. bending radius, repetitive / Min. bending radius, once only	10 x cable diameter / 5 x cable diameter
Ambient temperature (operational)	-40 °C...85 °C
Abrasion resistance	very good
Halogen	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1 / UL 1581 FT2
Resistance to oils	in acc. with IEC 60811-2-1
Approvals	CE; CULUS; UKCA
Note	

Ordering data

	Type	Qty.	Order No.
0.3 m	IE-C6FS8UG0003A40A40-G	1	**8941350003**
0.5 m	IE-C6FS8UG0005A40A40-G	1	**8941350005**
1.0 m	IE-C6FS8UG0010A40A40-G	1	**8941350010**
1.5 m	IE-C6FS8UG0015A40A40-G	1	**8941350015**
2.0 m	IE-C6FS8UG0020A40A40-G	1	**8941350020**
3.0 m	IE-C6FS8UG0030A40A40-G	1	**8941350030**
5.0 m	IE-C6FS8UG0050A40A40-G	1	**8941350050**
10.0 m	IE-C6FS8UG0100A40A40-G	1	**8941350100**
15.0 m	IE-C6FS8UG0150A40A40-G	1	**8941350150**
20.0 m	IE-C6FS8UG0200A40A40-G	1	**8941350200**
Note	Other lengths available on request		

Accessories

	Type	Qty.	Order No.
Tools			
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**
Dust protection cap			
Protective cap	IE-PP-RJ45	10	**2552580000**
Cable routing			
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**
Note			

Assembled cables

Smart Metering Patch cable Cat. 5 straight

- 6 kV

blue



green



	RJ45		RJ45
	1	white (orange)	1
	2	orange	2
	3	white (green)	3
	4	blue	4
	5	white (blue)	5
	6	green	6
	7	white (brown)	7
	8	brown	8

	RJ45		RJ45
	1	white (orange)	1
	2	orange	2
	3	white (green)	3
	4	blue	4
	5	white (blue)	5
	6	green	6
	7	white (brown)	7
	8	brown	8

Technical data

Product type	Patch cable	Patch cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Cable layout	Double insulation acc. to VDE 0603-100	Double insulation acc. to VDE 0603-100
Rated impulse withstand voltage	6 kV	6 kV
Plug left / Plug right	RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded	RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3at	conforming to IEEE 802.3at
Cross-section	4x2xAWG 26/7. 4x2x0.128 mm²	4x2xAWG 26/7. 4x2x0.128 mm²
Sheath diameter	5.5 mm	5.5 mm
Material sheath / Sheathing colour	PVC / blue	PVC / green
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive / Min. bending radius, once only	/ 5 x cable diameter	/ 5 x cable diameter
Ambient temperature (operational)	-20 °C...70 °C	-20 °C...70 °C
Abrasion resistance		
Halogen	yes (PVC cable)	yes (PVC cable)
Resistance to spread of flame	in acc. with IEC 60332-1-2	in acc. with IEC 60332-1-2
Resistance to oils	No	No
Approvals	CE	CE
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.3 m	IE-C5ES8VB0003N40N40-B-K6KV	1	**2813820003**	IE-C5ES8VG0003N40N40-G-K6KV	1	**2814800003**
0.4 m	IE-C5ES8VB0004N40N40-B-K6KV	1	**2813820004**			
0.5 m	IE-C5ES8VB0005N40N40-B-K6KV	1	**2813820005**	IE-C5ES8VG0005N40N40-G-K6KV	1	**2814800005**
1.0 m	IE-C5ES8VB0010N40N40-B-K6KV	1	**2813820010**	IE-C5ES8VG0010N40N40-G-K6KV	1	**2814800010**
1.5 m	IE-C5ES8VB0015N40N40-B-K6KV	1	**2813820015**	IE-C5ES8VG0015N40N40-G-K6KV	1	**2814800015**
2.0 m	IE-C5ES8VB0020N40N40-B-K6KV	1	**2813820020**	IE-C5ES8VG0020N40N40-G-K6KV	1	**2814800020**
2.5 m	IE-C5ES8VB0025N40N40-B-K6KV	1	**2813820025**			
5.0 m	IE-C5ES8VB0050N40N40-B-K6KV	1	**2813820050**			
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**

Note

Assembled cables

Smart Metering Patch cable SlimLine Cat. 6 straight

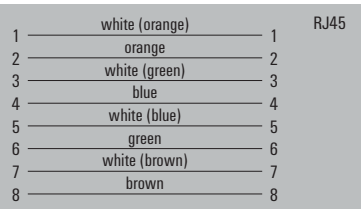
- 4 kV

orange



blue







Technical data

Product type	Patch cable	Patch cable
Category	Cat. 6	Cat. 6
Shielding	SF/UTP	SF/UTP
Cable layout	Double insulation acc. to VDE 0603-100	Double insulation acc. to VDE 0603-100
Rated impulse withstand voltage	4 kV	4 kV
Plug left / Plug right	RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded	RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded
Connector standard	IEC 60603-7-51	IEC 60603-7-51
PoE / PoE+	conforming to IEEE 802.3bt	conforming to IEEE 802.3bt
Cross-section	4*2*AWG 32/7 / 4*2*0,0320 mm²	4*2*AWG 32/7 / 4*2*0,0320 mm²
Sheath diameter	3.9...4.1 mm	3.9...4.1 mm
Material sheath / Sheathing colour	LSZH / orange	LSZH / blue
Insulation diameter	0.68 mm	0.68 mm
Min. bending radius, repetitive / Min. bending radius, once only		
Ambient temperature (operational)	-20 °C...70 °C	-20 °C...70 °C
Abrasion resistance		
Halogen	halogen-free	halogen-free
Resistance to spread of flame	in acc. with IEC 60332-1-2	in acc. with IEC 60332-1-2
Resistance to oils	No	No
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.15 m	IE-C6OP8LO015CN40N40-O-K4KV	1	**3009630000**	IE-C6OP8LB015CN40N40-B-K4KV	1	**3009730000**
0.2 m	IE-C6OP8LO020CN40N40-O-K4KV	1	**3009480002**	IE-C6OP8LB020CN40N40-B-K4KV	1	**3009490002**
0.3 m	IE-C6OP8LO030CN40N40-O-K4KV	1	**3009480003**	IE-C6OP8LB030CN40N40-B-K4KV	1	**3009490003**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**
Cable routing						
90° outlet angle	IE-CABLE-BENDER-90	50	**2704480000**	IE-CABLE-BENDER-90	50	**2704480000**

Note

Assembled cables

Smart Metering Patch cable RJ12 straight – 6 KV

- 6 kV

red





blue





Technical data

Product type	Patch cable	Patch cable
Category	Cat.3	Cat.3
Shielding	U/UTP	U/UTP
Rated impulse withstand voltage	6 kV	6 kV
Plug left / Plug right	RJ12, IP20, male contact, straight, plug, unshielded / RJ12, IP20, male contact, straight, plug, unshielded	RJ12, IP20, male contact, straight, plug, unshielded / RJ12, IP20, male contact, straight, plug, unshielded
Connector standard	TIA-1096-A	TIA-1096-A
PoE / PoE+		
Cross-section	3x2xAWG 24/7	3x2xAWG 24/7
Sheath diameter, max.	4.95 mm	4.95 mm
Material sheath / Sheathing colour	LSZH / red	LSZH / blue
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive / Min. bending radius, once only		
Ambient temperature (operational)	-20 °C...60 °C	-20 °C...60 °C
Abrasion resistance		
Halogen	No	No
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	No	No
Approvals	CE	CE
Note		

Ordering data

	Type	Qty.	Order No.
0.3 m	IE-C5G06LR0003F40F40-X-K6KV	30	**2860910003**
1.0 m			
0.8 m	IE-C5G06LR0008F40F40-X-K6KV	1	**2860910008**
1.1 m	IE-C5G06LR0011F40F40-X-K6KV	1	**2860910011**
Note	additional length in the onlineshop and on request		

	Type	Qty.	Order No.
	IE-C5G06LB0003F40F40-X-K6KV	30	**3036970003**
	IE-C5G06LB0010F40F40-X-K6KV	10	**3036970010**
	additional length in the onlineshop and on request		

Accessories

Tools	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**

Type	Qty.	Order No.
AM 12	1	**9030060000**
IE-CST	1	**9204350000**

Note

Assembled cables
Patch cable PROFINET dragline cable (type C)
Cat. 5
IP20

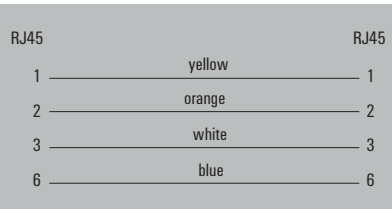
RJ45 IP20





RJ45 IP20 incl. protective cap





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded	RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive / Min. bending radius, once only	7.5 x cable diameter / 5 x cable diameter	7.5 x cable diameter / 5 x cable diameter
Bending cycles	3 Mio	3 Mio
Speed	180 m/min	180 m/min
Acceleration	4 m/s²	4 m/s²
Pulling force	≤ 150 N	≤ 150 N
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Approvals	CE; CULUS; UKCA	CE; UKCA
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C5DD4UG0005A20A20-E	1	**1173030005**	IE-C5DD4UG0005A2DA2D-E	1	**1376510005**
1.0 m	IE-C5DD4UG0010A20A20-E	1	**1173030010**	IE-C5DD4UG0010A2DA2D-E	1	**1376510010**
2.0 m	IE-C5DD4UG0020A20A20-E	1	**1173030020**	IE-C5DD4UG0020A2DA2D-E	1	**1376510020**
3.0 m	IE-C5DD4UG0030A20A20-E	1	**1173030030**	IE-C5DD4UG0030A2DA2D-E	1	**1376510030**
5.0 m	IE-C5DD4UG0050A20A20-E	1	**1173030050**	IE-C5DD4UG0050A2DA2D-E	1	**1376510050**
10.0 m	IE-C5DD4UG0100A20A20-E	1	**1173030100**	IE-C5DD4UG0100A2DA2D-E	1	**1376510100**
15.0 m	IE-C5DD4UG0150A20A20-E	1	**1173030150**	IE-C5DD4UG0150A2DA2D-E	1	**1376510150**
20.0 m	IE-C5DD4UG0200A20A20-E	1	**1173030200**	IE-C5DD4UG0200A2DA2D-E	1	**1376510200**
Note						

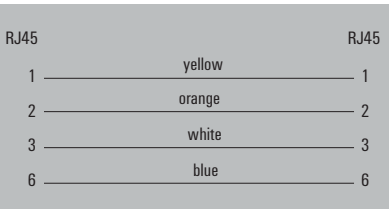
Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Dust protection cap						
Protective cap	IE-PP-RJ45	10	**2552580000**			
Note						

Assembled cables
Patch cable PROFINET RJ45 crimp
Cat. 5
IP20

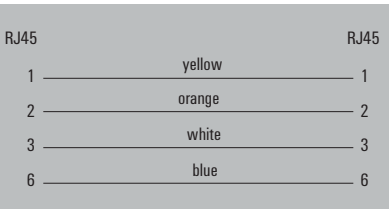
Connecting cable (Type B), PVC





Dragline cable (Type C), PUR





Technical data

Product type	System cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PVC	PUR
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive / Min. bending radius, once only	7.5 x cable diameter / 3.5 *diameter	7.5 x cable diameter / 5 x cable diameter
Bending cycles		3 Mio
Speed		180 m/min
Acceleration		4 m/s²
Pulling force		≤ 150 N
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-40 °C...80 °C	-20 °C...60 °C
Storage temperature	-40 °C...80 °C	-50 °C...70 °C
Abrasion resistance	good	very good
Halogen	Yes	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1 / UL 1685	in acc. with IEC 60332-1
Resistance to oils		in acc. with IEC 60811-2-1
Approvals	CE; UKCA	CE; UKCA
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C5DS4VG0005A60A60-E	1	**1522100005**	IE-C5DD4UG0005A60A60-E	1	**2047310005**
1.0 m	IE-C5DS4VG0010A60A60-E	1	**1522100010**	IE-C5DD4UG0010A60A60-E	1	**2047310010**
1.5 m	IE-C5DS4VG0015A60A60-E	1	**1522100015**	IE-C5DD4UG0015A60A60-E	1	**2047310015**
2.0 m	IE-C5DS4VG0020A60A60-E	1	**1522100020**	IE-C5DD4UG0020A60A60-E	1	**2047310020**
2.5 m	IE-C5DS4VG0025A60A60-E	1	**1522100025**	IE-C5DD4UG0025A60A60-E	1	**2047310025**
3.0 m	IE-C5DS4VG0030A60A60-E	1	**1522100030**	IE-C5DD4UG0030A60A60-E	1	**2047310030**
4.0 m	IE-C5DS4VG0040A60A60-E	1	**1522100040**	IE-C5DD4UG0040A60A60-E	1	**2047310040**
5.0 m	IE-C5DS4VG0050A60A60-E	1	**1522100050**	IE-C5DD4UG0050A60A60-E	1	**2047310050**
7.5 m	IE-C5DS4VG0075A60A60-E	1	**1522100075**	IE-C5DD4UG0075A60A60-E	1	**2047310075**
10.0 m	IE-C5DS4VG0100A60A60-E	1	**1522100100**	IE-C5DD4UG0100A60A60-E	1	**2047310100**
15.0 m	IE-C5DS4VG0150A60A60-E	1	**1522100150**	IE-C5DD4UG0150A60A60-E	1	**2047310150**
20.0 m	IE-C5DS4VG0200A60A60-E	1	**1522100200**	IE-C5DD4UG0200A60A60-E	1	**2047310200**
Note	Other lengths available on request					

Accessories

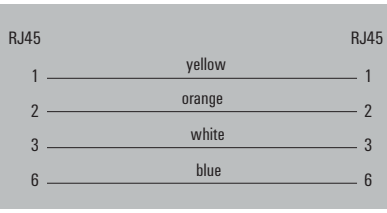
Dust protection cap	Type	Qty.	Order No.	Type	Qty.	Order No.
Protective cap	IE-PP-RJ45	10	**2552580000**	IE-PP-RJ45	10	**2552580000**

Note

Assembled cables
Patch cable PROFINET dragline cable (type C)
Cat. 5
IP67

V14 RJ45 IP67





Technical data

Product type	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Connector standard	IEC 61076-3-117 Var. 14, IEC 60603-7-51
Shielding	SF/UTP
Plug left / Plug right	RJ45, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PUR
Insulation diameter	1.5 mm
Min. bending radius, repetitive / Min. bending radius, once only	7.5 x cable diameter / 5 x cable diameter
Bending cycles	3 Mio
Speed	180 m/min
Acceleration	4 m/s²
Pulling force	≤ 150 N
Ambient temperature (operational)	-40 °C...70 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-50 °C...70 °C
Abrasion resistance	very good
Halogen	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1
Approvals	CE; UKCA
Note	

Ordering data

	Type	Qty.	Order No.
1.0 m	IE-C5DD4UG0010A2EA2E-X	1	**1119730010**
2.0 m	IE-C5DD4UG0020A2EA2E-X	1	**1119730020**
3.0 m	IE-C5DD4UG0030A2EA2E-X	1	**1119730030**
5.0 m	IE-C5DD4UG0050A2EA2E-X	1	**1119730050**
10.0 m	IE-C5DD4UG0100A2EA2E-X	1	**1119730100**
15.0 m	IE-C5DD4UG0150A2EA2E-X	1	**1119730150**
20.0 m	IE-C5DD4UG0200A2EA2E-X	1	**1119730200**
Note			

Accessories

Tools	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**
Marking tags			
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**

Note

Assembled cables
Patch cable PROFINET (Type C) Cat. 5, over-moulded
IP67

V14 RJ45 IP67

Dragline cable



RJ45 — RJ45

1	yellow	1
2	orange	2
3	white	3
6	blue	6

V14 RJ45 IP67

Torsion cable



RJ45 — RJ45

1	yellow	1
2	orange	2
3	white	3
6	blue	6

Technical data

Product type	Dragline cable	Torsion cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Connector standard	IEC 61076-3-117 Var. 14	IEC 61076-3-117 Var. 14
Shielding	SF/UTP	S/UTP
Plug left / Plug right	RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded	RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/19 - 0.38 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive / Min. bending radius, once only	7.5 x cable diameter / 5 x cable diameter	10 x cable diameter / 5 x cable diameter
Bending cycles / Pulling force	3 Mio / ≤ 150 N	
Torsion cycles / Torsion resistance		1 mill. / 180 °/m
Speed / Acceleration	180 m/min / 4 m/s²	
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...80 °C
Installation temperature	-20 °C...60 °C	-40 °C...80 °C
Storage temperature	-50 °C...70 °C	-40 °C...80 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.0 m	IE-C5DD4UG0010B2EB2E-X	1	**1307610010**	IE-C5IT4UG0010B2EB2E-X	1	**1312690010**
2.0 m	IE-C5DD4UG0020B2EB2E-X	1	**1307610020**	IE-C5IT4UG0020B2EB2E-X	1	**1312690020**
3.0 m	IE-C5DD4UG0030B2EB2E-X	1	**1307610030**	IE-C5IT4UG0030B2EB2E-X	1	**1312690030**
5.0 m	IE-C5DD4UG0050B2EB2E-X	1	**1307610050**	IE-C5IT4UG0050B2EB2E-X	1	**1312690050**
10.0 m	IE-C5DD4UG0100B2EB2E-X	1	**1307610100**	IE-C5IT4UG0100B2EB2E-X	1	**1312690100**
Note						

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**

Note

Assembled cables
Patch cable PushPull Power

Power IP67, PVC



Power IP67, PUR



Technical data

	Power IP67, PVC	Power IP67, PUR
Connector standard	in acc. with PROFINET specification	in acc. with PROFINET specification
Plug left / Plug right	PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded / PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded	PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded / PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...80 °C
Cross-section	5*1.5 mm²	5*1.5 mm²
Wire connection cross section AWG, max.	AWG 16	AWG 16
Sheath diameter, max.	8.1 mm	9 mm
Material sheath	PVC	PUR
Sheathing colour	grey (similar to RAL 7001)	grey (similar to RAL 7001)
Insulation	PVC	TPE
Number of wires	5	5
Min. bending radius, once only	4 x cable diameter	5 x cable diameter
Nominal voltage	24 V	24 V
Current-carrying capacity (at 50 °C)	16 A	16 A
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.0 m	IE-CSPS5VS0010VAPVAP-X	1	**1350120010**			
3.0 m	IE-CSPS5VS0030VAPVAP-X	1	**1350120030**			
5.0 m	IE-CSPS5VS0050VAPVAP-X	1	**1350120050**	IE-CSPD5US0050VAPVAP-X	1	**1403680050**
10.0 m	IE-CSPS5VS0100VAPVAP-X	1	**1350120100**	IE-CSPD5US0100VAPVAP-X	1	**1403680100**
15.0 m	IE-CSPS5VS0150VAPVAP-X	1	**1350120150**	IE-CSPD5US0150VAPVAP-X	1	**1403680150**
20.0 m	IE-CSPS5VS0200VAPVAP-X	1	**1350120200**			
Note	Other lengths available on request					

Accessories

Tools	Type	Qty.	Order No.	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**	AM 12	1	**9030060000**
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**	IE-CST	1	**9204350000**
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**

Note

Assembled cable
Dragline cable M12

- Cat. 5
- PUR
- D-coded
- PROFINET type C

M12 - M12

Plug / Plug



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

M12 - M12

Plug / Socket



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded	M12, D-coded, IP67, female contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Bending cycles	3 Mio	3 Mio
Speed	180 m/min	180 m/min
Acceleration	4 m/s²	4 m/s²
Pulling force	≤ 150 N	≤ 150 N
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Approvals	CULUS	CULUS; UKCA
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C5DD4UG0005MCSMCS-E	1	**1025950005**	IE-C5DD4UG0005MSSMCS-E	1	**1059330005**
1.5 m	IE-C5DD4UG0015MCSMCS-E	1	**1025950015**	IE-C5DD4UG0015MSSMCS-E	1	**1059330015**
3.0 m	IE-C5DD4UG0030MCSMCS-E	1	**1025950030**	IE-C5DD4UG0030MSSMCS-E	1	**1059330030**
5.0 m	IE-C5DD4UG0050MCSMCS-E	1	**1025950050**	IE-C5DD4UG0050MSSMCS-E	1	**1059330050**
10.0 m	IE-C5DD4UG0100MCSMCS-E	1	**1025950100**	IE-C5DD4UG0100MSSMCS-E	1	**1059330100**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**
Note						

Assembled cable

Dragline cable M12

- Cat. 5
- PUR
- D-coded
- PROFINET type C

M12 - open

Plug / -



Assembled cables

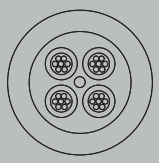
M12 dragline cable, angled

- Cat. 5
- PUR
- D-coded
- PROFINET type C

M12 - M12

Plug / Plug

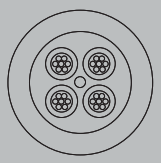




M12 - M12

Plug / Plug





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded	M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter, min. / max.	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Fire safety for railway vehicles		
Note		

Ordering data

Cat. 5 PROFINET. PUR. M12 angled-M12 angled	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m				IE-C5DD4UG0015MCAMCA-E	1	1059890015
3.0 m				IE-C5DD4UG0030MCAMCA-E	1	1059890030
5.0 m				IE-C5DD4UG0050MCAMCA-E	1	1059890050
10.0 m				IE-C5DD4UG0100MCAMCA-E	1	1059890100
Cat. 5 PROFINET. PUR. M12 straight-M12 angled						
1.5 m	IE-C5DD4UG0015MCSMCA-E	1	1059770015			
3.0 m	IE-C5DD4UG0030MCSMCA-E	1	1059770030			
10.0 m	IE-C5DD4UG0100MCSMCA-E	1	1059770100			
Cat. 5. PUR. M12 angled-open						
1.5 m						
3.0 m						
5.0 m						
10.0 m						
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687	TM-I 18 MC NE GE	320	1718431687
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	1719840000	TM 4/12 HF/HB	500	1719840000
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	1719850000	TM 4/18 HF/HB	500	1719850000
Note						

Assembled cables

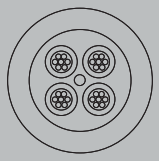
M12 dragline cable, angled

- Cat. 5
- PUR
- D-coded
- PROFINET type C

M12 - open

Plug / -





Technical data

Product type	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PUR
Sheathing colour	green (RAL 6018)
Insulation diameter, min. / max.	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-50 °C...70 °C
Abrasion resistance	very good
Halogen	halogen-free, acc. to IEC 60754-2
Resistance to oils	in acc. with IEC 60811-2-1
Fire safety for railway vehicles	

Note

Ordering data

Cat. 5 PROFINET. PUR. M12 angled-M12 angled	Type	Qty.	Order No.
1.5 m			
3.0 m			
5.0 m			
10.0 m			
Cat. 5 PROFINET. PUR. M12 straight-M12 angled			
1.5 m			
3.0 m			
10.0 m			
Cat. 5. PUR. M12 angled-open			
1.5 m	IE-C5DD4UG0015MCAXXX-X	1	**1059750015**
3.0 m	IE-C5DD4UG0030MCAXXX-X	1	**1059750030**
5.0 m	IE-C5DD4UG0050MCAXXX-X	1	**1059750050**
10.0 m	IE-C5DD4UG0100MCAXXX-X	1	**1059750100**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**

Note

Assembled cables

System cable M12 flange

- Cat. 5
- PUR
- D-coded
- PROFINET type B

M12 flange - M12 male

Plug / Socket



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

M12 flange - RJ45

Plug / Socket



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

Technical data

Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	360° shield contact	360° shield contact
Plug left / Plug right	M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded	M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	15 x cable diameter	15 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-C5DS4UG0005MBSMCS-E	1	**1244130005**	IE-C5DS4UG0005MBSA70-E	1	**1234750005**
1.0 m	IE-C5DS4UG0010MBSMCS-E	1	**1244130010**	IE-C5DS4UG0010MBSA70-E	1	**1234750010**
1.5 m	IE-C5DS4UG0015MBSMCS-E	1	**1244130015**	IE-C5DS4UG0015MBSA70-E	1	**1234750015**
2.0 m	IE-C5DS4UG0020MBSMCS-E	1	**1244130020**	IE-C5DS4UG0020MBSA70-E	1	**1234750020**
5.0 m	IE-C5DS4UG0050MBSMCS-E	1	**1244130050**	IE-C5DS4UG0050MBSA70-E	1	**1234750050**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**
Dust protection cap						
Protective cap				IE-PP-RJ45	10	**2552580000**
Note						

Assembled cables

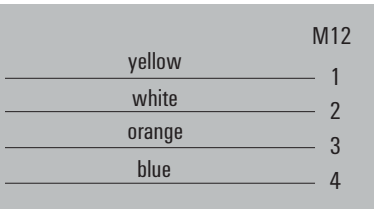
System cable M12 flange

- Cat. 5
- PUR
- D-coded
- PROFINET type B

M12 flange - open

Socket / -





Technical data

Product type	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	360° shield contact
Plug left / Plug right	M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PUR
Sheathing colour	green (RAL 6018)
Insulation diameter	1.5 mm
Min. bending radius, repetitive	15 x cable diameter
Min. bending radius, once only	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-50 °C...70 °C
Approvals	

Note

Ordering data

	Type	Qty.	Order No.
0.5 m	IE-C5DS4UG0005MBSXXX-E	1	1234770005
1.0 m	IE-C5DS4UG0010MBSXXX-E	1	1234770010
1.5 m	IE-C5DS4UG0015MBSXXX-E	1	1234770015
2.0 m	IE-C5DS4UG0020MBSXXX-E	1	1234770020
5.0 m	IE-C5DS4UG0050MBSXXX-E	1	1234770050

Note

Accessories

Marking tags	**Type**	**Qty.**	**Order No.**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Tools			
Tool set	SCREWTY SET	1	1910000000
Tool set with torque function	SCREWTY SET -DM	1	1920000000
Mounting tool	SCREWTY-M12-DM	1	1900001000
Screwty-M12	SCREWTY- M12	1	1900000000
Dust protection cap			
Protective cap			

Note

Assembled cable

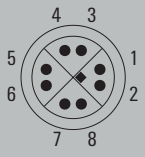
Connecting cable M12

- Cat. 6
- PVC
- X-type
- PROFINET type B

M12 - M12

Plug / Plug



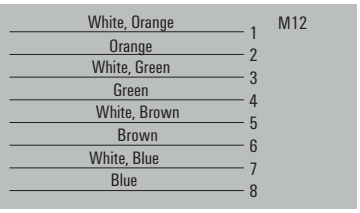




M12 - open

Plug / -





Technical data

	M12 - M12	M12 - open
Product type	Connecting line	Connecting line
Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Shielding	S/FTP	S/FTP
Plug left / Plug right	M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded	M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end
Cross-section	4*2*AWG 23/7	4*2*AWG 23/7
Sheath diameter, max.	8.8 mm	8.8 mm
Material sheath	PVC	PVC
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.58 mm	1.58 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	4 x cable diameter	4 x cable diameter
Pulling force	≤ 150 N	≤ 150 N
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	-40 °C...80 °C	-40 °C...80 °C
Storage temperature	-40 °C...80 °C	-40 °C...80 °C
Halogen	Yes	Yes
Resistance to spread of flame	in acc. with IEC 60332-1-2	in acc. with IEC 60332-1-2
Standard, assembly	UL-Style 2461	UL-Style 2461
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.
0.5 m	IE-C6KS8VG0005XCSXCS-E	1	**1398070005**
1.5 m	IE-C6KS8VG0015XCSXCS-E	1	**1398070015**
3.0 m	IE-C6KS8VG0030XCSXCS-E	1	**1398070030**
5.0 m	IE-C6KS8VG0050XCSXCS-E	1	**1398070050**
10.0 m	IE-C6KS8VG0100XCSXCS-E	1	**1398070100**

Note

	Type	Qty.	Order No.
0.5 m	IE-C6KS8VG0005XCSXXX-E	1	**1449470005**
1.5 m	IE-C6KS8VG0015XCSXXX-E	1	**1449470015**
3.0 m	IE-C6KS8VG0030XCSXXX-E	1	**1449470030**
5.0 m	IE-C6KS8VG0050XCSXXX-E	1	**1449470050**
10.0 m	IE-C6KS8VG0100XCSXXX-E	1	**1449470100**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**

Note

Assembled cable

Dragline cable M12

- Cat. 6
- PUR
- X-type
- PROFINET type C

M12 - M12

Plug / Plug





M12 - RJ45

Plug / Plug





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.6 (ISO/IEC 11801)	Cat.6 (ISO/IEC 11801)
Shielding	S/FTP	S/FTP
Plug left / Plug right	M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded	RJ45, IP20, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded
Cross-section	4*2*AWG 26/19 - 4*2*0.128 mm²	4*2*AWG 26/19 - 4*2*0.128 mm²
Sheath diameter, max.	7.8 mm	7.8 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	0.98 mm	0.98 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	4 x cable diameter	4 x cable diameter
Pulling force	≤ 100 N	≤ 100 N
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	-30 °C...70 °C	-30 °C...70 °C
Storage temperature	...	...
Halogen	halogen-free	halogen-free
Resistance to spread of flame	in acc. with IEC 60332-1-2, in acc. with UL 1581 VW-1 and CSA FT1	in acc. with IEC 60332-1-2, in acc. with UL 1581 VW-1 and CSA FT1
Standard, assembly		
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.0 m	IE-C6HD8UG0010XCSXCS-E	1	**2723040010**			
3.0 m	IE-C6HD8UG0030XCSXCS-E	1	**2723040030**			
5.0 m	IE-C6HD8UG0050XCSXCS-E	1	**2723040050**	IE-C6HD8UG0050A40XCS-E	1	**2723030050**
7.5 m	IE-C6HD8UG0075XCSXCS-E	1	**2723040075**	IE-C6HD8UG0075A40XCS-E	1	**2723030075**
10.0 m	IE-C6HD8UG0100XCSXCS-E	1	**2723040100**	IE-C6HD8UG0100A40XCS-E	1	**2723030100**
15.0 m	IE-C6HD8UG0150XCSXCS-E	1	**2723040150**	IE-C6HD8UG0150A40XCS-E	1	**2723030150**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**

Note

Assembled cables

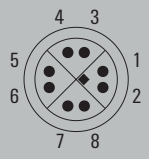
M12 connecting cables

- Cat. 6
- PUR
- X-type

M12 - RJ45

Plug / Plug





RJ45		M12
1	White, Orange	1
2	Orange	2
3	White, Green	3
4	Blue	8
5	White, Blue	7
6	Green	4
7	White, Brown	5
8	Brown	6

Technical data

Product type	System cable
Category	Cat.6_A / Class E_A (ISO/IEC 11801 2010)
Shielding	S/FTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PUR
Sheathing colour	green (RAL 6018)
Insulation diameter	0.98 mm
Min. bending radius, repetitive	10 x cable diameter
Min. bending radius, once only	5 x cable diameter
Pulling force	
Ambient temperature (operational)	-40 °C...80 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Halogen	halogen-free, acc. to IEC 60754-1
Resistance to spread of flame	in acc. with IEC 60332-1-2
Standard, assembly	UL Style 20963
Approvals	
Note	

Ordering data

	Type	Qty.	Order No.
1.0 m	IE-C6EL8UG0010U40XCS-E	1	1457580010
2.0 m	IE-C6EL8UG0020U40XCS-E	1	1457580020
3.0 m	IE-C6EL8UG0030U40XCS-E	1	1457580030
5.0 m	IE-C6EL8UG0050U40XCS-E	1	1457580050
10.0 m	IE-C6EL8UG0100U40XCS-E	1	1457580100
12.0 m	IE-C6EL8UG0120U40XCS-E	1	1457580120
Note			

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Dust protection cap			
Protective cap	IE-PP-RJ45	10	2552580000

Note

Assembled cables

EtherNet/IP patch cable

- PUR

V1 RJ45 IP 67 - metal



RJ45		RJ45
1	white (orange)	1
2	orange	2
3	white (green)	3
4	blue	4
5	white (blue)	5
6	green	6
7	white (brown)	7
8	brown	8

V1 RJ45 IP 67 - plastic



RJ45		RJ45
1	white (orange)	1
2	orange	2
3	white (green)	3
4	blue	4
5	white (blue)	5
6	green	6
7	white (brown)	7
8	brown	8

Technical data

Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	RJ45, IP67, male contact, straight, V01 Baymo, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, V01 Baymo, plug, Zinc diecast, shielded	RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded / RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded
Cross-section	4*2*AWG 26/7 - 4*2*0.128 mm²	4*2*AWG 26/7 - 4*2*0.128 mm²
Sheath diameter, max.	6.3 mm	6.3 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1 mm	1 mm
Min. bending radius, repetitive	10 x cable diameter	10 x cable diameter
Min. bending radius, once only	4 x cable diameter	4 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	-10 °C...60 °C	-10 °C...60 °C
Storage temperature	-40 °C...75 °C	-40 °C...75 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to spread of flame	in acc. with IEC 60332-1	in acc. with IEC 60332-1
Resistance to oils	in acc. with IEC 60811-2-1	in acc. with IEC 60811-2-1
Approvals	CULUS	CULUS
Note		

Ordering data

	Type	Qty.	Order No.
1.0 m	IE-C5ES8UG0010B41B41-E	1	1066850000
2.0 m	IE-C5ES8UG0020B41B41-E	1	1066860000
5.0 m	IE-C5ES8UG0050B41B41-E	1	1066870000
10.0 m	IE-C5ES8UG0100B41B41-E	1	1066880000
Note			

	Type	Qty.	Order No.
1.0 m	IE-C5ES8UG0010P41P41-E	1	1106010000
2.0 m	IE-C5ES8UG0020P41P41-E	1	1106020000
5.0 m	IE-C5ES8UG0050P41P41-E	1	1106030000
10.0 m	IE-C5ES8UG0100P41P41-E	1	1106040000
Note			

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687

Note

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - open

Socket / -



M8

1	yellow
2	white
3	blue
4	orange

M8 - open

Plug / -



M8

1	yellow
2	white
3	blue
4	orange

Technical data

Product type	Dragline cable	Dragline cable
Category	Cat. 5e	Cat. 5e
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, P-coded, IP67, female contact, straight, plug, Plastic, shielded / free conductor end	M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	2*2*AWG 22/7 - 2*2*0.36 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	black	black
Insulation diameter	1.6 mm	1.6 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m	IE-C5DE4UP0015PSSXXX-E	1	**2717740015**	IE-C5DE4UP0015PCSXXX-E	1	**2717750015**
3.0 m	IE-C5DE4UP0030PSSXXX-E	1	**2717740030**	IE-C5DE4UP0030PCSXXX-E	1	**2717750030**
5.0 m	IE-C5DE4UP0050PSSXXX-E	1	**2717740050**	IE-C5DE4UP0050PCSXXX-E	1	**2717750050**
7.5 m	IE-C5DE4UP0075PSSXXX-E	1	**2717740075**	IE-C5DE4UP0075PCSXXX-E	1	**2717750075**
10.0 m	IE-C5DE4UP0100PSSXXX-E	1	**2717740100**	IE-C5DE4UP0100PCSXXX-E	1	**2717750100**
20.0 m	IE-C5DE4UP0200PSSXXX-E	1	**2717740200**	IE-C5DE4UP0200PCSXXX-E	1	**2717750200**
30.0 m	IE-C5DE4UP0300PSSXXX-E	1	**2717740300**	IE-C5DE4UP0300PCSXXX-E	1	**2717750300**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

Assembled cable

Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - open

Socket angled / -



M8	
1	yellow
2	white
3	blue
4	orange

M8 - open

Plug angled / -



M8	
1	yellow
2	white
3	blue
4	orange

Technical data

Product type	Dragline cable	Dragline cable
Category	Cat. 5e	Cat. 5e
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, P-coded, IP67, female contact, angled 90°, plug, Plastic, shielded / free conductor end	M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	2*2*AWG 22/7 - 2*2*0.36 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	black	black
Insulation diameter	1.6 mm	1.6 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m	IE-C5DE4UP0015PSAXXX-E	1	**2717760015**	IE-C5DE4UP0015PCAXXX-E	1	**2717770015**
3.0 m	IE-C5DE4UP0030PSAXXX-E	1	**2717760030**	IE-C5DE4UP0030PCAXXX-E	1	**2717770030**
5.0 m	IE-C5DE4UP0050PSAXXX-E	1	**2717760050**	IE-C5DE4UP0050PCAXXX-E	1	**2717770050**
7.5 m	IE-C5DE4UP0075PSAXXX-E	1	**2717760075**	IE-C5DE4UP0075PCAXXX-E	1	**2717770075**
10.0 m	IE-C5DE4UP0100PSAXXX-E	1	**2717760100**	IE-C5DE4UP0100PCAXXX-E	1	**2717770100**
20.0 m	IE-C5DE4UP0200PSAXXX-E	1	**2717760200**			
30.0 m	IE-C5DE4UP0300PSAXXX-E	1	**2717760300**			
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

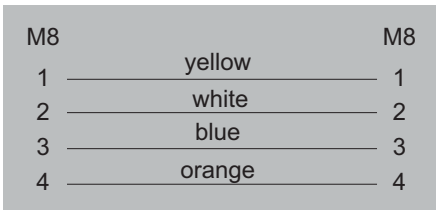
Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - M8

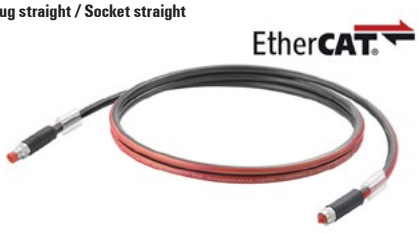
Plug straight / Plug straight

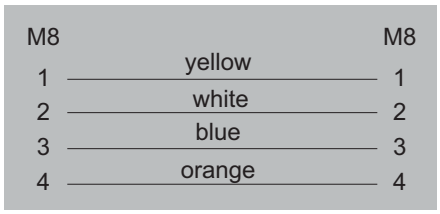




M8 - M8

Plug straight / Socket straight





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat. 5e	Cat. 5e
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded	M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, P-coded, IP67, female contact, straight, plug, Plastic, shielded
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	2*2*AWG 22/7 - 2*2*0.36 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	black	black
Insulation diameter	1.6 mm	1.6 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m	IE-C5DE4UP0015PCSPCS-E	1	**2717780015**	IE-C5DE4UP0015PCSPSS-E	1	**2717790015**
3.0 m	IE-C5DE4UP0030PCSPCS-E	1	**2717780030**	IE-C5DE4UP0030PCSPSS-E	1	**2717790030**
5.0 m	IE-C5DE4UP0050PCSPCS-E	1	**2717780050**	IE-C5DE4UP0050PCSPSS-E	1	**2717790050**
7.5 m	IE-C5DE4UP0075PCSPCS-E	1	**2717780075**	IE-C5DE4UP0075PCSPSS-E	1	**2717790075**
10.0 m	IE-C5DE4UP0100PCSPCS-E	1	**2717780100**	IE-C5DE4UP0100PCSPSS-E	1	**2717790100**
20.0 m	IE-C5DE4UP0200PCSPCS-E	1	**2717780200**	IE-C5DE4UP0200PCSPSS-E	1	**2717790200**
30.0 m	IE-C5DE4UP0300PCSPCS-E	1	**2717780300**	IE-C5DE4UP0300PCSPSS-E	1	**2717790300**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

Assembled cable

Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - M8

Plug angled / Plug angled



M8		M8
1	yellow	1
2	white	2
3	blue	3
4	orange	4

M8 - M8

Plug angled / Socket angled



M8		M8
1	yellow	1
2	white	2
3	blue	3
4	orange	4

Technical data

Product type	Dragline cable	Dragline cable
Category	Cat. 5e	Cat. 5e
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded	M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, P-coded, IP67, female contact, angled 90°, plug, Plastic, shielded
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	2*2*AWG 22/7 - 2*2*0.36 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	black	black
Insulation diameter	1.6 mm	1.6 mm
Min. bending radius, repetitive	8 x cable diameter	8 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DE4UP0015PCAPCA-E	1	2717800015
3.0 m	IE-C5DE4UP0030PCAPCA-E	1	2717800030
5.0 m	IE-C5DE4UP0050PCAPCA-E	1	2717800050
7.5 m	IE-C5DE4UP0075PCAPCA-E	1	2717800075
10.0 m	IE-C5DE4UP0100PCAPCA-E	1	2717800100
Note			

	Type	Qty.	Order No.
1.5 m	IE-C5DE4UP0015PCAPSA-E	1	2717810015
3.0 m	IE-C5DE4UP0030PCAPSA-E	1	2717810030
5.0 m	IE-C5DE4UP0050PCAPSA-E	1	2717810050
7.5 m	IE-C5DE4UP0075PCAPSA-E	1	2717810075
10.0 m	IE-C5DE4UP0100PCAPSA-E	1	2717810100
Note			

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Tools			
Tool set	SCREWTY SET	1	1910000000
Tool set with torque function	SCREWTY SET -DM	1	1920000000
Mounting tool	SCREWTY-M12-DM	1	1900001000
Screwty-M12	SCREWTY- M12	1	1900000000

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Tools			
Tool set	SCREWTY SET	1	1910000000
Tool set with torque function	SCREWTY SET -DM	1	1920000000
Mounting tool	SCREWTY-M12-DM	1	1900001000
Screwty-M12	SCREWTY- M12	1	1900000000

Note

Assembled cable

Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - open

Plug / -



M8 - open

Socket / -



	M8	
1		yellow
2		white
3		orange
4		blue

M8	
1	yellow
2	white
3	orange
4	blue

Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end	M8, D-coded, IP67, female contact, straight, plug, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
3.0 m	IE-C5DD4UG0030DCSXXX-E	1	**2706150030**	IE-C5DD4UG0030DSSXXX-E	1	**2706260030**
5.0 m	IE-C5DD4UG0050DCSXXX-E	1	**2706150050**	IE-C5DD4UG0050DSSXXX-E	1	**2706260050**
7.5 m	IE-C5DD4UG0075DCSXXX-E	1	**2706150075**	IE-C5DD4UG0075DSSXXX-E	1	**2706260075**
10.0 m	IE-C5DD4UG0100DCSXXX-E	1	**2706150100**	IE-C5DD4UG0100DSSXXX-E	1	**2706260100**
20.0 m	IE-C5DD4UG0200DCSXXX-E	1	**2706150200**	IE-C5DD4UG0200DSSXXX-E	1	**2706260200**
30.0 m	IE-C5DD4UG0300DCSXXX-E	1	**2706150300**	IE-C5DD4UG0300DSSXXX-E	1	**2706260300**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

Assembled cable

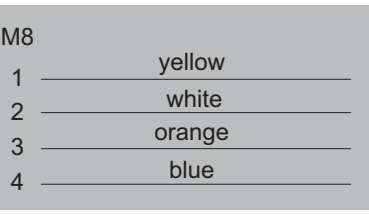
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - open

Plug angled / -

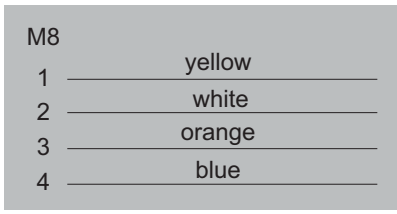




M8 - open

Socket angled / -





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end	M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
3.0 m	IE-C5DD4UG0030DCAXXX-E	1	**2706190030**	IE-C5DD4UG0030DSAXXX-E	1	**2706160030**
5.0 m	IE-C5DD4UG0050DCAXXX-E	1	**2706190050**	IE-C5DD4UG0050DSAXXX-E	1	**2706160050**
7.5 m	IE-C5DD4UG0075DCAXXX-E	1	**2706190075**	IE-C5DD4UG0075DSAXXX-E	1	**2706160075**
10.0 m	IE-C5DD4UG0100DCAXXX-E	1	**2706190100**	IE-C5DD4UG0100DSAXXX-E	1	**2706160100**
20.0 m				IE-C5DD4UG0200DSAXXX-E	1	**2706160200**
30.0 m				IE-C5DD4UG0300DSAXXX-E	1	**2706160300**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
Marking tags						
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

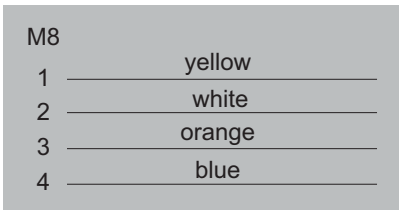
Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - M8

Plug straight / Plug straight





M8 - M8

Plug straight / Socket straight





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded	M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, D-coded, IP67, female contact, straight, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m	IE-C5DD4UG0015DCSDCS-E	1	**2706200015**			
3.0 m	IE-C5DD4UG0030DCSDCS-E	1	**2706200030**	IE-C5DD4UG0030DCSDSS-E	1	**2706210030**
5.0 m	IE-C5DD4UG0050DCSDCS-E	1	**2706200050**	IE-C5DD4UG0050DCSDSS-E	1	**2706210050**
7.5 m	IE-C5DD4UG0075DCSDCS-E	1	**2706200075**	IE-C5DD4UG0075DCSDSS-E	1	**2706210075**
10.0 m	IE-C5DD4UG0100DCSDCS-E	1	**2706200100**	IE-C5DD4UG0100DCSDSS-E	1	**2706210100**
20.0 m	IE-C5DD4UG0200DCSDCS-E	1	**2706200200**	IE-C5DD4UG0200DCSDSS-E	1	**2706210200**
30.0 m	IE-C5DD4UG0300DCSDCS-E	1	**2706200300**	IE-C5DD4UG0300DCSDSS-E	1	**2706210300**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

Assembled cable

Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - M8

Plug angled / Plug angled





M8 - M8

Plug angled / Socket angled





Technical data

Product type	Dragline cable	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded	M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm	6.7 mm
Material sheath	PUR	PUR
Sheathing colour	green (RAL 6018)	green (RAL 6018)
Insulation diameter	1.5 mm	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-50 °C...70 °C	-50 °C...70 °C
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
1.5 m	IE-C5DD4UG0015DCADCA-E	1	**2706220015**			
3.0 m	IE-C5DD4UG0030DCADCA-E	1	**2706220030**	IE-C5DD4UG0030DCADSA-E	1	**2706230030**
5.0 m	IE-C5DD4UG0050DCADCA-E	1	**2706220050**	IE-C5DD4UG0050DCADSA-E	1	**2706230050**
7.5 m	IE-C5DD4UG0075DCADCA-E	1	**2706220075**	IE-C5DD4UG0075DCADSA-E	1	**2706230075**
10.0 m	IE-C5DD4UG0100DCADCA-E	1	**2706220100**	IE-C5DD4UG0100DCADSA-E	1	**2706230100**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Tools						
Tool set	SCREWTY SET	1	**1910000000**	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**	SCREWTY- M12	1	**1900000000**

Note

Assembled cable

Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - RJ45

Plug straight / Plug straight





Technical data

Product type	Dragline cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP
Plug left / Plug right	M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	6.7 mm
Material sheath	PUR
Sheathing colour	green (RAL 6018)
Insulation diameter	1.5 mm
Min. bending radius, repetitive	7.5 x cable diameter
Min. bending radius, once only	5 x cable diameter
Ambient temperature (operational)	-40 °C...70 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-50 °C...70 °C
Approvals	
Note	

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DD4UG0015DCSU20-E	1	**2706250015**
3.0 m	IE-C5DD4UG0030DCSU20-E	1	**2706250030**
5.0 m	IE-C5DD4UG0050DCSU20-E	1	**2706250050**
7.5 m	IE-C5DD4UG0075DCSU20-E	1	**2706250075**
10.0 m	IE-C5DD4UG0100DCSU20-E	1	**2706250100**
20.0 m	IE-C5DD4UG0200DCSU20-E	1	**2706250200**
30.0 m	IE-C5DD4UG0300DCSU20-E	1	**2706250300**
Note			

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Tools			
Tool set	SCREWTY SET	1	**1910000000**
Tool set with torque function	SCREWTY SET -DM	1	**1920000000**
Mounting tool	SCREWTY-M12-DM	1	**1900001000**
Screwty-M12	SCREWTY- M12	1	**1900000000**

Note

Assembled cable
Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - M12

Plug / Plug



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

M12 - M12

Plug / Socket



M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

Technical data

Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, female contact, straight, plug, Plastic, shielded
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	2*2*AWG 22/7 - 2*2*0.36 mm²
Sheath diameter, max.	7.55 mm	7.55 mm
Material sheath	Radox GKW S	Radox GKW S
Sheathing colour	black	black
Insulation diameter	1.95 mm	1.95 mm
Min. bending radius, repetitive	6 *diameter	6 *diameter
Ambient temperature (operational)	-40 °C...90 °C	-40 °C...90 °C
Installation temperature	-25 °C...90 °C	-25 °C...90 °C
Storage temperature	-40 °C...90 °C	-40 °C...90 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	halogen-free, acc. to IEC 60754-2
Resistance to oils	in acc. with EN 50306-3	in acc. with EN 50306-3
Fire safety for railway vehicles	Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3	Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MCSMCS-E	1	1010850015
3.0 m	IE-C5DB4RE0030MCSMCS-E	1	1010850030
5.0 m	IE-C5DB4RE0050MCSMCS-E	1	1010850050
10.0 m	IE-C5DB4RE0100MCSMCS-E	1	1010850100

Note

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MSSMCS-E	1	1059340015
3.0 m	IE-C5DB4RE0030MSSMCS-E	1	1059340030
5.0 m	IE-C5DB4RE0050MSSMCS-E	1	1059340050
10.0 m	IE-C5DB4RE0100MSSMCS-E	1	1059340100

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687

Note

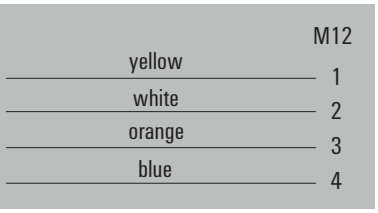
Assembled cable
Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - open

Plug / -





Technical data

Product type	System cable
Category	Cat. 5e
Shielding	SF/UTP
Plug left / Plug right	M12, D-coded, Number of poles: 4, IP67, male contact, straight, plug, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	7.55 mm
Material sheath	Radox EM 104
Sheathing colour	black
Insulation diameter	1.95 mm
Min. bending radius, repetitive	6 *diameter
Ambient temperature (operational)	-25 °C...85 °C
Installation temperature	...
Storage temperature	...
Abrasion resistance	
Halogen	No
Resistance to oils	in acc. with EN 50264-1 or EN 50306-1
Fire safety for railway vehicles	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130
Approvals	

Note

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MCSXXX-X	1	1010840015
3.0 m	IE-C5DB4RE0030MCSXXX-X	1	1010840030
5.0 m	IE-C5DB4RE0050MCSXXX-X	1	1010840050
10.0 m	IE-C5DB4RE0100MCSXXX-X	1	1010840100

Note

Accessories

Tools	Type	Qty.	Order No.
Sheathing strippers, For UTP and STP data cables	AM 12	1	9030060000
Sheathing strippers, For coaxial and round data cables	IE-CST	1	9204350000
Marking tags			
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687

Note

Assembled cables
Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - M12

Plug / Plug





M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

M12		M12
1	yellow	1
2	white	2
3	orange	3
4	blue	4

Technical data

Product type	System cable	System cable
Category	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)	Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded	M12, D-coded, Number of poles: 4, male contact, angled 0°, plug, shielded / M12, D-coded, Number of poles: 4, male contact, angled 0°, plug, shielded
Cross-section	2*2*AWG 22/7 - 2*2*0.36 mm²	4 x AWG 22
Sheath diameter, max.	7.55 mm	7.55 mm
Material sheath	Radox GKW S	Radox EM 104
Sheathing colour	black	black
Insulation diameter, min. / max.	1.95 mm	1.95 mm
Min. bending radius, repetitive	6 *diameter	6 *diameter
Ambient temperature (operational)	-40 °C...90 °C	-40 °C...90 °C
Installation temperature	-25 °C...90 °C	-25 °C...90 °C
Storage temperature	-40 °C...90 °C	-40 °C...90 °C
Abrasion resistance	very good	very good
Halogen	halogen-free, acc. to IEC 60754-2	No
Resistance to oils	in acc. with EN 50306-3	Yes
Fire safety for railway vehicles	Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MCSMCA-E	1	1059940015
3.0 m	IE-C5DB4RE0030MCSMCA-E	1	1059940030
5.0 m	IE-C5DB4RE0050MCSMCA-E	1	1059940050
10.0 m	IE-C5DB4RE0100MCSMCA-E	1	1059940100

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MCAMCA-E	1	1059970015
3.0 m	IE-C5DB4RE0030MCAMCA-E	1	1059970030
5.0 m	IE-C5DB4RE0050MCAMCA-E	1	1059970050
10.0 m	IE-C5DB4RE0100MCAMCA-E	1	1059970100

Note

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	1719840000
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	1719850000

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	1718411687
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	1718431687
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	1719840000
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	1719850000

Note

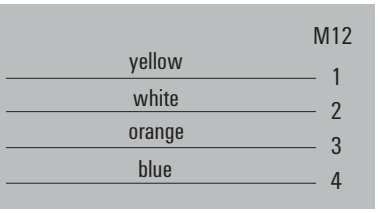
Assembled cables
Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 – open

Plug / -





Technical data

Product type	System cable
Category	Cat. 5e
Shielding	SF/UTP
Plug left / Plug right	M12, D-coded, Number of poles: 4, IP67, male contact, angled 0°, plug, Plastic, shielded / free conductor end
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	7.55 mm
Material sheath	Radox EM 104
Sheathing colour	black
Insulation diameter, min. / max.	1.95 mm
Min. bending radius, repetitive	6 *diameter
Ambient temperature (operational)	-25 °C...85 °C
Installation temperature	...
Storage temperature	...
Abrasion resistance	
Halogen	No
Resistance to oils	in acc. with EN 50264-1 or EN 50306-1
Fire safety for railway vehicles	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130
Approvals	
Note	

Ordering data

	Type	Qty.	Order No.
1.5 m	IE-C5DB4RE0015MCAXXX-X	1	**1059900015**
3.0 m	IE-C5DB4RE0030MCAXXX-X	1	**1059900030**
5.0 m	IE-C5DB4RE0050MCAXXX-X	1	**1059900050**
10.0 m	IE-C5DB4RE0100MCAXXX-X	1	**1059900100**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**

Note

Assembled cables

Railway cable RW M12

- Cat. 5
- Radox
- D-coded
- RW (reduced wire): suitable for RJ45 connectors

M12 – open

Plug / -



	M12
yellow	1
white	2
orange	3
blue	4

M12 - RJ45

Plug / Plug



RJ45		M12
1	yellow	1
3	white	2
2	orange	3
6	blue	4

Technical data

Product type	System cable	System cable
Category	Cat. 5e	Cat. 5e
Shielding	SF/UTP	SF/UTP
Plug left / Plug right	M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / Free conductor end	M12, D-coded, Number of poles: 4, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	7 mm	7 mm
Material sheath	Radox EM 104	Radox EM 104
Sheathing colour	black	black
Insulation diameter	1.55 mm	1.55 mm
Min. bending radius, repetitive	6 *diameter	6 *diameter
Ambient temperature (operational)	-25 °C...85 °C	-25 °C...70 °C
Storage temperature	...	...
Abrasion resistance		
Halogen	No	No
Resistance to oils	in acc. with EN 50264-1 or EN 50306-1	in acc. with EN 50264-1 or EN 50306-1
Fire safety for railway vehicles	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130
Approvals		
Note		

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
4.0 m				IE-C5DB4WE0040MCSA70-E	1	**1220310040**
5.0 m	IE-C5DB4WE0050MCSXXX-E	1	**1269740050**			
10.0 m	IE-C5DB4WE0100MCSXXX-E	1	**1269740100**			
Note						

Accessories

Tools	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Sheathing strippers, For UTP and STP data cables	AM 12	1	**9030060000**			
Sheathing strippers, For coaxial and round data cables	IE-CST	1	**9204350000**			
Marking tags						
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**
Dust protection cap						
Protective cap				IE-PP-RJ45	10	**2552580000**

Note

Assembled cables

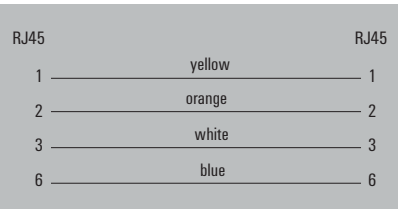
Railway cable RJ45 - RJ45

- Cat. 5
- Radox
- RW (reduced wire)

RJ45 - RJ45

Plug / Plug





Technical data

Product type	System cable
Category	Cat. 5e
Shielding	SF/UTP
Plug left / Plug right	RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded
Cross-section	4*AWG 22/7 - 0.32 mm²
Sheath diameter, max.	7 mm
Material sheath	Radox EM 104
Sheathing colour	black
Insulation diameter	1.55 mm
Min. bending radius, repetitive	6 *diameter
Ambient temperature (operational)	-40 °C...70 °C
Storage temperature	...
Abrasion resistance	
Halogen	No
Resistance to oils	in acc. with EN 50264-1 or EN 50306-1
Fire safety for railway vehicles	Acc. to BS 6853, GM/RT 2130, Ia,Ib, II, Acc. to EN 45545, HL1 - HL3, Acc. to DIN 5510 1-4, Acc. to NF F16-101, A1, A2, B, Acc. to UNI CEI 11170, LR1-LR4, NFPA 130
Approvals	

Note

Ordering data

	Type	Qty.	Order No.
1.0 m	IE-C5DB4WE0010A70A70-E	1	**1421710010**
2.0 m	IE-C5DB4WE0020A70A70-E	1	**1421710020**
3.0 m	IE-C5DB4WE0030A70A70-E	1	**1421710030**
4.0 m	IE-C5DB4WE0040A70A70-E	1	**1421710040**
5.0 m	IE-C5DB4WE0050A70A70-E	1	**1421710050**
10.0 m	IE-C5DB4WE0100A70A70-E	1	**1421710100**
20.0 m	IE-C5DB4WE0200A70A70-E	1	**1421710200**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**
Dust protection cap			
Protective cap	IE-PP-RJ45	10	**2552580000**

Note

Assembled cables
USB cable

USB A - USB A



USB A 3.0 - USB A 3.0



Technical data

	USB A - USB A	USB A 3.0 - USB A 3.0
Sheathing colour	black	black
Material sheath	PVC	PVC
Plug left	USB A, IP20, male contact, straight, plug, Plastic, shielded	USB A 3.0, IP20, male contact, straight, plug, Plastic, shielded
Plug right	USB A, IP20, male contact, straight, plug, Plastic, shielded	USB A 3.0, IP20, male contact, straight, plug, Plastic, shielded
Ambient temperature (operational)	-15 °C...80 °C	-15 °C...80 °C
Note		

Ordering data

	USB A - USB A			USB A 3.0 - USB A 3.0		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
0.3 m	IE-USB-A-A-0.3M	1	**1993550003**			
0.5 m	IE-USB-A-A-0.5M	1	**1993550005**	IE-USB-3.0-A-A-0.5M	1	**2581730005**
1.0 m	IE-USB-A-A-1.0M	1	**1993550010**			
1.5 m	IE-USB-A-A-1.5M	1	**1993550015**			
1.8 m	IE-USB-A-A-1.8M	1	**1993550018**	IE-USB-3.0-A-A-1.8M	1	**2581730018**
3.0 m	IE-USB-A-A-3.0M	1	**1993550030**	IE-USB-3.0-A-A-3M	1	**2581730030**
5.0 m				IE-USB-3.0-A-A-5M	1	**2581730050**
Note						

Accessories

	USB A - USB A			USB A 3.0 - USB A 3.0		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**

Note

Assembled cables
USB cable

USB Micro - FrontCom® interface



Technical data

Sheathing colour	black
Material sheath	
Plug left	USB A Mini, IP20, male contact, straight, plug, Plastic, shielded
Plug right	USB A Mini, IP20, female contact, straight, Service interface, Plastic, shielded
Ambient temperature (operational)	...

Note

Ordering data

	Type	Qty.	Order No.
0.3 m	IE-FCML-MINIUSB-0.3M	1	**2488200000**

Note

Accessories

Type	Qty.	Order No.

Note

Assembled cables
USB cable

USB A - USB Micro



USB A - USB C



Technical data

Sheathing colour	black	black
Material sheath	PVC	PVC
Plug left	USB A, IP20, male contact, straight, Plastic, shielded	USB A, IP20, male contact, straight, plug, Plastic, shielded
Plug right	USB Micro, IP20, male contact, straight, Plastic, shielded	IP20, male contact, straight, plug, Plastic, shielded
Ambient temperature (operational)	-15 °C...80 °C	-15 °C...80 °C
Note		

Ordering data

	Type	Qty.	Order No.
1.8 m	IE-USB-A-MICRO-1.8M	1	**1487980000**
2.0 m			
Note			

	Type	Qty.	Order No.
	IE-USB-A-C-2.0M	1	**2838380020**

Accessories

Type	Qty.	Order No.

Type	Qty.	Order No.

Note

Fibre-optic cabling solutions
Overview

Fibre-optic cabling solutions	Overview – Fibre-optic cables	P.2
	Raw cable – FO connection cable / dragline cable	P.3
	Assembled cables – FO PROFINET cable	P.4
	Assembled cables – FO patch cable	P.5
	Assembled cables – FO dragline cable	P.10

Overview – Fibre-optic cables
First choice for industry

Fibre-optic cables are the best option for working in harsh industrial environments, especially if you:

- Need long transmission paths (up to 120 km!)
- Need to take account of EMC issues
- Must ensure electrical isolation in the case of potential differences

Raw cables

Industrial fibre-optic dragline cable



For flexible installations in and around machinery and plants – for harsh, industrial surroundings, dragline cable compatible

- Polymer optic fibre (POF)
- Breakout cable
- Raw cable for assembling your own connecting cables

Assembled cables

Industrial FO patch cables



...for use in industrial switching cabinets or junction boxes

- Multimode glass fibre
- Singlemode glass fibre
- Polymer optic fibre (POF)

Industrial fibre-optic dragline cable



...for flexible installations in and around machinery and plants – for harsh, industrial surroundings, dragline cable compatible

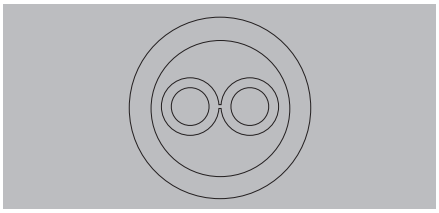
- Multimode fibre-optic
- Breakout cable
- Pre-assembled cable

Raw cables

- Polymer optical fibre
- Customisable

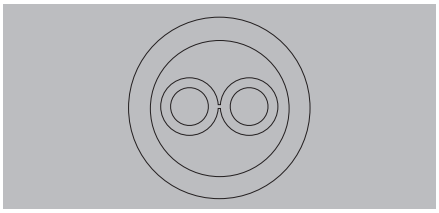
Mini-Breakout (Typ B)





Breakout (Typ C)





Technical data

Product type	System cable	Dragline cable
Cable layout	Mini-Breakout	Break-out dragline
Sheath diameter, max.	7.5 mm	8 mm
Material sheath	Polyethylene	PUR
Sheathing colour	green	green
Insulation		
Min. bending radius, repetitive		60 mm
Min. bending radius, once only		25 mm
Bending cycles	10.000	6 Mio
Ambient temperature (operational)	-30 °C...70 °C	-40 °C...85 °C
Fibre type	POF	POF
Bandwidth	> 35 MHz*100 m at 650 nm	> 35 MHz*100 m at 650 nm
Attenuation	≤ 160 dB/km at 650 nm	≤ 160 dB/km at 650 nm
Core diameter	980 µm	980 µm
Installation temperature	...	...
Storage temperature	-30 °C...70 °C	-40 °C...85 °C
Halogen	No	No
Approvals		
Note		

Ordering data

POF 980/1000 µm	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
500.0 m	IE-FPOB2EG-500	1	**2781950000**	IE-FPOD2UG-500	1	**2763640000**
Note						

Accessories

Marking tags	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Insertion label. yellow. 12 mm	TM-I 12 MC NE GE	320	**1718411687**	TM-I 12 MC NE GE	320	**1718411687**
Insertion label. yellow. 18 mm	TM-I 18 MC NE GE	320	**1718431687**	TM-I 18 MC NE GE	320	**1718431687**
Transparent sleeves. 12-mm length	TM 4/12 HF/HB	500	**1719840000**	TM 4/12 HF/HB	500	**1719840000**
Transparent sleeves. 18-mm length	TM 4/18 HF/HB	500	**1719850000**	TM 4/18 HF/HB	500	**1719850000**
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**
Tools						
Mounting tool, POF	HTX-IE-POF	1	**1208870000**	HTX-IE-POF	1	**1208870000**
Tool set POF, crimp	TOOL SET IE-POF	1	**1208930000**	TOOL SET IE-POF	1	**1208930000**

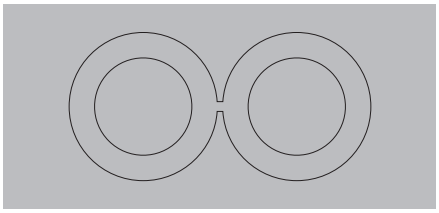
Note

Assembled cable
FO patch cable PROFINET

- Polymer optical fibre

SC-RJ / SC-RJ





Technical data

Product type	Connecting line
Plug left / Plug right	SC-RJ, IP20, male contact, straight, plug, Plastic, unshielded / SC-RJ, IP20, male contact, straight, plug, Plastic, unshielded
Cable layout	ZIPCORD
Sheath diameter	2.2*4.5 mm
Insulation	PE
Sheathing colour	black
Fibre type	POF
Core diameter	980 µm
Ambient temperature (operational)	-20 °C...80 °C
Attenuation	≤ 160 dB/km at 650 nm
Insertion loss	≤ 1.0 dB
Bandwidth	≥ 100 MHz*km at 650 nm
Halogen	No
Approvals	

Note

Ordering data

POF 980/1000 µm	Type	Qty.	Order No.
1.0 m	IE-FPOZ2EE0001MSJOSJ0-X	1	**1273430010**
3.0 m	IE-FPOZ2EE0003MSJOSJ0-X	1	**1273430030**
5.0 m	IE-FPOZ2EE0005MSJOSJ0-X	1	**1273430050**
10.0 m	IE-FPOZ2EE0010MSJOSJ0-X	1	**1273430100**
20.0 m	IE-FPOZ2EE0020MSJOSJ0-X	1	**1273430200**

Note

Accessories

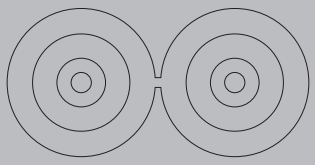
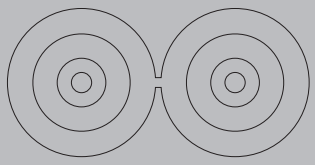
Marking tags	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

Assembled cables

CabinetLine FO patch cable

- Multi-mode glass fibre optics
- LSZH Casing

	SC-Duplex / SC-Duplex	ST / ST
		
		

Technical data

Product type	Patch cable, duplex clip included	Patch cable
Cable layout	ZIPCORD	ZIPCORD
Sheath diameter	2.8 * 5.7 mm	2.8 * 5.7 mm
Material sheath	LSZH	LSZH
Sheathing colour	orange	orange
Category		
Ambient temperature (operational)	-20 °C...70 °C	-20 °C...70 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

Core 50 µm, OM2	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-FM5Z2L00005DSD0SD0-X	1	**1433970005**	IE-FM5Z2L00005DST0ST0-X	1	**1433990005**
1.0 m	IE-FM5Z2L00001MSD0SD0-X	1	**1433970010**	IE-FM5Z2L00001MST0ST0-X	1	**1433990010**
2.0 m	IE-FM5Z2L00002MSD0SD0-X	1	**1433970020**	IE-FM5Z2L00002MST0ST0-X	1	**1433990020**
3.0 m	IE-FM5Z2L00003MSD0SD0-X	1	**1433970030**	IE-FM5Z2L00003MST0ST0-X	1	**1433990030**
5.0 m	IE-FM5Z2L00005MSD0SD0-X	1	**1433970050**	IE-FM5Z2L00005MST0ST0-X	1	**1433990050**
10.0 m	IE-FM5Z2L00010MSD0SD0-X	1	**1433970100**	IE-FM5Z2L00010MST0ST0-X	1	**1433990100**
Core 62.5 µm, OM1						
0.5 m	IE-FM6Z2L00005DSD0SD0-X	1	**1433960005**	IE-FM6Z2L00005DST0ST0-X	1	**1433980005**
1.0 m	IE-FM6Z2L00001MSD0SD0-X	1	**1433960010**	IE-FM6Z2L00001MST0ST0-X	1	**1433980010**
2.0 m	IE-FM6Z2L00002MSD0SD0-X	1	**1433960020**	IE-FM6Z2L00002MST0ST0-X	1	**1433980020**
3.0 m	IE-FM6Z2L00003MSD0SD0-X	1	**1433960030**	IE-FM6Z2L00003MST0ST0-X	1	**1433980030**
5.0 m	IE-FM6Z2L00005MSD0SD0-X	1	**1433960050**	IE-FM6Z2L00005MST0ST0-X	1	**1433980050**
10.0 m	IE-FM6Z2L00010MSD0SD0-X	1	**1433960100**	IE-FM6Z2L00010MST0ST0-X	1	**1433980100**
Core 50 µm, OM4						
0.5 m						
1.0 m						
1.5 m						
2.0 m						
3.0 m						
5.0 m						
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

Assembled cables

CabinetLine FO patch cable

- Multi-mode glass fibre optics
- LSZH Casing

LC-Duplex / LC-Duplex

OM1 / OM2



LC-Duplex / LC-Duplex

OM4



Technical data

Product type	Patch cable, duplex clip included	Patch cable, duplex clip included
Cable layout	ZIPCORD	ZIPCORD
Sheath diameter	2.0 * 4.1 mm	2 * 1.5 mm
Material sheath	LSZH	LSZH
Sheathing colour	orange	Magenta
Category		
Ambient temperature (operational)	-20 °C...70 °C	-20 °C...70 °C
Installation temperature	...	...
Storage temperature	...	...
Approvals		
Note		

Ordering data

Core 50 µm, OM2	Type	Qty.	Order No.	Type	Qty.	Order No.
0.5 m	IE-FM5Z2L00005DLD0LD0-X	1	**1433940005**			
1.0 m	IE-FM5Z2L00001MLD0LD0-X	1	**1433940010**			
2.0 m	IE-FM5Z2L00002MLD0LD0-X	1	**1433940020**			
3.0 m	IE-FM5Z2L00003MLD0LD0-X	1	**1433940030**			
5.0 m	IE-FM5Z2L00005MLD0LD0-X	1	**1433940050**			
10.0 m	IE-FM5Z2L00010MLD0LD0-X	1	**1433940100**			
Core 62.5 µm, OM1						
0.5 m	IE-FM6Z2L00005DLD0LD0-X	1	**1433930005**			
1.0 m	IE-FM6Z2L00001MLD0LD0-X	1	**1433930010**			
2.0 m	IE-FM6Z2L00002MLD0LD0-X	1	**1433930020**			
3.0 m	IE-FM6Z2L00003MLD0LD0-X	1	**1433930030**			
5.0 m	IE-FM6Z2L00005MLD0LD0-X	1	**1433930050**			
10.0 m	IE-FM6Z2L00010MLD0LD0-X	1	**1433930100**			
Core 50 µm, OM4						
0.5 m				IE-FM5Z2LM0005LD0LD0-X	1	**2903650005**
1.0 m				IE-FM5Z2LM0010LD0LD0-X	1	**2903650010**
1.5 m				IE-FM5Z2LM0015LD0LD0-X	1	**2903650015**
2.0 m				IE-FM5Z2LM0020LD0LD0-X	1	**2903650020**
3.0 m				IE-FM5Z2LM0030LD0LD0-X	1	**2903650030**
5.0 m				IE-FM5Z2LM0050LD0LD0-X	1	**2903650050**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

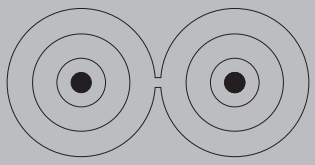
Assembled cables

CabinetLine FO patch cable

- Single-mode glass fibre optics
- LSZH Casing

LC-Duplex / LC-Duplex





Technical data

Product type	Patch cable, duplex clip included
Cable layout	ZIPCORD
Sheath diameter	2.0 * 4.1 mm
Material sheath	LSZH
Sheathing colour	yellow
Ambient temperature (operational)	-20 °C...70 °C
Installation temperature	...
Storage temperature	...
Approvals	

Note

Ordering data

Core 9 µm. OS2	Type	Qty.	Order No.
0.5 m	IE-FSMZ2LY0005DLD0LD0-X	1	**1433950005**
1.0 m	IE-FSMZ2LY0001MLD0LD0-X	1	**1433950010**
2.0 m	IE-FSMZ2LY0002MLD0LD0-X	1	**1433950020**
3.0 m	IE-FSMZ2LY0003MLD0LD0-X	1	**1433950030**
5.0 m	IE-FSMZ2LY0005MLD0LD0-X	1	**1433950050**
10.0 m	IE-FSMZ2LY0010MLD0LD0-X	1	**1433950100**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

Assembled cable

FO patch cable

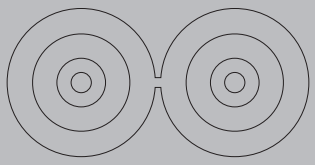
- Multimode glass optical fibre
- PVC outer cladding

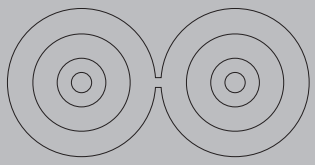
SC-Duplex / SC-Duplex



ST / ST







Technical data

	SC-Duplex / SC-Duplex	ST / ST
Product type	Pre-assembled patch cable, crossover	Patch cable
Cable layout	ZIPCORD	ZIPCORD
Sheath diameter	3*6 mm	3*6 mm
Material sheath	PVC	PVC
Sheathing colour	orange	orange
Ambient temperature (operational)	-5 °C...75 °C	-5 °C...75 °C
Installation temperature	-5 °C...50 °C	-5 °C...50 °C
Storage temperature	-25 °C...75 °C	-25 °C...75 °C
Approvals		
Note		

Ordering data

Core 50 µm, OM2	SC-Duplex / SC-Duplex			ST / ST		
	Type	Qty.	Order No.	Type	Qty.	Order No.
1.0 m	IE-FM5Z2V00001MSD0SD0X	1	**8813300000**	IE-FM5Z2V00001MST0ST0X	1	**8876370010**
2.0 m	IE-FM5Z2V00002MSD0SD0X	1	**8813310000**	IE-FM5Z2V00002MST0ST0X	1	**8876370020**
3.0 m	IE-FM5Z2V00003MSD0SD0X	1	**8813320000**	IE-FM5Z2V00003MST0ST0X	1	**8876370030**
5.0 m	IE-FM5Z2V00005MSD0SD0X	1	**8876350050**	IE-FM5Z2V00005MST0ST0X	1	**8876370050**
10.0 m	IE-FM5Z2V00010MSD0SD0X	1	**8876350100**	IE-FM5Z2V00010MST0ST0X	1	**8876370100**
Core 62.5 µm, OM1						
1.0 m	IE-FM6Z2V00001MSD0SD0X	1	**8813330000**	IE-FM6Z2V00001MST0ST0X	1	**8813270000**
2.0 m	IE-FM6Z2V00002MSD0SD0X	1	**8813340000**	IE-FM6Z2V00002MST0ST0X	1	**8813280000**
3.0 m	IE-FM6Z2V00003MSD0SD0X	1	**8813350000**	IE-FM6Z2V00003MST0ST0X	1	**8813290000**
5.0 m	IE-FM6Z2V00005MSD0SD0X	1	**8876360050**	IE-FM6Z2V00005MST0ST0X	1	**8876380050**
10.0 m	IE-FM6Z2V00010MSD0SD0X	1	**8876360100**	IE-FM6Z2V00010MST0ST0X	1	**8876380100**
Note						

Accessories

Marking tags	SC-Duplex / SC-Duplex			ST / ST		
	Type	Qty.	Order No.	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note		

Assembled cable

FO patch cable

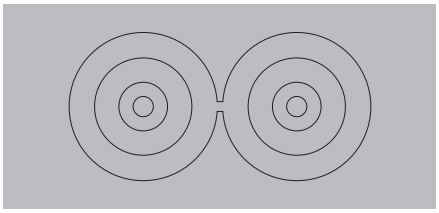
- Multi-mode glass fibre optics
- PVC cover

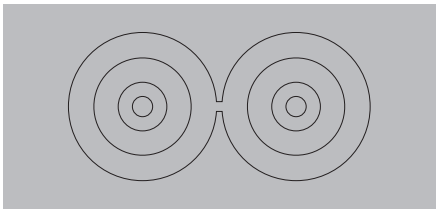
ST / SC-Duplex



LC-Duplex / LC-Duplex







Technical data

	ST / SC-Duplex	LC-Duplex / LC-Duplex
Product type	Pre-assembled patch cable, crossover	Pre-assembled patch cable, crossover
Cable layout	ZIPCORD	ZIPCORD
Sheath diameter	3*6 mm	3*6 mm
Material sheath	PVC	PVC
Sheathing colour	orange	orange
Ambient temperature (operational)	-5 °C...75 °C	-5 °C...75 °C
Installation temperature	-5 °C...50 °C	-5 °C...50 °C
Storage temperature	-25 °C...75 °C	-25 °C...75 °C
Approvals		
Note		

Ordering data

Core 50 µm, OM2	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
1.0 m				IE-FM5Z2V00001MLD0LD0X	1	**1276880000**
2.0 m	IE-FM5Z2V00002MST0SD0X	1	**8813390000**	IE-FM5Z2V00002MLD0LD0X	1	**1062570000**
5.0 m				IE-FM5Z2V00005MLD0LD0X	1	**1062550000**
10.0 m				IE-FM5Z2V00010MLD0LD0X	1	**1062580000**
Core 62.5 µm, OM1						
1.0 m				IE-FM6Z2V00001MLD0LD0X	1	**1296450000**
2.0 m	IE-FM6Z2V00002MST0SD0X	1	**8813400000**			
Note						

Accessories

Marking tags	**Type**	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

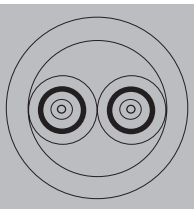
Note

Assembled cables
FO dragline cable

- Multimode glass optical fibre

LC-Duplex / LC-Duplex





Technical data

Product type	Dragline cable
Plug left / Plug right	LC-Duplex, IP20, male contact, straight, plug, Plastic, unshielded / LC-Duplex, IP20, male contact, straight, plug, Plastic, unshielded
Cable layout	Break-out dragline
Sheath diameter	6 mm
Material sheath	PUR
Sheathing colour	black
Ambient temperature (operational)	-40 °C...80 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Approvals	
Note	

Ordering data

Core 62.5 µm, OM1		**Type**	**Qty.**	**Order No.**
5.0 m		IE-FM6D2UE0005MLD0LD0X	1	**1220930000**
20.0 m		IE-FM6D2UE0020MLD0LD0X	1	**1174830000**
50.0 m		IE-FM6D2UE0050MLD0LD0X	1	**8993220000**
Core 50 µm, OM2				
10.0 m		IE-FM5D2UE0010MLD0LD0X	1	**8979020000**
50.0 m		IE-FM5D2UE0050MLD0LD0X	1	**8979040000**
100.0 m		IE-FM5D2UE0100MLD0LD0X	1	**8979030000**
Note				

Accessories

Marking tags	**Type**	**Qty.**	**Order No.**
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

Assembled cable
FO dragline cable

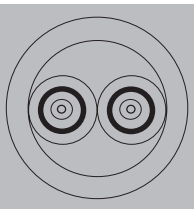
- Multimode glass optical fibre

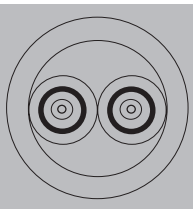
SC-Duplex / SC-Duplex



ST / ST







Technical data

Product type	Dragline cable	Dragline cable
Cable layout	Break-out dragline	Break-out dragline
Sheath diameter	6 mm	6 mm
Material sheath	PUR	PUR
Sheathing colour	black	black
Ambient temperature (operational)	-40 °C...80 °C	-40 °C...80 °C
Installation temperature	-20 °C...60 °C	-20 °C...60 °C
Storage temperature	-40 °C...80 °C	-40 °C...80 °C
Approvals		
Note		

Ordering data

Core 50 µm, OM2	Type	Qty.	Order No.	Type	Qty.	Order No.
1.0 m	IE-FM5D2UE0001MSD0SD0X	1	**8876430010**	IE-FM5D2UE0001MST0ST0X	1	**8876450010**
3.0 m	IE-FM5D2UE0003MSD0SD0X	1	**8876430030**	IE-FM5D2UE0003MST0ST0X	1	**8876450030**
5.0 m	IE-FM5D2UE0005MSD0SD0X	1	**8876430050**	IE-FM5D2UE0005MST0ST0X	1	**8876450050**
10.0 m	IE-FM5D2UE0010MSD0SD0X	1	**8876430100**	IE-FM5D2UE0010MST0ST0X	1	**8876450100**
50.0 m	IE-FM5D2UE0050MSD0SD0X	1	**8876430500**	IE-FM5D2UE0050MST0ST0X	1	**8876450500**
100.0 m	IE-FM5D2UE0100MSD0SD0X	1	**8876431000**	IE-FM5D2UE0100MST0ST0X	1	**8876451000**
Core 62.5 µm, OM1						
1.0 m	IE-FM6D2UE0001MSD0SD0X	1	**8876440010**	IE-FM6D2UE0001MST0ST0X	1	**8876460010**
3.0 m	IE-FM6D2UE0003MSD0SD0X	1	**8876440030**	IE-FM6D2UE0003MST0ST0X	1	**8876460030**
5.0 m	IE-FM6D2UE0005MSD0SD0X	1	**8876440050**	IE-FM6D2UE0005MST0ST0X	1	**8876460050**
10.0 m	IE-FM6D2UE0010MSD0SD0X	1	**8876440100**	IE-FM6D2UE0010MST0ST0X	1	**8876460100**
50.0 m	IE-FM6D2UE0050MSD0SD0X	1	**8876440500**			
100.0 m	IE-FM6D2UE0100MSD0SD0X	1	**8876441000**	IE-FM6D2UE0100MST0ST0X	1	**8876461000**
Note						

Accessories

Marking tags	Type	Qty.	Order No.	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**	VT SF 6/21 MC NE WS V0	160	**1730560001**

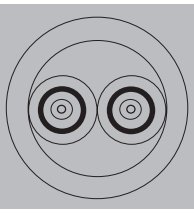
Note

Assembled cables
FO dragline cable with extended temperature range

- Multimode glass optical fibre

SC-Duplex IP67





Technical data

Product type	Dragline cable
Cable layout	Break-out dragline
Plug left / Plug right	SC, IP67, male contact, straight, V1 Bayonett, plug, Zinc diecast, unshielded / SC, IP67, male contact, straight, V1 Bayonett, plug, Zinc diecast, unshielded
Sheath diameter	7.5–8 mm
Material sheath	PUR
Sheathing colour	black
Fibre type	GOF, Multimode, OM1
Bandwidth	200 MHz*km at 850 nm, 500 MHz*km at 1300 nm
Attenuation	2.7 dB/km at 850 nm, ≤ 0.5 dB/km at 1300 nm
Ambient temperature (operational)	-40 °C...85 °C
Installation temperature	-55 °C...60 °C
Storage temperature	-55 °C...85 °C
Approvals	

Note

Ordering data

Core 62.5 µm, OM1	Type	Qty.	Order No.
100.0 m	IE-FM6C2UE0100MSD1SD1X	1	**1318011000**
180.0 m	IE-FM6C2UE0180MSD1SD1X	1	**1318011800**
200.0 m	IE-FM6C2UE0200MSD1SD1X	1	**1318012000**
250.0 m	IE-FM6C2UE0250MSD1SD1X	1	**1318012500**
300.0 m	IE-FM6C2UE0300MSD1SD1X	1	**1318013000**
350.0 m	IE-FM6C2UE0350MSD1SD1X	1	**1318013500**
500.0 m	IE-FM6C2UE0500MSD1SD1X	1	**1318015000**

Note

Accessories

Marking tags	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	**1689470001**
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	**1730560001**

Note

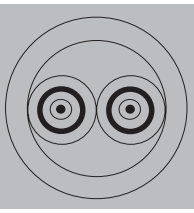
Assembled cables

FO dragline cable

- Singlemode glass optical fibre

SC-Duplex IP67





Technical data

Product type	Dragline cable
Cable layout	Break-out dragline
Plug left / Plug right	SC, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, unshielded / SC, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, unshielded
Sheath diameter	6 mm
Material sheath	PUR
Sheathing colour	black
Fibre type	Singlemode, OS 2
Bandwidth	
Insertion loss	≤ 0.5 dB
Attenuation	≤0.4 dB/km at 1310 nm
Ambient temperature (operational)	-40 °C...80 °C
Installation temperature	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Approvals	

Note

Ordering data

Core 9 µm. OS2	Type	Qty.	Order No.
5.0 m	IE-FSMD2UE0005MSDESDEX	1	1449420050
20.0 m	IE-FSMD2UE0020MSDESDEX	1	1449420200
25.0 m	IE-FSMD2UE0025MSDESDEX	1	1449420250
40.0 m	IE-FSMD2UE0040MSDESDEX	1	1449420400

Note

Accessories

Marking tags	Type	Qty.	Order No.
Wire and cable markers. ø 4.7 - 7.4 mm	VT SF 5/21 MC NE WS V0	160	1689470001
Wire and cable markers. ø 5.8 - 7.8 mm	VT SF 6/21 MC NE WS V0	160	1730560001

Note

Passive components
Overview of accessories

Accessories – Passive components	Introduction	Q.2
	Cable connector	Q.3
	Copper cabling tools	Q.4
	Fibre-optic cabling tools	Q.12
	General tools	Q.16
	Cable Entry System – Cabtite	Q.18
	Cable Bender	Q.27
	Protective caps	Q.28
	Inkjet printer	Q.30
	Markers for cables and ***STEADY****TEC*®	Q.34
	Surge protection for data interfaces	Q.35

Overview of accessories
Everything from a single source

Cable connector



Connection, repair or extension of Industrial Ethernet cables to Cat.7_A

- fieldattachable with IDC connection technology
- Specified for class F_A
- IP67

Cable guiding



Cable bender to guide patch cables safely and without cable breakage or data loss by 90° angles

Copper cabling tools



For assembling
- RJ45 crimp
- Hybrid insert

for stripping
to test the wiring

Cabtite



System-based cable entry

- Cable entry strips
- Cable grommets

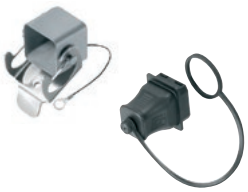
Fibre-optic cabling tools



For assembling

- SCRJ-POF
- SC-GOF
- ST-GOF

Protective caps



to protect all IE-LINE connectors with ***STEADY****TEC*® technology

General tools



For pressing conductors into IDC terminals and pressing RJ45 contacts

- Indentation tool
- Pressing tool

Marker



For identifying conductors, plugs and devices

- Line markers
- Housing and plug marker

Surge protection for data interfaces

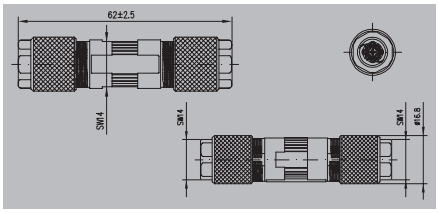


For the protection of Cat. 5 and Cat. 6 data lines - also in PoE and PoE + applications

Cable connector class 7

Cable connector





Technical data

Category	Class FA (ISO/IEC11801 2011) with Cat. 7A Cable
Protection degree	IP67
Connection 1 / 2	IDC / IDC
Housing main material	Zinc diecast
Ambient temperature (operational)	-40 °C...85 °C
Current-carrying capacity at 50 °C	
Nominal voltage	63 V
Insulation resistance	100 MΩ
Shielding	360° all-round enclosure
Connection diameter, flexible, min. / max.	0.48 mm / 0.76 mm
Connection cross-section, flexible, min. / max.	AWG 26 / AWG 22
Connection diameter, solid, min. / max.	0.4 mm / 0.64 mm
Connection cross-section, solid, min. / max.	AWG 24 / AWG 22
Insulation cross-section, max.	1.6 mm
Sheath diameter min. / max.	5 mm / 9.7 mm
Approvals	

Note

Ordering data

Type	Qty.	Order No.
IE-CC-8W-FA-IP67	1	1499940000

Note

Accessories

Type	Qty.	Order No.

Note

Stripping tools

IE-CST

1- and 2- step stripping in one operation



Stripping tool for round (shielded) data cables of Ø 2.5...8 mm

- Specially designed for Ethernet cables
- Strips sheathing and cuts shield in one operation
- Blue blade cartridge included in delivery

AM 12

For UTP and STP data cables



- Cutting of UTP and STP data cables and other flexible copper cables with a diameter of up to 4 mm² (~AWG11)
- Stripping of the outer insulations of UTP and STP data cables and other round cables with Ø 0.5 ... 12.5 mm
- No damage to the shielding or conductor due to adjustable stripping blade
- Length gauge for repeated stripping lengths

Technical data

Max. cutting performance copper cable		IE-CST	AM 12
Cable model		coaxial & round data cables	UTP and STP data cables
Conductor cross-section	AWG		
Conductor diameter	mm	2.5 ... 8	0.5...12.5
Adjustable depth of cut	mm		adjustable
Cutting performance			
Non-shielded & shielded data cables	mm		8
Flexible copper cable	mm²		4
Tool data			
Length	mm	100	97
Weight	g	85	36
Note			

Ordering data

	Type	Qty.	Order No.
IE-CST	IE-CST	1	9204350000
AM 12	AM 12	1	9030060000

Accessories

	Type	Qty.	Order No.
IE-CST	Spare cutter cassette	1	9032020000
AM 12			

Pressing tools

- Pressing tool for modular plug connectors of the WE system (Western Electric and DEC)
- Ratchet for precise crimping
- Release option in the event of incorrect operation

3 functions:

- Pressing of plug connectors
- Pressing of enclosure shielding
- Crimping of cable shielding

TT 8 RS MP 8



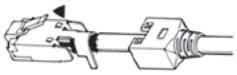
For 8-pole shielded RJ45 plugs

- AWG 27...24

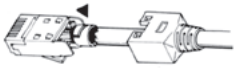
Pressing of IDC contacts

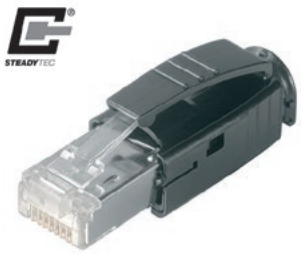


Pressing of shielded enclosures



Crimping of shielded cable





Technical data

Description of contact	TT 8 RS MP 8
Number of poles	8
Tool data	
Width	255 mm
Weight	1251 g
Note	

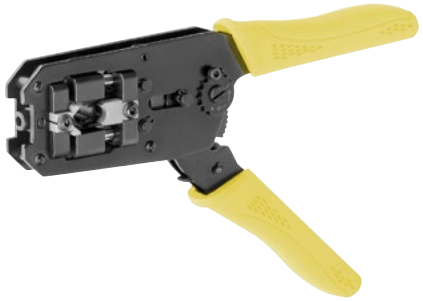
Ordering data

Version	Type	Qty.	Order No.
	TT 8 RS MP 8	1	9202800000
Note	A large selection of RJ 45 connectors can be found in our current Industrial Ethernet Catalogue		

Pressing tools

- Press (punch-down) tool for Ethernet connectors
- Ratchet for precise crimping
- Release option in the event of incorrect operationg

IE-CWZ-RJ45-TH-P



For 4-pole shielded RJ45 plug

- AWG 23...22



Technical data

Description of contact		IE-CWZ-RJ45-TH-P
No. of poles		4
Tool data		
Length	mm	250
Weight	g	570
Note		

Ordering data

Version	Type	Qty.	Order No.
	IE-CWZ-RJ45-TH-P	1	**2614210000**
Note			

Cable tester

Test equipment to test Ethernet cables for:

- External voltage
- Cable breakage
- Wire breakage
- Short-circuit
- Crossed wires
- Checking for twisted wires
- Testable cable length: max. 1000 m
- Wire connection: RJ45
- External-voltage resistance: 80 V AC / DC

LAN USB

LAN continuity tester



- Network cable tester for LAN and USB connections
- Including remote tester
- Connection option for RJ45 plug
- Manual and automatic test
- Display of connection faults (cable breakage, wrong connection, incorrect wiring)



IE-CT



- External voltage
- External-voltage resistance: 80 V AC / DC

Technical data

Housing specification			
Display		LED	digital
Testable cable length, max.		1000	
Supply		9V battery	9V battery
Type of connection		RJ45, USB A, USB B	
Remote box dimensions		65 x 28 x 27 mm	
Remote box weight		30 g	
Depth / Width / Height	mm	65 / 135 / 27	/ 70 / 36
Weight		174 g	185 g
Note			

Ordering data

Version	Type	Qty.	Order No.	Type	Qty.	Order No.
	LAN USB TESTER	1	**9205400000**	IE-CT	1	**8808420000**
Note	Battery, accessories and bag included in delivery			Further test boxes on request Battery included		

Cutting tools

- The cutting blade design for different cable sizes increases the quality of the cuts for smaller cross-sections
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!
- Cutting without deformation of the conductor
- Do not cut live conductors
- Individually tested protective insulation, 1000 V, VDE and GS tested in accordance with EN/IEC 60900
- Optimised handle ergonomics
- Minimal hand force required

KT 8



KT 8S

Cutting tool with spring





max. 8 mm

max. 16 mm²

max. 16 mm²

max. 16 mm²

max. 8 mm

max. 16 mm²

max. 16 mm²

max. 16 mm²

Technical data

Max. cutting performance, copper cable acc. to EN 60228	KT8	
Copper cable - solid, max.	50 mm² / 1 AWG	50 mm² / 1 AWG
Copper cable - stranded, max.	35 mm² / 2 AWG	35 mm² / 2 AWG
Copper cable - flexible, max.	25 mm² / 4 AWG	25 mm² / 4 AWG
Max. cutting performance, aluminium cable acc. to EN 60228		
Stranded aluminium cable, max (mm²)	35 mm² / 2 AWG	35 mm² / 2 AWG
Stranded aluminium cable, max. diameter	9 mm	9 mm
Tool data		
Depth / Width / Height	30 / 185 / 65.5 mm	30 / 185 / 65.5 mm
Weight	180 g	220 g
Note	Tool closed	

Ordering data

Version	Type	Qty.	Order No.	Type	Qty.	Order No.
	KT 8	1	9002650000	KT 8S	1	2876450000
Note						

KT 12



max. 12 mm

max. 16 mm²

max. 25 mm²

max. 35 mm²

KT12
95 mm² / 3/0 AWG
70 mm² / 2/0 AWG
50 mm² / 1 AWG
70 mm² / 2/0 AWG
11 mm
30 / 225 / 63.5 mm
300 g
Tool closed

Type	Qty.	Order No.
KT 12	1	9002660000

KT 22



max. 22 mm

max. 25 mm²

max. 50 mm²

max. 95 mm²

Suggested cross-section range /
Empfohlener Querschnittsbereich

150 mm² / 4/0 AWG
95 mm² / 3/0 AWG
70 mm² / 2/0 AWG
95 mm² / 3/0 AWG
13 mm
31 / 249 / 71.5 mm
460 g
Tool closed

Type	Qty.	Order No.
KT 22	1	1157830000

Cutting and releasing tools

Special cutting tool for clean pinch-free cutting of Weidmüller Z-Series cross-connections

KT Mini





max. 7 mm | max. 6 mm² | max. 10 mm² | max. 10 mm²

Technical data

Max. cutting performance, copper cable acc. to EN 60228	
Copper cable - solid, max.	35 mm² / 2 AWG
Copper cable - stranded, max.	25 mm² / 4 AWG
Copper cable - flexible, max.	16 mm² / 6 AWG
Max. cutting performance, aluminium cable acc. to EN 60228	
Stranded aluminium cable, max (mm²)	25 mm² / 4 AWG
Stranded aluminium cable, max. diameter	7 mm
Tool data	
Depth / Width / Height	9.5 / 42 / 120 mm
Weight	91 g
Note	

Ordering data

Version	Type	Qty.	Order No.
	KT MINI	1	**2876460000**
Note			

SEE ESD 120

Electronic ESD diagonal-cutting pliers with pointed head

- Hard wire (spring wire/steel nails): 0.2 mm/AWG 32
- Semi-hard wire (iron/nails): 1.0 mm/AWG 18
- Soft wire (copper/aluminium): 1.5 mm/AWG 15

Ordering data

Type	Qty.	Order No.
SEE ESD 120	1	9205130000

Technical data

Weight	90 g



SEE ESD 125

Electronic ESD diagonal-cutting pliers with oval head

- Semi-hard wire (iron/nails): 0.3 mm/AWG 29
- Soft wire (copper/aluminium): 1.5 mm/AWG 15

Ordering data

Type	Qty.	Order No.
SEE ESD 125	1	9204750000

Technical data

Weight	90 g



FZE ESD 130

Electronic ESD flat-nosed pliers

Ordering data

Type	Qty.	Order No.
FZE ESD 130	1	9204760000

Technical data

Weight	90 g



SZE ESD 130

Electronic ESD Snipe-nosed pliers

Ordering data

Type	Qty.	Order No.
SZE ESD 130	1	9204770000

Technical data

Weight	90 g



SVSE ESD 130

Electronic ESD angle -cutting pliers

- Hard wire (spring wire or steel nails): 0.6 mm/AWG 22
- Semi-hard wire (iron or nails): 1.0 mm/AWG 18
- Soft wire (copper or aluminium): 1.2 mm/AWG 16

Ordering data

Type	Qty.	Order No.
SVSE ESD 130	1	9205140000

Technical data

Weight	93 g



SUPER CUT

Electronic diagonal-cutting pliers

- Soft wire (copper): 2 mm/AWG 12

Ordering data

Type	Qty.	Order No.
SUPER CUT	1	9205150000



KOF SET ESD

Electronic ESD case set

Contents:
- Diagonal-cutting pliers
- Snipe-nosed pliers
- Flat-nose pliers
- Angle-cutting pliers

Ordering data

Type	Qty.	Order No.
KOF SET ESD	1	9205210000



Crimping tools

Cutting, stripping and crimping tools
for processing POF fibres in compliance with
IEC 60793-2 A4A fibres (1000 µm/980 µm POF)

- Multifunction tool for POF fibres
- Processing the duplex POF fibres
- Stripping tool for processing POF fibres and cables
- The new set of blades for POF cables makes stripping the outer covering and the POF fibres simple
- Cable shears specially designed for aramid fibres
- Only for cutting aramid fibres (strain relief in fibre-optic cables)

Tool-Set IE-POF



Contents:

- Assortment case PSC 80
- Kevlar scissors for aramid fibres
- Multifunction tool HTX-IE-POF
- Stripping tool multi-stripax® IE-POF

multi-stripax® POF



- Excellent stripping quality for industrial applications
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length with end stop, adjustable from 2.3...30 mm
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function up to 6 mm²

Technical data

Length / Width / Height	mm	241 / 338 / 79	250 / 85 / 40
Weight	g	1,833	250
Note			

Ordering data

Version	Type	Qty.	Order No.	Type	Qty.	Order No.
	TOOL SET IE-POF	1	**1208930000**	MULTI-STRIPAX IE-POF	1	**1208880000**
Note						

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
	HTX-IE-POF	1	**1208870000**	Replacement cutting blade	1	**9203100000**
	MULTI-STRIPAX IE-POF	1	**1208880000**	Replacement stop set	1	**9203070000**
	KEVLAR SCISSORS	1	**1208910000**	AIE MULTI-STRIPAX POF	1	**1212770000**
Note						

Mounting tools

- Release option in the event of incorrect operation
- With end stop for exact positioning of the contacts

HTX-IE-POF



- Only one tool needed for all SC-RJ plug processing steps
- For processing 1 mm thick polymer optical fibres, especially for the PROFINET and EtherNet/IP-SC-RJ connectors
- For stripping Duplex polymer optical fibres
- The plug is crimped and the polymer optical fibres are separated, all in a single step
- Cut surfaces do not need to be polished after cutting
- Locator for precise positioning of the SC-RJ plugs
- Ergonomic handles
- High repeat accuracy
- Ratchet for precise crimping

Three steps to produce IP67 connectors:
1) Strip the Duplex polymer optical fibres
2) Crimp and separate
3) Crimp the strain relief

Technical data

Material data		HTX-IE-POF
Length	mm	220
Weight	g	450
Note		

Ordering data

Version	Type	Qty.	Order No.
	HTX-IE-POF	1	1208870000
Note			

Kevlar Scissor

- Cable shears specially designed for aramid fibres

SCISSOR Kevlar



- Only for cutting aramid fibres (strain relief in fibre-optic cables)
- Do not use for other materials
- Special blade geometry
- Blades ground
- With teeth on the cutting edge
- Riveted joint
- Hand-friendly, impact-resistant plastic handles

Technical data

Material data		SCISSORS KEVLAR
Length	mm	148
Weight	g	66.88
Note		

Ordering data

Version	Type	Qty.	Order No.
	SCISSORS KEVLAR	1	1208910000
Note			

Crimping tool for other contacts

- Ratchet for precise crimping
- Release option in the event of incorrect operation
- With end stop for exact positioning of the contacts
- Contact and insulation are crimped in one step

HTF HYB

0.08…1.0 mm²



For Weidmüller hybrid sockets and pins

- ~AWG 28…AWG 17



Technical data

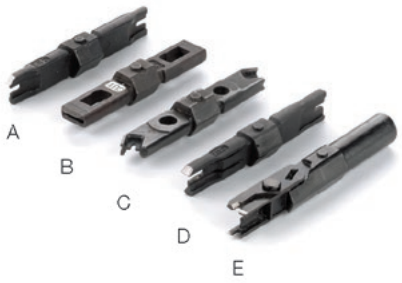
Description of contact		HTF HYB
Crimping range	mm²	0.08…1
Tool data		
Length	mm	200
Weight	g	443.2
Note		

Ordering data

Version	Type	Qty.	Order No.
	HTF HYB	1	1119580000
Note			

Insertion tool for twisted-pair cable

For connecting twisted-pair cable to terminal rails with IDC contacts e.g. in main and floor distributors, and in modular wall junction boxes for structured building cabling.



PDT



The punch-down tool has the following features:

- Mechanism made from metal components
- Adjustable pressing force for conductor sizes AWG 20 to AWG 28
- Different blades for connector blocks of type 110 from AT&T, type 66, type LSA Plus from Krone (standard and scissors cutting function) as well as for telephone outlets 630A6
- Incision blades with 2 functions: incision or incision with cutting off of remaining conductor
- Storage compartment for one blade

A = PD blade 110
B = PD blade 66
C = PD blade 630
D = PD blade Krone LSA (standard)
E = PD blade Krone LSA (scissors)

IE-FISP-V4



Fastening tool for the hexagon cap nut from ***STEADY**TEC*® V4 flange and FrontCom® Micro.

Technical data

Housing specification	PUNCH DOWN TOOL PDT	Fixing tool
Depth / Width / Height	37 / 160 / 29 mm	115 / 28 / 28
Weight	142 g	21
Note		

Ordering data

Version	Type	Qty.	Order No.	Type	Qty.	Order No.
	PUNCH DOWN TOOL PDT	1	**9013970000**	IE-FISP-V4	2	**9204370000**
Note	(without blade)					

Accessories

	Type	Qty.	Order No.	Type	Qty.	Order No.
A	ERME 110 PDT	1	**9013960000**			
B	ERME 66 PDT	1	**9013980000**			
C	ERME 630 PDT	1	**9013990000**			
D	ERME LSA PLUS STANDARD	1	**9014000000**			
E	ERME LSA PLUS SCHERE	1	**9014050000**			
Note						

Hydraulic sheet holes

Incl. accessories:
- 1 HSS pre-drill Ø 10 mm
- 1 tension bolt Ø 19 mm
- 1 tension bolt Ø 19 x 9.5 mm
- 1 spacer nut set (3-part)
- 1 bridge
- Punching force 75 kN

IE-KO-HAT



- Pressure relief valve protects against overloading
- Cylinder head angled at 90°
- Angled head can be rotated through 360°
- Ergonomic handle springs back automatically
- The waste piece no longer becomes jammed thanks to 3-fold splitter
- Hydraulic punch made of high-strength aluminium (approx. 40% weight saving)

Technical data

Steel-sheet (S235) punching performance tension bolt, max.	IE-KO-HAT
KOHS 9,5 + 19	2mm
KOHS 19	3mm
Square holes	3mm
Rectangular holes	2.5mm
Tool data	
Depth / Width / Height	70 / 290 / 120 mm
Weight	1.75 kg
Punching force	75 kN
Max. operating pressure	680 bar
Type hydraulic oil	HLP32
Note	

Ordering data

Version	Type	Qty.	Order No.
	IE-KO-HAT	1	1966810000
Note			

Accessories

	Type	Qty.	Order No.
Tension bolt	KOHS 19	1	9205010000
Tension bolts	KOHS 9.5+19	1	9205000000
Pre-drill	KOPD 10.0	1	9205020000
Note	Splitting stamp on the next page		



Tension bolt KOHS 19



Tension bolts KOHS 9.5+19



Pre-drill KOPD 10.0

Custom stamp for Industrial Ethernet connections and FrontCom® Vario (Single Frame)



Type	Description	Dimensions	Qty.	Order No.
IE-KOK-V1	Custom shape for Bajonet 01 metal	Diameter 27 mm x 1 side 25.9 mm	1	1966780000
IE-KOK-V4	Custom shape for Push Pull V04 plastic	Diameter 23.2 mm x 2 sides 20.2 mm	1	1966790000
IE-KOK-V5	Custom shape for RockStar® V05 metal	22.0 x 22.0 mm	1	9204790000
IE-KOK-HAT	Custom shape for FrontCom® Vario Single Frame	91.0 x 52.0 mm	1	2008410000

Cabtite SE - Sealing element small



Cable grommets for ASI cables

The Cabtite SE sealing elements are used in the frame or in the separable cable gland. The conical design allows easy installation, reliably seals gaps and provides strain relief in accordance with DIN EN 62444. For installation, the sealing elements are pressed into the snap-in inlays previously fitted in the frame or, in the case of the divisible cable gland, are placed between the cable gland half-shells. Various sealing elements with different cable diameters and geometries are available.

Technical data

Material	TPE
Halogen / Silicone	No / No
Operating temperature, min.	Light Grey: -40 °C; Deep black: -40 °C
Operating temperature, max.	Light Grey: 90 °C; Deep black: 120 °C
UL 94 flammability rating	Light Grey: V-0; Deep black: HB
Note	

Ordering data

Type	Clamping range	Qty.	Deep black	Light Grey
			Order No.	Order No.
Individual sealing elements				
CABTITE SE 1.5-2 SML	1.5...2 mm	10	2584780000	2583360000
CABTITE SE 2-3 SML	2...3 mm	10	2584760000	2583380000
CABTITE SE 3-4 SML	3...4 mm	10	2584730000	2583400000
CABTITE SE 4-5 SML	4...5 mm	10	2584680000	2583440000
CABTITE SE 5-6 SML	5...6 mm	10	2584710000	2583450000
CABTITE SE 6-7 SML	6...7 mm	10	2584690000	2583460000
CABTITE SE 7-8 SML	7...8 mm	10	2584670000	2584660000
CABTITE SE 8-9 SML	8...9 mm	10	2584330000	2584650000
CABTITE SE 9-10 SML	9...10 mm	10	2584080000	2584630000
CABTITE SE 10-11 SML	10...11 mm	10	2584060000	2584610000
CABTITE SE 11-12 SML	11...12 mm	10	2584040000	2584600000
CABTITE SE 12-13 SML	12...13 mm	10	2584020000	2584590000
CABTITE SE 13-14 SML	13...14 mm	10	2584000000	2584570000
CABTITE SE 14-15 SML	14...15 mm	10	2583980000	2584560000
CABTITE SE 15-16 SML	15...16 mm	10	2583960000	2584550000
Special geometry ASI				
CABTITE SE 1/ASI SML		10	2583530000	2584810000
CABTITE SE 2/ASI SML		10	2583520000	2584800000
Multiple sealing element				
CABTITE SE 2/4-5 SML	4...5 mm	10	2583620000	2584900000
CABTITE SE 2/5-6 SML	5...6 mm	10	2583610000	2584890000
CABTITE SE 2/7 SML	7...8 mm	10	2583550000	2584830000
CABTITE SE 2/8 SML	8...9 mm	10	2583540000	2584820000
CABTITE SE 3/5-6 SML	5...6 mm	10	2652280000	2652290000
CABTITE SE 4/2-3 SML	2...3 mm	10	2583590000	2584870000
CABTITE SE 4/3-4 SML	3...4 mm	10	2583580000	2584860000
CABTITE SE 4/4-5 SML	4...5 mm	10	2583560000	2584840000
Cone sealing element				
CABTITE CSE 2-11 SML	2...11 mm	10	2583510000	
Blind plugs				
CABTITE BSE SML		10	2584790000	2583350000
Note				

Cabtite SE - sealing elements large



Blanking plugs

Cone sealing element

The Cabtite SE sealing elements in large design are identical in construction to those in small design.However, they can accommodate cables with a larger outer diameter.

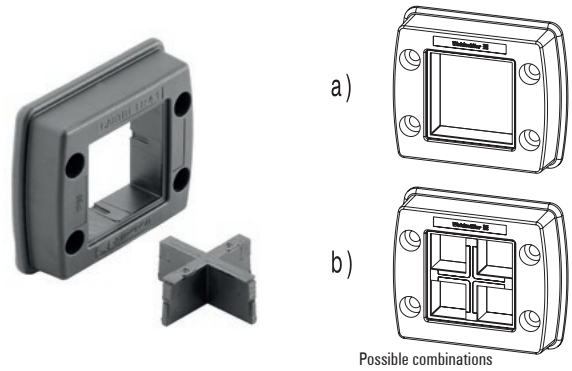
Technical data

Material	TPE
Halogen / Silicone	No / No
Operating temperature, min.	Deep black: -40 °C; Light Grey: -40 °C
Operating temperature, max.	Deep black: 120 °C; Light Grey: 90 °C
UL 94 flammability rating	Deep black: HB; Light Grey: V-0
Note	

Ordering data

Type	Clamping range	Qty.	Deep black	Light Grey
			Order No.	Order No.
Individual sealing elements				
CABTITE SE 14-15 LRG	14...15 mm	10	2583880000	2584510000
CABTITE SE 15-16 LRG	15...16 mm	10	2583860000	2584500000
CABTITE SE 16-17 LRG	16...17 mm	10	2583850000	2584490000
CABTITE SE 17-18 LRG	17...18 mm	10	2583840000	2584480000
CABTITE SE 18-19 LRG	18...19 mm	10	2583830000	2584470000
CABTITE SE 19-20 LRG	19...20 mm	10	2583810000	2584460000
CABTITE SE 20-21 LRG	20...21 mm	10	2583790000	2584450000
CABTITE SE 21-22 LRG	21...22 mm	10	2583770000	2584440000
CABTITE SE 22-23 LRG	22...23 mm	10	2583750000	2584430000
CABTITE SE 23-24 LRG	23...24 mm	10	2583730000	2584420000
CABTITE SE 24-25 LRG	24...25 mm	10	2583710000	2584410000
CABTITE SE 25-26 LRG	25...26 mm	10	2583700000	2584400000
CABTITE SE 26-27 LRG	26...27 mm	10	2583690000	2584390000
CABTITE SE 27-28 LRG	27...28 mm	10	2583680000	2584370000
CABTITE SE 28-29 LRG	28...29 mm	10	2583670000	2584350000
CABTITE SE 29-30 LRG	29...30 mm	10	2583660000	2584380000
CABTITE SE 30-31 LRG	30...31 mm	10	2583650000	2584360000
CABTITE SE 31-32 LRG	31...32 mm	10	2583640000	2584340000
CABTITE SE 32-33 LRG	32...33 mm	10	2583630000	2584920000
CABTITE SE 33-34 LRG	33...34 mm	10	2595510000	2584910000
CABTITE SE 34-35 LRG	34...35 mm	10	2595520000	2595530000
Cone sealing element				
CABTITE CSE 7-24 LRG	7...24 mm	10	2583500000	
Blind plugs				
CABTITE BSE LRG		10	2583900000	2584520000
Note				

Cabtite FR - CABTITE FR 4-1 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

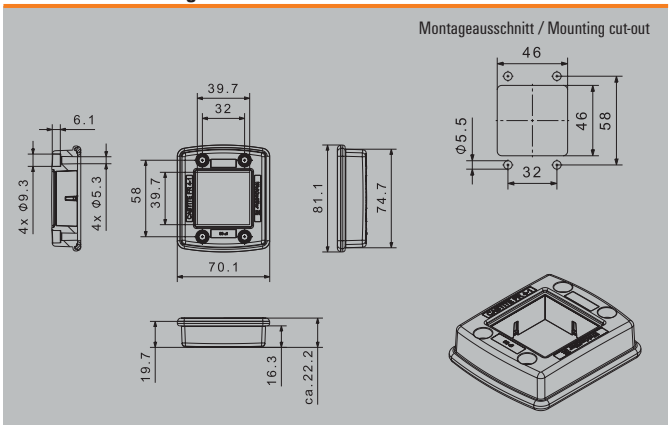
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FR 4-1 BK SET	1	**2583780000**
Single frame (without snap-in inlay)		
CABTITE FR 4-1 BK	1	**2583490000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

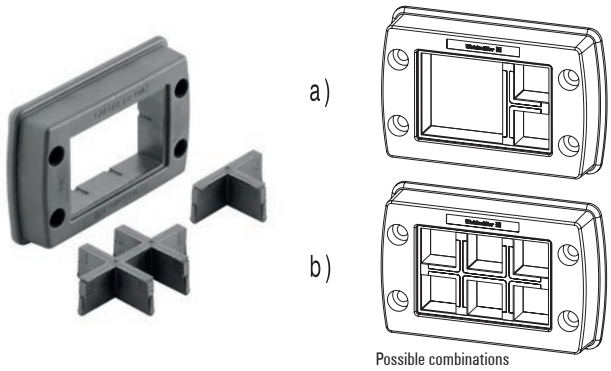
Accessories

Product type	Type	Qty.	Order No.
Locking frame (inside)	CABTITE FRL 4-1 BK	10	**2584260000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite FR - CABTITE FR 10/6 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

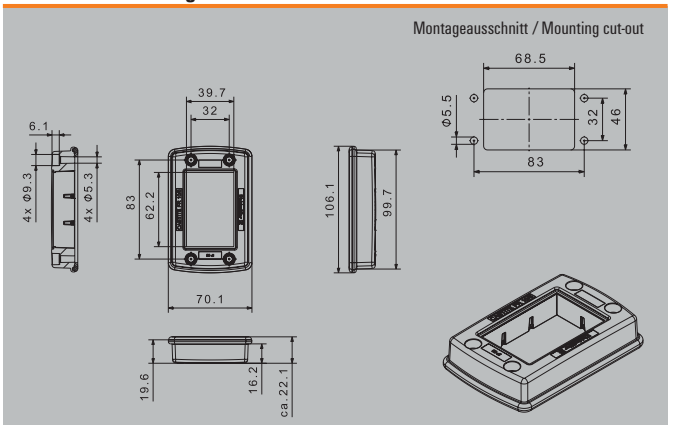
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FR 10/6 BK SET	1	**2583760000**
Single frame (without snap-in inlay)		
CABTITE FR 10/6 BK	1	**2583480000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

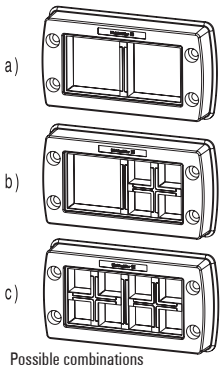
Product type	Type	Qty.	Order No.
Locking frame (inside)	CABTITE FRL 10/6 BK	10	**2584240000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite FR - CABTITE FR 16/8 BK SET





Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a, b or c) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameters.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

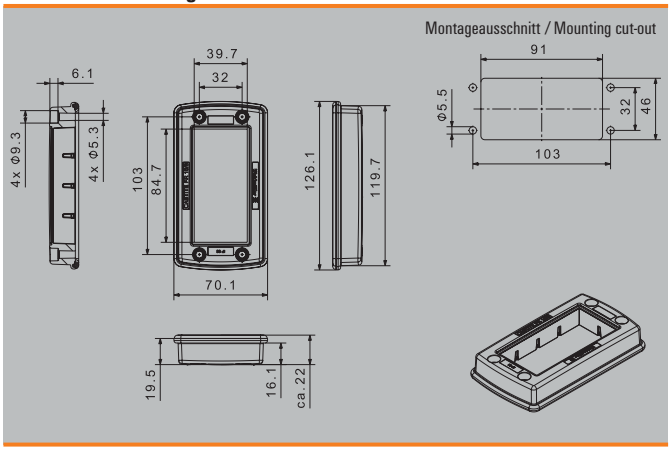
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FR 16/8 BK SET	1	**2583740000**
Single frame (without snap-in inlay)		
CABTITE FR 16/8 BK	1	**2583470000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

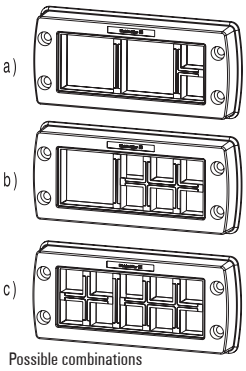
Product type	Type	Qty.	Order No.
Locking frame (inside)	CABTITE FRL 16/8 BK	10	**2584220000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite FR - CABTITE FR 24/10 BK SET





Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a, b or c) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameters.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

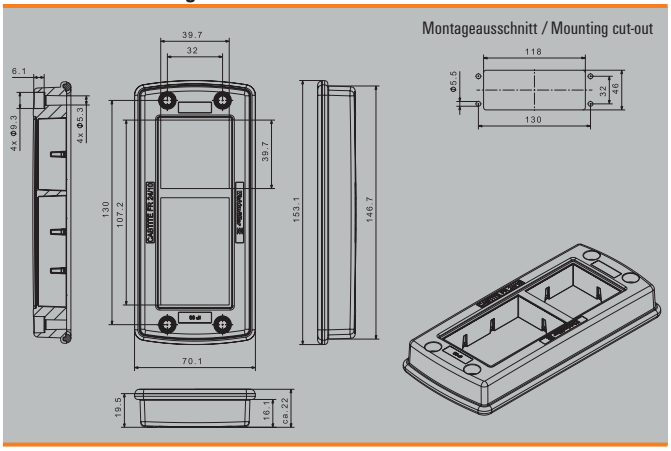
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FR 24/10 BK SET	1	**2583720000**
Single frame (without snap-in inlay)		
CABTITE FR 24/10 BK	1	**2583800000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

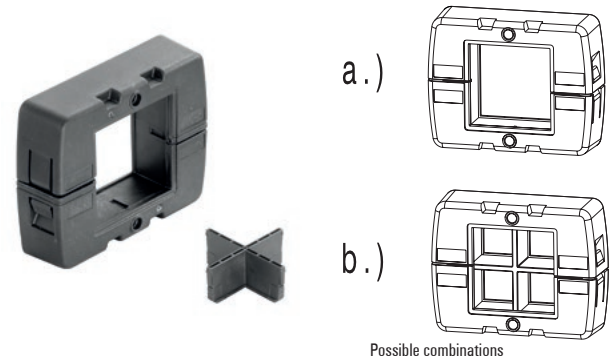
Accessories

Product type	Type	Qty.	Order No.
Locking frame (inside)	CABTITE FRL 24/10 BK	10	**2584210000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite FT - CABTITE FRFT 4-1 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

Ordering data

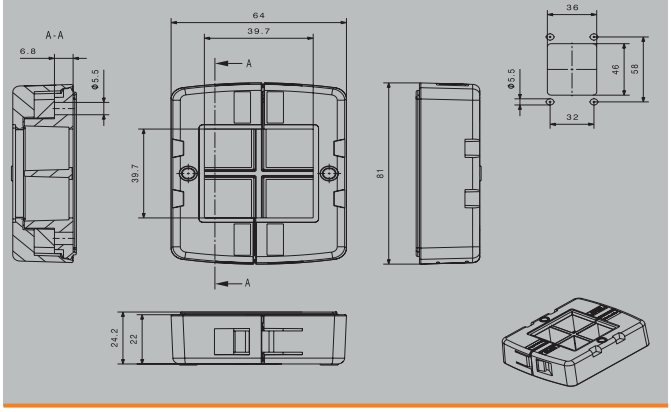
Type	Qty.	Order No.
Set		
CABTITE FRFT 4-1 SET	1	**2891470000**
Single frame (without snap-in inlay)		
CABTITE FRFT 4-1	1	**2891450000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

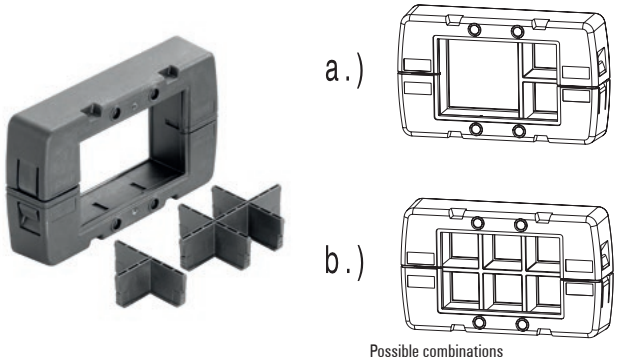
Product type	Type	Qty.	Order No.
Locking frame (outside)	CABTITE OFRL BK	20	**2907560000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing

Montageausschnitt / Mounting cut-out



Cabtite FT - CABTITE FRFT 10/6 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

Ordering data

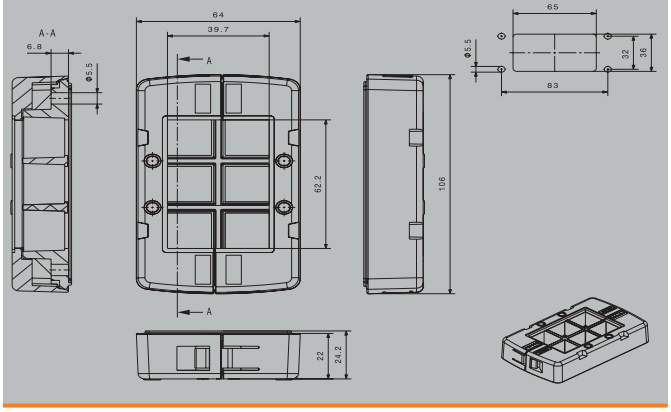
Type	Qty.	Order No.
Set		
CABTITE FRFT 10/6 SET	1	**2891500000**
Single frame (without snap-in inlay)		
CABTITE FRFT 10/6	1	**2891480000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

Product type	Type	Qty.	Order No.
Locking frame (outside)	CABTITE OFRL BK	20	**2907560000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

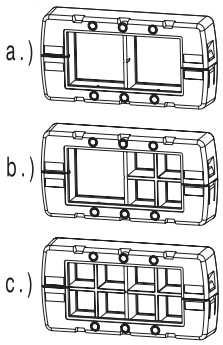
Dimensioned drawing

Montageausschnitt / Mounting cut-out



Cabtite FT - CABTITE FRFT 16/8 SET





Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

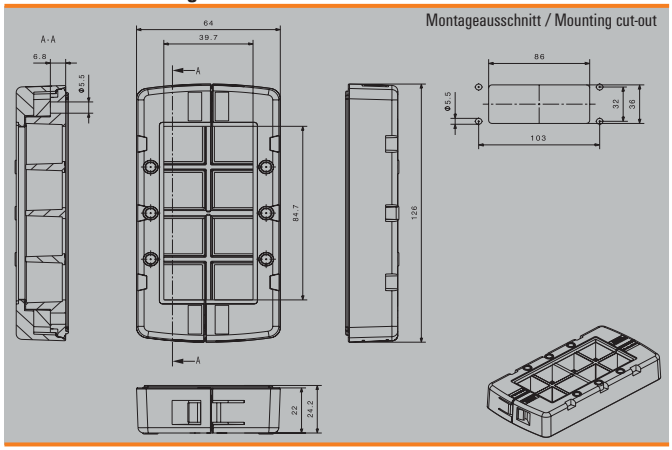
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FRFT 16/8 SET	1	**2891530000**
Single frame (without snap-in inlay)		
CABTITE FRFT 16/8	1	**2891510000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

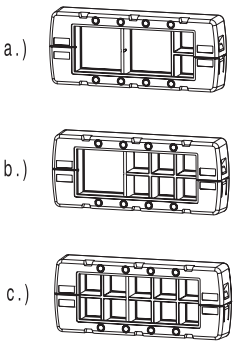
Product type	Type	Qty.	Order No.
Locking frame (outside)	CABTITE OFRL BK	20	**2907560000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite FT - CABTITE FRFT 24/10 SET





Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class / Protection class (UL)	IP66 / Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

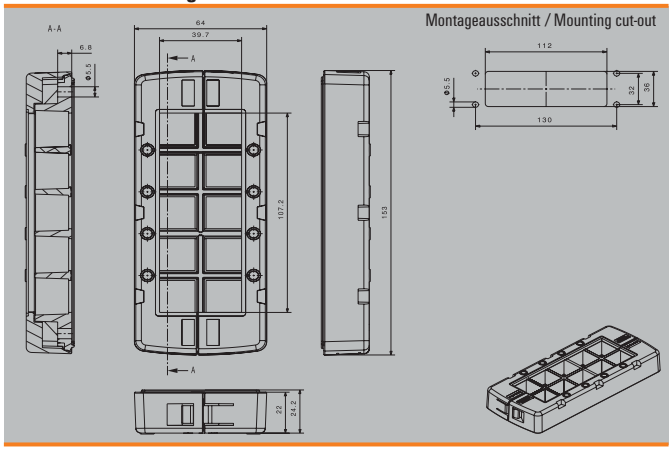
Ordering data

Type	Qty.	Order No.
Set		
CABTITE FRFT 24/10 SET	1	**2891560000**
Single frame (without snap-in inlay)		
CABTITE FRFT 24/10	1	**2891540000**
Note The individual frames do not contain any Rastinlays or sealing elements.		

Accessories

Product type	Type	Qty.	Order No.
Locking frame (outside)	CABTITE OFRL BK	20	**2907560000**
Operating tool	CABTITE TOOL ATSE PA	1	**2637360000**
Mounting screw set	CABTITE SC M5X25 SET	1	**2635120000**
Note			

Dimensioned drawing



Cabtite CGS - separable cable gland





Spare counter nut

For metric through holes from M20 to M63, the Cabtite cable entry system offers separable cable glands for cables with and without plugs. In case of maintenance or changes in the system, pre-assembled cables with diameters from 2 to 35 mm can be quickly and safely inserted into switch cabinets or housings. After inserting the sealing elements (Cabtite SE), the two halves of the cable gland are simply snapped together. A likewise separable lock nut on the inside of the cabinet ensures a secure and firm hold.

Technical data

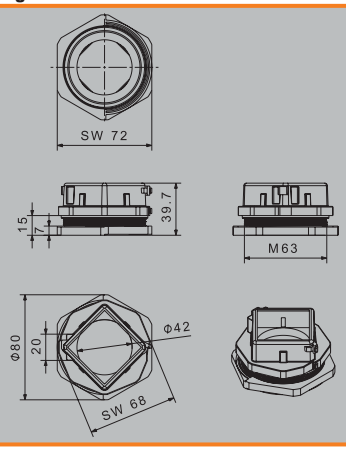
Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class	IP66
UL 94 flammability rating	V-0
Note	

Ordering data

Type	Qty.	Order No.
Divisible cable gland*		
CABTITE CGS M20 BK	10	**2584200000**
CABTITE CGS M25 BK	10	**2584180000**
CABTITE CGS M32 BK	10	**2584160000**
CABTITE CGS M40 BK	5	**2584150000**
CABTITE CGS M50 BK	5	**2584130000**
CABTITE CGS M63 BK	5	**2584120000**
Articulated locknut		
CABTITE LNS M20 BK	10	**2584110000**
CABTITE LNS M25 BK	10	**2584090000**
CABTITE LNS M32 BK	10	**2584070000**
CABTITE LNS M40 BK	5	**2584050000**
CABTITE LNS M50 BK	5	**2584030000**
CABTITE LNS M63 BK	5	**2584010000**
Rastinly for M40-M63**		
CABTITE GI X BK	5	**2584290000**
Note	*The cable glands are supplied with a locknut. **The snap-in insert is required to install 4 small sealing elements in the cable gland.	

Dimensioned drawing

Example:



Cabtite GI - Rastinlay



The insertable snap-in inlay allows the frame openings/cable glands to be configured as required for the small or large sealing elements used. Thus the Cabtite cable entry system can be variably configured for different requirements (cables, lines, hoses, pneumatic and hydraulic lines).

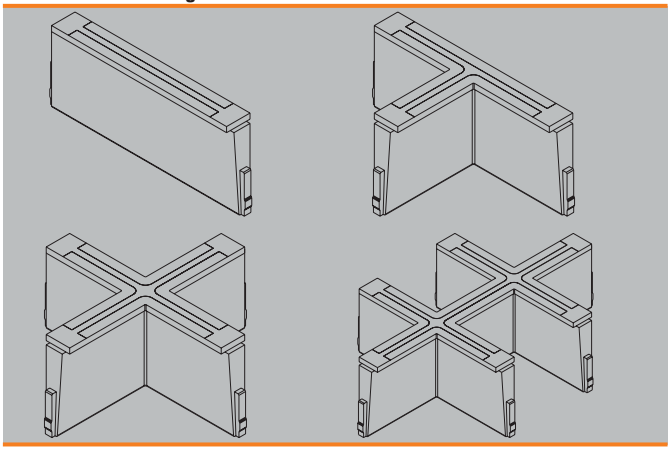
Technical data

Material	Polyamide, glass fibre-reinforced
Colour	Deep black
Operating temperature	-40...120 °C
Protection class	IP66
UL 94 flammability rating	V-0
Note	

Ordering data

Type	Qty.	Order No.
CABTITE GI I BK	5	**2584320000**
CABTITE GI T BK	5	**2584300000**
CABTITE GI H BK	5	**2584270000**
Rastinly for M40-M63**		
CABTITE GI X BK	5	**2584290000**
Note	**The locking inlay is required to install 4 small sealing elements in the cable gland.	

Dimensioned drawing



Q

CABTITE CR - Cable support strips (EMC)



In combination with a large number of different shield connection clamps (KLBÜ), the shield connection rails enable practical, uncomplicated and fast shielding of cables.

Technical data

Material	Steel, galvanized
Colour	silver

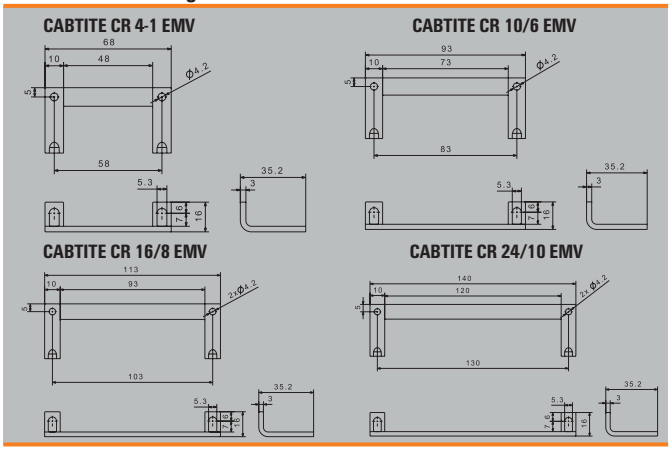
Note

Ordering data

Type	Qty.	Order No.
CABTITE CR 4/1 EMV	10	2583950000
CABTITE CR 10/6 EMV	10	2583930000
CABTITE CR 16/8 EMV	10	2583910000
CABTITE CR 24/10 EMV	10	2583890000

Note

Dimensioned drawing



CABTITE BP - Blanking plug



The blind plugs are used for the safe closing of unneeded cable passages in the sealing elements.

Technical data

Material	Polyamide
Colour	white
Operating temperature	-40...120 °C

Note

Ordering data

Type	Qty.	Order No.
CABTITE BP 2MM PA	25	2652300000
CABTITE BP 3MM PA	25	2652310000
CABTITE BP 4MM PA	25	2652320000
CABTITE BP 5MM PA	25	2652330000
CABTITE BP 6MM PA	25	2652340000
CABTITE BP 7MM PA	25	2652350000
CABTITE BP 8MM PA	25	2652360000
CABTITE BP 9MM PA	25	2652370000
CABTITE BP 10MM PA	25	2652380000
CABTITE BP 12MM PA	25	2652400000
CABTITE BP 13MM PA	25	2652410000
CABTITE BP 14MM PA	25	2652420000
CABTITE BP 17MM PA	25	2652430000

Note

IP54 Snap version



Insert cables and wires without plugs into control cabinets, enclosures or machines easily and in the smallest possible space. The tool-free IP54 snap-in version of the cable entry plates is tested according to DIN EN 60529 and made of UL94 V-0 certified TPE material.

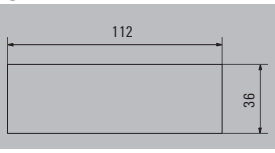
Technical data

Material	TPE
Colour	grey
Operating temperature	-40...90 °C
Protection class / Protection class (UL)	IP54 / Type 1, Type 12
UL 94 flammability rating	V-0
Note	

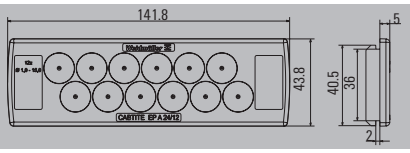
Ordering data

Type	Qty.	Order No.
Type A - for wall thicknesses 1.5 - 2.5 mm		
CABTITE EP A 24/12 GY	10	**2743540000**
CABTITE EP A 24/14 GY	10	**2743550000**
CABTITE EP A 24/17 GY	10	**2743560000**
CABTITE EP A 24/18 GY	10	**2743570000**
CABTITE EP A 24/19 GY	10	**2743580000**
CABTITE EP A 24/26 GY	10	**2743590000**
CABTITE EP A 24/42 GY	10	**2743600000**
CABTITE EP A 24/48 GY	10	**2743610000**
CABTITE EP A 24/50 GY	10	**2743620000**
Type B - for wall thicknesses 2.5 - 4 mm		
CABTITE EP B 24/12 GY	10	**2743630000**
CABTITE EP B 24/14 GY	10	**2743640000**
CABTITE EP B 24/17 GY	10	**2743650000**
CABTITE EP B 24/18 GY	10	**2743660000**
CABTITE EP B 24/19 GY	10	**2743670000**
CABTITE EP B 24/26 GY	10	**2743680000**
CABTITE EP B 24/42 GY	10	**2743690000**
CABTITE EP B 24/48 GY	10	**2743700000**
CABTITE EP B 24/50 GY	10	**2743710000**
Note		

Mounting Cut-out

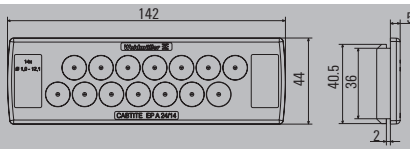


CABTITE EP ... 24/12 GY



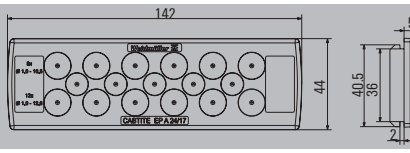
12x 1.0 - 15.0 mm

CABTITE EP ... 24/14 GY



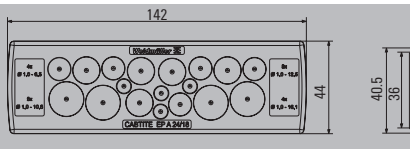
14x 1.00 - 12.1 mm

CABTITE EP ... 24/17 GY



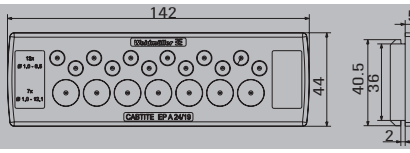
5x 1.0 - 10.5 mm
12x 1.0 - 12.6 mm

CABTITE EP ... 24/18 GY



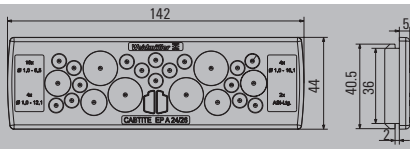
4x 1.0 - 6.5 mm
5x 1.0 - 10.5 mm
5x 1.0 - 12.5 mm
4x 1.0 - 16.1 mm

CABTITE EP ... 24/19 GY



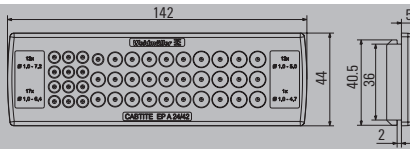
12x 1.0 - 6.5 mm
7x 1.0 - 12.1 mm

CABTITE EP ... 24/26 GY



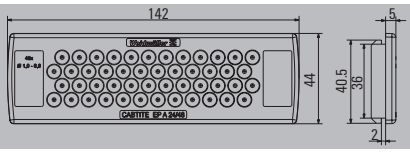
16x 1.0 - 6.5 mm
4x 1.0 - 12.1 mm
4x 1.0 - 16.1 mm
2x ASI

CABTITE EP ... 24/42 GY



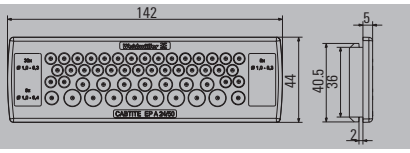
12x 1.0 - 7.2 mm
17x 1.0 - 6.4 mm
12x 1.0 - 5.0 mm
1x 1.0 - 4.7 mm

CABTITE EP ... 24/48 GY



48x 1.0 - 6.5 mm

CABTITE EP ... 24/50 GY



33x 1.0 - 5.3 mm
9x 1.0 - 6.4 mm
8x 1.0 - 8.3 mm

IP66 Screw version



Insert cables and wires without plugs into control cabinets, enclosures or machines easily and in the smallest possible space. The IP66 screw version of the cable entry plates is tested according to DIN EN 60529 and made of UL94 V-0 certified TPE material with a hard plastic core.

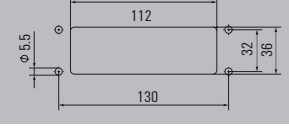
Technical data

Material	TPE
Colour	grey
Operating temperature	-40...90 °C
Protection class / Protection class (UL)	IP66 / Type 1, Type 12, Type 4X
UL 94 flammability rating	V-0
Note	

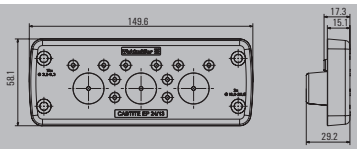
Ordering data

Type	Qty.	Order No.
CABTITE EP 24/13 GY	10	**2779310000**
CABTITE EP 24/14 GY	10	**2779320000**
CABTITE EP 24/16 GY	10	**2779330000**
CABTITE EP 24/16-1 GY	10	**2779340000**
CABTITE EP 24/17 GY	10	**2779350000**
CABTITE EP 24/20 GY	10	**2779360000**
CABTITE EP 24/21 GY	10	**2779370000**
CABTITE EP 24/32 GY	10	**2779380000**
Note		

Mounting Cut-out

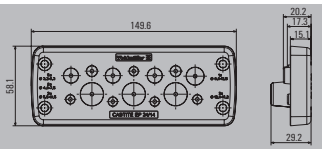


CABTITE EP 24/13



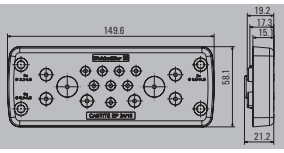
10x 3.2 - 6.3 mm
3x 16.0 - 20.5 mm

CABTITE EP 24/14



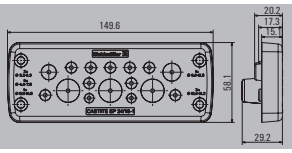
5x 3.2 - 6.3 mm
2x 4.0 - 7.5 mm
3x 5.5 - 10.5 mm
1x 8.0 - 12.5 mm
3x 12.0 - 16.2 mm

CABTITE EP 24/16



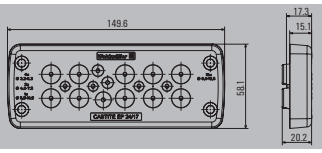
8x 3.2 - 5.5 mm
6x 5.0 - 6.5 mm
2x 9.5 - 14.5 mm

CABTITE EP 24/16-1



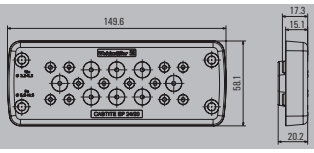
2x 3.2 - 6.3 mm
9x 4.0 - 7.5 mm
1x 5.5 - 10.5 mm
1x 8.0 - 12.5 mm
3x 12.0 - 16.2 mm

CABTITE EP 24/17



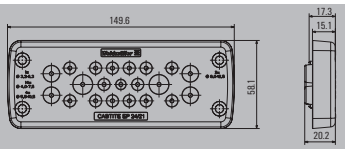
4x 3.2 - 6.3 mm
2x 4.0 - 7.5 mm
1x 5.5 - 10.5 mm
10x 8.0 - 12.5 mm

CABTITE EP 24/20



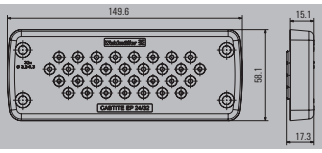
12x 3.2 - 6.3 mm
8x 5.5 - 10 5 mm

CABTITE EP 24/21



1x 3.2 - 6.3 mm
14x 4.0 - 7.5 mm
4x 5.5 - 10.5 mm
2x 8.0 - 12.5 mm

CABTITE EP 24/32



32x 3.2 - 6.3 mm

Cable Bender

Cable bender to guide patch cables safely and without cable breakage or data loss by 90° angles

Cable bender



Technical data

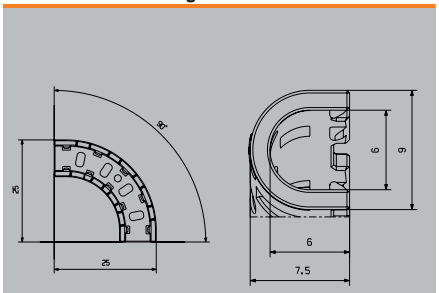
Cable bending radius	90 °
Colour	black
Temperature range	-25 °C....85 °C
Sheath diameter, min.	5.5 mm
Sheath diameter, max	6.5 mm
Hinweis	

Ordering data

Type	Qty.	Order No.
IE-CABLE-BENDER-90	50	**2704480000**

Note

Dimensioned drawings



Protective caps

Dust-protection plugs for protecting empty ports

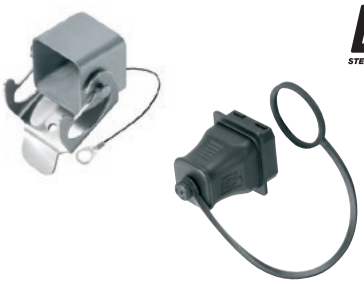
- RJ45
- ***STEADY****TEC*® variants
- M12

Dust Cap RJ45



- Dust Cap RJ45 with finger grip

Protective caps IP67



- Protective caps for all ***STEADY****TEC*® variants and for M12 plug-in connectors

Ordering data

Type	Qty.	Order No.
IE-DPC	100	**8813490000**

Type	Qty.	Order No.
V1 Bayonet plug	10	**1965690000**
V1 Bayonet flange	10	**1965700000**
V4 PushPull plug	10	**1963890000**
V4 PushPull flange	10	**1963900000**
V5 HDC plug	10	**1968920000**
V5 HDC flange	10	**1968930000**
V14 PushPull plug	10	**1058280000**
V14 PushPull flange	10	**1058310000**
PushPull Power flange	10	**1068930000**
M12 plug	1	**2330260000**
M12 flange	1	**8425960000**

Note

PrintJet CONNECT

The networked high-performance printer for efficient and high-quality markings

Your direct connection to the optimal marking process

The PrintJet CONNECT is the consistent further development of our tried-and-tested PrintJet series. Focusing on the modern needs of industry and panel building, it combines maximum process and cost efficiency with intelligent networking and complete data consistency. For example, you can use existing data directly in the marking process – for working more efficiently and with a minimal error rate. The PrintJet CONNECT is part of the Weidmüller marking system consisting of software, markers and printers. It has an extremely durable industrial print head and has been specially optimised for fast working speed and high throughput.



The new 7" touch colour display with a multitude of new functions ensures optimal operation.

Your advantages at a glance:

- Perfect printing results every time
- Fast handling of large volumes
- High level of automation thanks to magazine capacity of 50 MultiCards
- Durable and robust markers thanks to thermal fixing
- User-friendly operation thanks to intuitive touch display
- Flexible connection possibilities
- Simple function monitoring on the device



Whether LAN, WLAN or USB: the PrintJet CONNECT offers a wide connectivity spectrum.

Technical data

	Description	
Intended use	Printing Weidmüller MultiCards and MetalliCards	
Technology	Inkjet procedure with integrated thermal fixing unit	
Feed	Automatic magazine for max. 30 MultiCards Individual feed for MetalliCards and MultiCards	
Removal	Automatic dispenser magazine for up to 50 MultiCards	
Fuses	10 ATH 240/120 V	
Application site	Office conditions	
Ambient temperature	10 °C – 35 °C 0 °F – 95 °F	
Dimensions	Length including output rail: Length not including output rail: Width: Height:	approx. 1.133 mm (44,60") approx. 930 mm (36,60") 590 mm (23,20") 454 mm (17,90")
Weight	63 kg with packaging 38 kg without packaging	
Ink system	Colour system – black, cyan, magenta, yellow	
Included in delivery	• PrintJet CONNECT • Mains cable • LAN cable • USB cable • WIFI stick	• one MultiCard DEK 5/5 • DVD with M-Print® PRO software • Quick start guide • Operating manual • Ink set PJ CON INK SET • 2 PrintJet cleaner cloths
	The ink cartridges are not installed in the printer.	

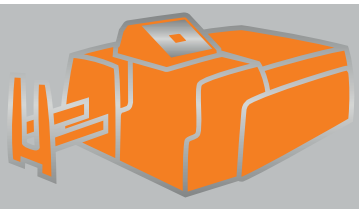


High magazine capacity for loading and dispensing of up to 50 MultiCards.

Ink-jet printer

PrintJet CONNECT





Technical data

EAN	4064675016922
Depth	930 mm
Width	590 mm
Height	454 mm
Net weight	38 kg
Printing method	Ink jet technology
Printer driver / Operating system	Windows 7, Windows 8, Windows 8.1, Windows 10
Printing speed	Depends on printing quality
Print quality	300 dpi, 600 dpi, 1200 dpi
Marker type	MultiCard, MetalliCard
Interface	USB, LAN, Wi-Fi
Fueling system	Ink cartridge, CMYK
Voltage supply	230 V AC / 16 A, 115 V AC / 20 A
Software	M-Print® PRO
Note	

Ordering data

Type	Qty.	Order No.
PRINTJET CONNECT	1	**2715590000**

Note

Accessories

PrintJet CONNECT	Type	Qty.	Order No.
Software	M-PRINT PRO	1	**1905490000**
Ink set	PJ CON INK SET	1	**2715600000**
Cyan ink	PJ CON INK C	1	**2715610000**
Magenta ink	PJ CON INK M	1	**2715620000**
Yellow ink	PJ CON INK Y	1	**2715630000**
Black ink	PJ CON INK K	1	**2715640000**
Fluid set	PJ CON FLUID SET	1	**2715650000**
Ink collecting tray	PJ CON WASTE PAD	1	**2715660000**
Textile cover	PJ ADV TEXTILE COVER	1	**2592960000**
PrintJet ADVANCED			
Ink collecting tray	PJ ADV TNAW	1	**1338710000**
Cyan ink	PJ ADV TNTK INK C	1	**1338680000**
Magenta ink	PJ ADV TNTK INK M	1	**1338670000**
Yellow ink	PJ ADV TNTK INK Y	1	**1338650000**
Black ink	PJ ADV TNTK INK K	1	**1338690000**
Ink set	PJ ADV TNTK INK SET	1	**1338720000**

Note

PrintJet MINI

Your compact industrial printer for professional marking solutions

As a cabinet manufacturer, system planner, or technician, you know how crucial precise and durable labeling is for optimizing processes and ensuring clarity within control cabinet infrastructure. With the PrintJet MINI – the compact industrial printer from Weidmüller – you're choosing a smart solution that boosts your efficiency and is perfectly tailored to your needs.

The PrintJet MINI is small, lightweight, and optionally available with a practical transport case. This mobility makes it the ideal choice for on-site service operations or changing work environments. Thanks to its well-thought-out design, it's easy to transport and can be used flexibly – wherever reliable control cabinet labeling is required.



PrintJet MINI

Your Benefits at a Glance:

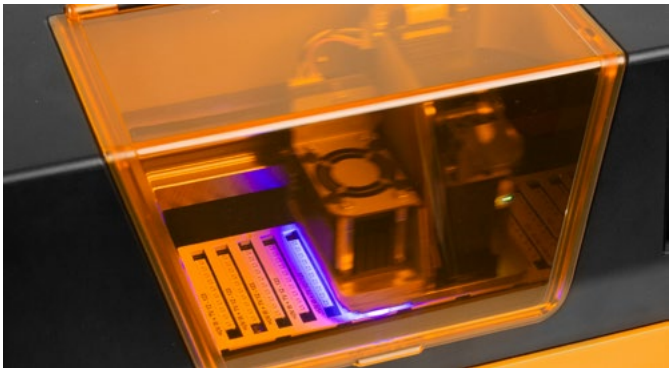
- UV-curing ink for wipe- and scratch-resistant markings Black printing at 600 dpi resolution – ideal for detailed labeling
- Grayscale printing capability
- Efficient printing of a MultiCard in just 90 seconds
- Supports full and half MultiCards as well as individual marker segments
- Low-maintenance components and robust technology



The 5" color touch display provides instant access to all relevant information at any time.



Labeling of full and half MultiCard cards, as well as individual marker segments and markers.



Inkjet technology with UV-curing ink for wipe- and scratch-resistant labeling.

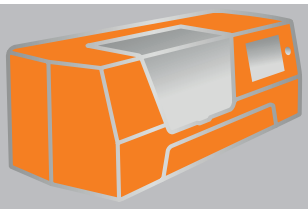
Technical data

	Beschreibung
Intended use	Printing Weidmüller MultiCards
Technology	Inkjet printing process with integrated UV light curing unit
Feed	Manual, full card or individual segment
Removal	Manual, full card or individual segment
Application site	Office conditions
Ambient temperature	10 °C – 35 °C 0 °F – 95 °F
Dimensions	Length: 540 mm Width: 330 mm Height: 190 mm
Weight	13 kg with packaging 8.5 kg without packaging
Ink system	Cartridge including print head, color: black
Included in delivery	• PrintJet MINI • one MultiCard DEK 5/5 • Desktop power supply, fixed voltage 24 V/DC 3.75 A 90 W • Ink cartridge including cleaning cloth • Mains cable • Downloadable instructions for manual, quick guide, and M-Print® PRO labeling software • USB cable • LAN cable The ink cartridge is not installed in the printer.

Ink-jet printer

PrintJet MINI





Technical data

EAN	4099987019071
Depth	540 mm
Width	330 mm
Height	190 mm
Net weight	8500 GRM
Printing method	Ink jet technology
Printer driver / Operating system	Windows 8, Windows 8.1, Windows 10, Windows 11
Printing speed	Up to 1.5 MultiCards per minute
Print resolution, max.	600 DPI
Marker type	Multicard
Interface	USB, LAN
Fueling system	Ink cartridge
Supply voltage	230 V AC / 16 A, 115 V AC / 20 A
Software	M-Print® PRO
Note	

Ordering data

Type	Qty.	Order No.
PRINTJET MINI	1	**3049980000**

Note

Accessories

Type	Qty.	Order No.
Black ink		
PJM INK SW	1	**3062650000**
Ink collecting tray		
PJM WASTE PAD	1	**3062640000**
Software		
M-PRINT PRO	1	**1905490000**

Note

Markers for cables and wires



SlimFix V0 for cables and wires

- Ø 4.7 to 6.8 mm SF5/21
- Ø 5.8 to 8.5 mm SF6/21

Ordering data

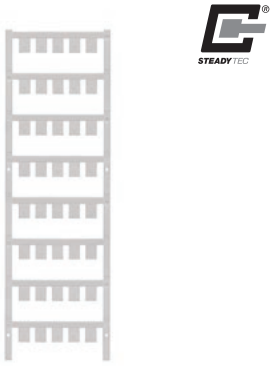
Type	Qty.	Order No.
VT SF 5/21 NE WS V0	160	**1689470001**
VT SF 6/21 NE WS V0	160	**1730560001**

Note: Can be printed with PrintJet PRO.

Accessories

Type	Qty.	Order No.

Markers for IE-Line STEADYTEC®



MultiCard ESG 9/11 K for IE-Line STEADYTEC®

- 9 x 11 mm
- White

Ordering data

Type	Qty.	Order No.
ESG 9/11 K MC NE WS	200	**1857440000**

Note: Can be printed with PrintJet PRO.

Accessories

Type	Qty.	Order No.

TM-I for pre-assembled M12 cables



MultiCard markers for labelling transparent M12 TM-I sleeves

- Tag length: 18 mm
- Tag width: 4 mm

Ordering data

Type		Qty.	Order No.
TM-I 18 MC NE WS		320	**1718431044**
TM-I 18 MC NE GE		320	**1718431687**

Accessories

Type		Qty.	Order No.
TM 4/12 HF/HB	Length 12 mm	500	**1719840000**
TM 4/18 HF/HB	Length 18 mm	500	**1719850000**

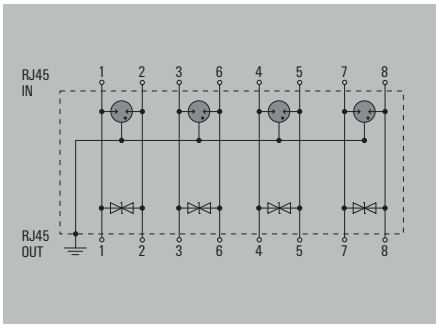
Note: Can be printed with PrintJet PRO.

V DATA Cat. 6 - surge protection for 8 wires with RJ45 socket

- RJ45 connection
- All 4 lines are protected
- Robust and compact metal housing
- Suitable for Cat. 5 (to 100 MHz) and Cat. 6 to 250 MHz (class E)
- Suitable for PoE (IEEE 802.3af) and PoE + (IEEE 802.3at)

V DATA CAT6





Technical data

Requirements category acc. to IEC 61643-21	C2, D1
Surge current-carrying capacity C2	10 kA
Surge current-carrying capacity D1	1 kA 10/350 µs
Discharge current I_n (8/20 µs) wire-wire/wire-PE/GND-PE	150 A / 1,25 kA
Discharge I_{max} (8/20 µs) wire-wire/wire-PE/GND-PE	10 kA / 5 kA
Lightning test I_{imp} (10/350 µs) wire-wire/wire-PE/GND-PE	1 kA / 1 kA
Type of connection	RJ45-Port
Storage temperature	-40 ... +85 °C
Ambient temperature (operational)	-40 ... +80 °C
Protection degree	IP20
Rated voltage (AC)	48 V
Rated current	1 A
Insertion loss at 250 MHz	≤ 1 dB at 250 MHz
Protection level U_P typical	≤ 550 V
Approvals	
Standards	According to IEC61643-21
Dimensions of complete module (arrester + base element)	
Height x width x depth	75 / 19 / 46 mm
Note	Can also be used for Cat.5 applications

Ordering data

	Type	**Qty.**	**Order No.**
	VDATA CAT6	1 ST	**1348590000**
Note			

Service and support

Service and support	Service connects – worldwide	V.2
	Engineering services and customised products	V.3
	Support Center	V.4
	Additional support services	V.5
	easyConnect – Your Industrial Service Platform	V.6
	Digital Engineering: Digital planning with Weidmüller product data, interfaces and software solutions	V.8
	Connectivity Consulting: A long-term increase in efficiency through partnership-based exchange	V.9
	Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering	V.10
	Your digital ordering options at Weidmüller	V.12

Our expertise for your requirements
Service connects – worldwide



Automation technology functions are becoming more complex in a globally-oriented world facing ambitious targets in terms of energy efficiency and smart production. We are your equal partners for the best connections in Industrial Connectivity.

Our personal support answers all questions reliably and expertly. During planning, installation or operation our service and support offer is your best companion.

In short: Weidmüller's global service combines our expertise with your requirements.

Your way to our service
www.weidmueller.com/service

Engineering services and customised products

Automation engineering and connectivity consulting belongs to our services as well as assembly of engineered products. We also support the process from the idea to the product with our Weidmüller Configurator and the Configure-to-Order process.



Consulting and engineering
The challenge for you is reducing costs and increasing efficiency. This requires intelligent, individual solutions. Whether it is modified products, pre-fitted mounting rails or complete small cabinets – our application centres provide a highly qualified custom-made engineering and production service.



Connectivity Consulting
Increase your competitiveness - supported by our experts
Our drive is to optimise your competitiveness. That's why our team of experts supports you in significantly increasing your efficiency in electrical machine design and control cabinet construction. With proven products and services from the Weidmüller portfolio – and with the experience gained from over 300 projects worldwide.



Klippon® Assembly Service – Assembled terminal rails and enclosures supplied ready for installation
The Klippon® Assembly Service supplies fully assembled terminal rails and enclosures that can be installed directly in the cabinet or on the machine. It therefore simplifies planning, accelerates production processes, reduces work steps and ensures the reliable delivery of individually assembled products.



Fast Delivery Service - Your ideas deserve a quick realisation
Obtain offers 24/7 and within minutes, including directly orderable article numbers with our Fast Delivery Service. The Weidmüller Configurator (WMC) for planning and configuration is key for consistent processes. Dispatch your orders in 5 days. Assemble individual terminal strips and enclosures from batch size 1!

Expand the possibilities of our products

Our Support Center - the answer is just a click away

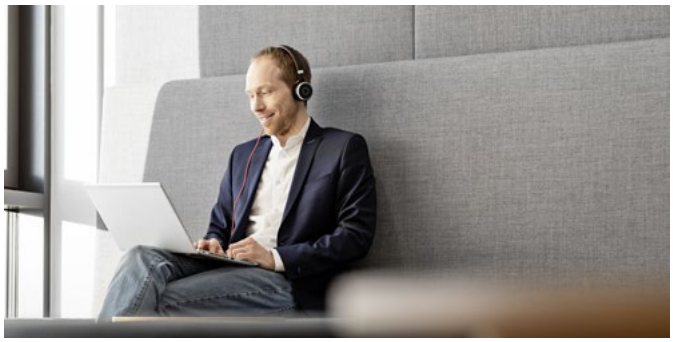


Receive fast and intuitive support to get the most out of our products in your application. In our new Support Center you can search or navigate to the many application notes, product information, video tutorials or software downloads of our products. It is also possible to create a technical Service Request in the Support Center and check the current status at any time. Use our AI chatbot for u-mation and u-software products and get immediate answers to your questions at any time.

- **Support Center –** the answer is just a click away
- **Everything at a glance –** One central support hub, where all relevant information is available
- **Powerful search –** Provides filter functions for various types of information and products
- **Navigation through product hierarchy –** Navigation to specific products through our product hierarchy
- **More than 40,000 downloads –** Application notes, video tutorials, templates and examples, user documentation, engineering data, ...
- **Personal contact –** Direct access to your personal technical contact in your country
- **Quick help via Service Request –** Create a service request to get quick technical help and check the current status and the solution provided

Explore the world of our new Support Center
support.weidmueller.com

Additional support services



Training and Webinars
Stay tuned in a world that is accelerating. In our entertaining interactive webinars, we offer you the opportunity to learn about new products and technology topics and to interact with our experts.



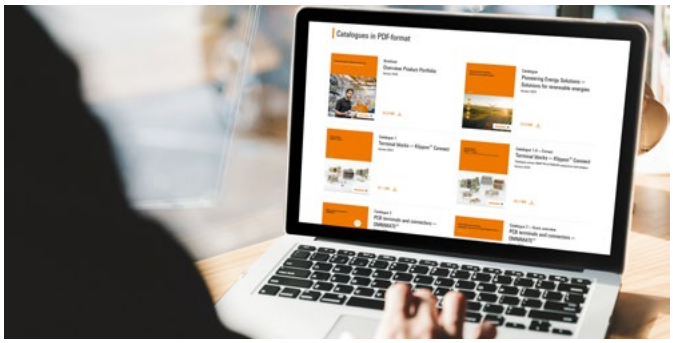
Repairs and replacement parts
We offer repair and components for our Workplace Solutions as well as assistance for other Weidmüller products. Find out how our experts can help you with your repair request.



Security advisory board
Our Product Security Incident Response Team (PSIRT) continuously informs you about possible security-related vulnerabilities of our products.

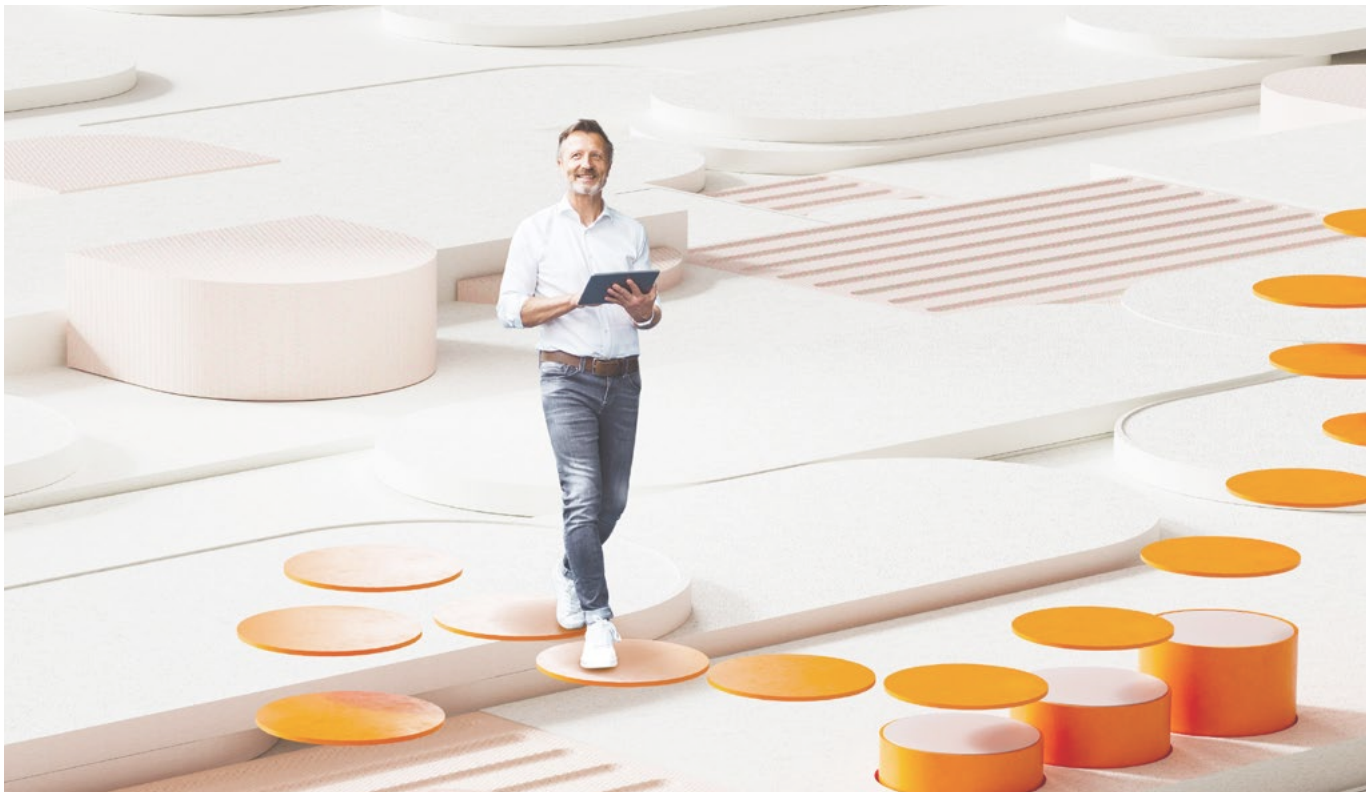


Product change notifications
Technical modifications of our products always available online.



Technical product catalogues
Technical data for our entire program in Industrial Connectivity for download in PDF-format.

Your ticket to the world of digital service
easyConnect – Your Industrial Service Platform



Our cloud-based platform is your ticket to the world of digital services from Weidmüller, and the intuitive and future-proof tool for your way to the Industrial IoT. Realise your use cases easily, consistently and without any relevant prior knowledge, thanks to the perfect interaction of platform, devices and diverse software services.

As an open, modular and perfectly integrable system, the platform is your enabler for a wide range of use cases. Increase your efficiency and unleash your full innovation potential with easyConnect.

Interested in using easyConnect?
Learn how to get started with easyConnect step-by-step.
www.weidmueller.com/easyconnect

Why should you use easyConnect?

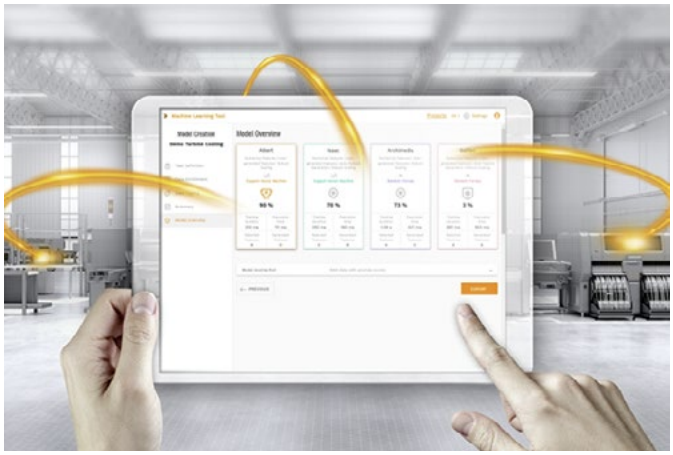
- You want to enter your digital transformation step-by-step?
- You want to make the step into Industrial IOT, but have no or little IT expertise?
- You want to use your digital data for smart & scalable services?
- You want to offer digital services (such as customised dashboard) to your customers?
- You want to improve your service offering and efficiency, e.g. through remote access?
- You feel Weidmüller's digital services are interesting, but you have „your cloud" already?



Weidmüller comes up with the solution: easyConnect, the new digitalisation platform. It bundles Weidmüller's digital services at one place in the cloud and connects them with various Weidmüller devices.

With easyConnect you start digitalising your application step-by-step without ballast in a secure way.

The following services are initially available on easyConnect:



Device management
Adding and managing cloud-connected devices is typically the first step in any Industrial IoT use case.

Asset management
The asset management service is a modelling tool that allows users to model their assets and processes and link them to relevant time series data.

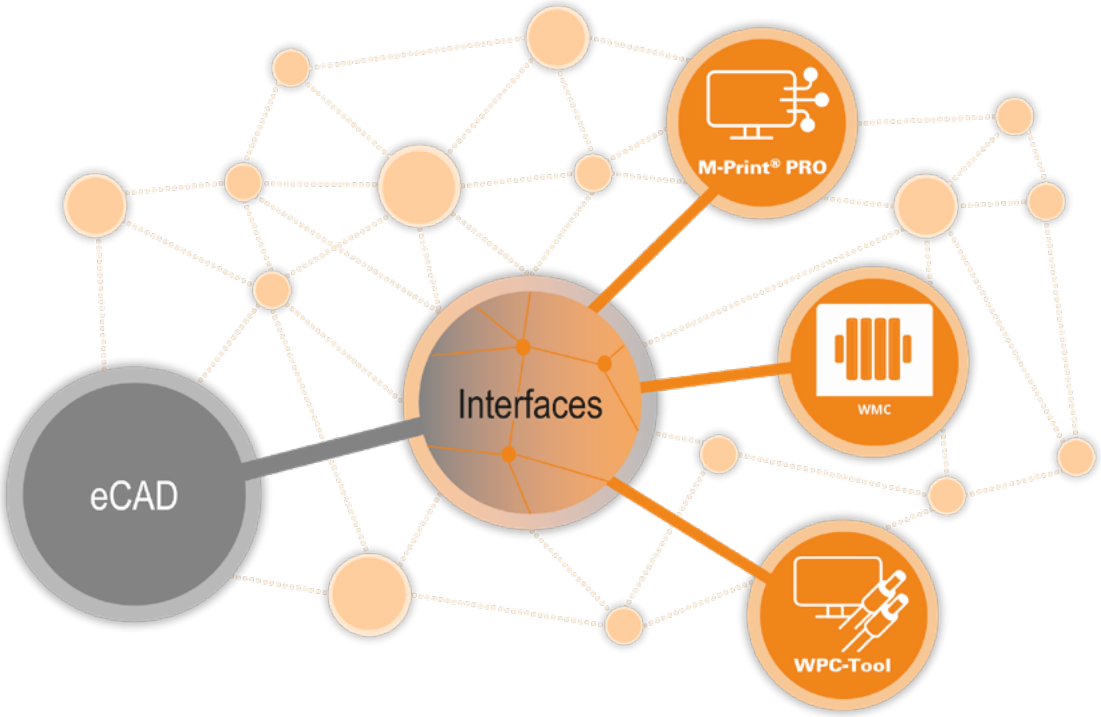
Remote access (u-link)
u-link guarantees a quick and secure access to machines and plants while also allowing for efficient management.

Data visualisation
easyConnect data visualisation services enable users to view, monitor and display live and historical data.

AutoML
With Weidmüller Industrial AutoML, you can optimize operations, increase product quality and develop new business models by benefiting from advanced analytics.

Digital Engineering

Digital planning with Weidmüller product data, interfaces and software solutions



You want to be optimally supported in all steps of the electrical design process, from planning to production? Weidmüller offers you support as best as possible!

Your advantages:

- **Processes are digitized, time is saved and sources of errors are eliminated** – With Weidmüller software solutions for terminal strip and housing configuration (WMC), component marking (M-Print® PRO) and cable assembly (WPC-Tool), you are perfectly prepared for all project phases in electrical design and control cabinet construction.
- **Potential sources of error are eliminated and your productivity is increased** – High-performance interfaces enable a complete data consistency from the planning to the commissioning process.
- **A simple, safe and fast design process** – Weidmüller provides digital product data for a variety of engineering systems. The data is always compliant with the latest system provider standard.

Find out more about digital engineering
www.weidmueller.com/digital_engineering

Connectivity Consulting

Together, we increase your efficiency in cabinet building



Are you looking for innovative and value-adding solutions for your individual requirements? Weidmüller offers you support with experienced experts for products, solutions and services in the industrial environment of energy, signals and data!

Your advantages:

- **Increasing efficiency and quality in cabinet building –** Weidmüller offers you customized solutions to make your cabinet building fit for purpose. From design optimization and process automation to digital planning and commissioning. Every single work step offers opportunities for optimization.
- **Benefit from the practical experience of the experts –** Weidmüller's connectivity consulting experts have acquired practical specialist knowledge in many international projects.
- **Support in the implementation process –** From analysis to implementation: Our experts support you with all measures.

Find out more about Connectivity Consulting
www.weidmueller.com/connectivity-consulting

Boost Your Efficiency from Engineering to Production

Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering

Digital engineering can be so easy – with the Weidmüller Configurator!
Discover the Weidmüller Configurator (WMC) – your free software solution that guides you through the entire value chain, all the way to production.

With access to nearly 14,000 digital products, the WMC provides an extensive range for configuring terminal strips, processed empty enclosures, and ready-to-connect terminal boxes. This includes over 10,500 products for terminal strip configurations, approximately 2,200 products for terminal box configurations, and around 1,200 products for configuring our heavy-duty connectors.

Your Benefits with the Well-Known WMC:

- **Seamless Engineering** – Import your circuit diagrams and terminal strips effortlessly with a single click directly from your engineering system into the WMC. Our interfaces enable continuous data flows, saving you valuable time, minimizing errors, and ensuring smooth project execution.
- **Optimized Production** – The WMC supports you on the shop floor, helping you assemble the required configurations yourself. Especially in times of skilled labor shortages, the WMC makes your production more efficient. With its user-friendly interface, 3D and touch functions, it eases the workload for your employees.



All information about the software can be found here:
www.weidmueller.com/wmc

New Online Configurator – Experience the Future of Digital Engineering

Configure. Share. Access anywhere.

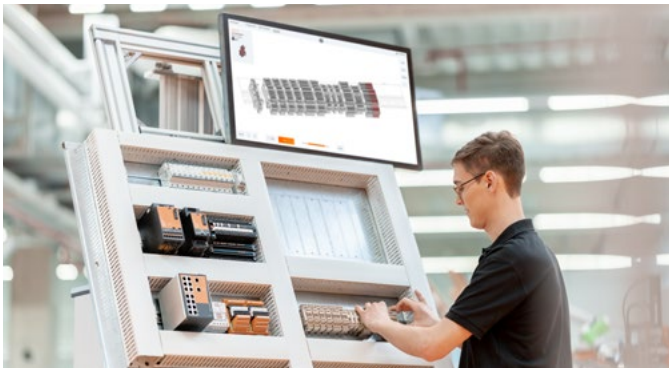
Online & Ready to Go: No installation required – use the Online Configurator directly in your browser. Access it flexibly from any device, whether PC or tablet, in the office or on the go. Your production will have a read-only view mode to ensure the security and consistency of your configurations.

Intelligent Optimization with a single Click: Reduce the width of your terminal strip with just one click – no product knowledge needed. Easily switch connection technologies, for example, from screw to PUSH IN or even to our innovative SNAP IN technology. Or take it a step further and transform your configured rail directly for labeling with the Klippon® Automated RailLaser.

Easy Transition – Seamlessly Integrated: Thanks to the integrated cloud upload function, you can transfer your existing terminal strip configurations from the WMC with just one click.

With the integrated assembly assistant, every installation is guided step by step – making assembly easier and more reliable. This helps address skilled labor shortages while reducing assembly effort and overall costs.





Start online now!
Configure anywhere, anytime and online.
configurator.weidmueller.com



Fast Delivery with Both Configurators:

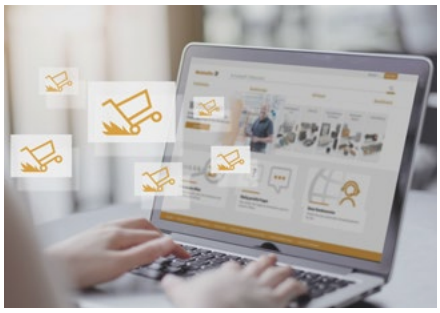
Whether you use the WMC or the Online Configurator – individually configured mounting rails (and enclosures in the WMC) can be directly transferred to the "Fast Delivery Service." You will receive ready-to-install solutions in the shortest possible time. This combines maximum customization with minimal delivery time, allowing you to benefit from fast and reliable delivery.

Digital ordering options
Your digital ordering options at Weidmüller

Find and easily select the products you need, with convenient ordering: as your Partner in Industrial Connectivity, we know what counts in purchasing. That is why we offer you a variety of options for ordering products from us and optimising your purchasing processes to meet your individual requirements and your workflow. The choice is yours.

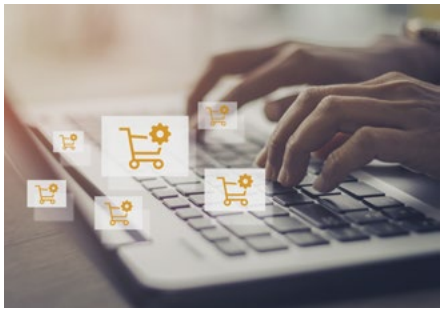
Order via the Weidmüller onlineshop

Our onlineshop offers you access to the complete Weidmüller product range around the clock – directly from a PC, tablet, or smartphone. The intuitive user guidance supports you as you select from over 50,000 products. Technical data, prices, and availabilities are available at any time. The shopping basket with check out function lets you place an order in seconds. Convenient additional functions like CSV upload, order history, reports, or custom order templates make your ordering processes even more efficient.



Order via the OCI interface

The Open Catalogue Interface (OCI) facilitates the exchange of data between your enterprise resource planning system and our onlineshop. This means that our onlineshop is integrated into your system via an OCI interface, so you have access to our complete product catalogue from your enterprise resource planning system. You can filter and select products, place them in your shopping basket and place direct orders without changing your software application. The open OCI standard is supported worldwide from a variety of software providers.



Order via the EDI interface

Our Electronic Data Interchange (EDI) also offers you the option of ordering our products directly from your enterprise resource planning system. All order data is transmitted automatically to our system and processed immediately. Orders, order confirmations, invoices, and delivery notices are transmitted lightning fast. This helps you make your purchasing processes even more efficient.



We will be glad to advise you on which solutions are suitable for you and how implementation is possible. Get in touch with us
www.weidmueller.com/digital-order

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CABTITE SE 25-26 LRG GY	2584400000	Q.18
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CABTITE SE 33-34 LRG BK	2595510000	Q.18
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CABTITE SE 4/2-3 SML GY	2584870000	Q.18
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IE-C5DB4WE0040A70A70-E	1421710040	0.62
IE-C5DB4WE0040MCSA70-E	1220310040	0.61
IE-C5DB4WE0050A70A70-E	1421710050	0.62
IE-C5DB4WE0050MCSXXX-E	1269740050	0.61
IE-C5DB4WE0100A70A70-E	1421710100	0.62
IE-C5DB4WE0100MCSXXX-E	1269740100	0.61
IE-C5DB4WE0200A70A70-E	1421710200	0.62
IE-C5DD4UG-100	8899010000	I.9
IE-C5DD4UG-100	8899010000	0.5
IE-C5DD4UG-100	8899010000	0.18
IE-C5DD4UG-500	2763450000	I.9
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IE-C5DD4UG0005A20A20-E	1173030005	0.33
IE-C5DD4UG0005A2DA2D-E	1376510005	0.33
IE-C5DD4UG0005A60A60-E	2047310005	0.34
IE-C5DD4UG0005MCSMCS-E	1025950005	0.38
IE-C5DD4UG0005MSSMCS-E	1059330005	0.38
IE-C5DD4UG0010A20A20-E	1173030010	0.33
IE-C5DD4UG0010A2DA2D-E	1376510010	0.33
IE-C5DD4UG0010A2EA2E-X	1119730010	I.9
IE-C5DD4UG0010A2EA2E-X	1119730010	0.35
IE-C5DD4UG0010A60A60-E	2047310010	0.34
IE-C5DD4UG0010B2EB2E-X	1307610010	0.36
IE-C5DD4UG0010MCSA70-E	1044470010	0.39
IE-C5DD4UG0010MCSXXX-X	1025940010	0.39
IE-C5DD4UG0015A60A60-E	2047310015	0.34
IE-C5DD4UG0015DCADCA-E	2706220015	0.55
IE-C5DD4UG0015DCSDCS-E	2706200015	0.54
IE-C5DD4UG0015DCSU20-E	2706250015	0.56
IE-C5DD4UG0015MCAMCA-E	1059890015	0.40
IE-C5DD4UG0015MCAXXX-X	1059750015	0.41
IE-C5DD4UG0015MCSA70-E	1044470015	0.39
IE-C5DD4UG0015MCSMCA-E	1059770015	0.40
IE-C5DD4UG0015MCSMCS-E	1025950015	0.38
IE-C5DD4UG0015MCSXXX-X	1025940015	0.39
IE-C5DD4UG0015MSSMCS-E	1059330015	0.38
IE-C5DD4UG0020A20A20-E	1173030020	0.33
IE-C5DD4UG0020A2DA2D-E	1376510020	0.33
IE-C5DD4UG0020A2EA2E-X	1119730020	0.35
IE-C5DD4UG0020A60A60-E	2047310020	0.34
IE-C5DD4UG0020B2EB2E-X	1307610020	0.36
IE-C5DD4UG0025A60A60-E	2047310025	0.34
IE-C5DD4UG0030A20A20-E	1173030030	0.33
IE-C5DD4UG0030A2DA2D-E	1376510030	0.33
IE-C5DD4UG0030A2EA2E-X	1119730030	I.9
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IE-C5DD4UG0030DCSDCS-E	2706200030	0.54
IE-C5DD4UG0030DCSDSS-E	2706210030	0.54
IE-C5DD4UG0030DCSU20-E	2706250030	0.56
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IE-C5DD4UG0030DSAXXX-E	2706160030	0.53
IE-C5DD4UG0030DSSXXX-E	2706260030	0.52
IE-C5DD4UG0030MCAMCA-E	1059890030	0.40
IE-C5DD4UG0030MCAXXX-X	1059750030	0.41
IE-C5DD4UG0030MCSA70-E	1044470030	0.39
IE-C5DD4UG0030MCSMCA-E	1059770030	0.40
IE-C5DD4UG0030MCSMCS-E	1025950030	0.38
IE-C5DD4UG0030MCSXXX-X	1025940030	0.39
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IE-C5DD4UG0050A2DA2D-E	1376510050	0.33
IE-C5DD4UG0050A2EA2E-X	1119730050	I.9
IE-C5DD4UG0050A2EA2E-X	1119730050	0.35
IE-C5DD4UG0050A60A60-E	2047310050	0.34
IE-C5DD4UG0050B2EB2E-X	1307610050	0.36
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IE-C5DD4UG0050DCSDCS-E	2706200050	0.54
IE-C5DD4UG0050DCSDSS-E	2706210050	0.54
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IE-C5DD4UG0050DSAXXX-E	2706160050	0.53
IE-C5DD4UG0050DSSXXX-E	2706260050	0.52
IE-C5DD4UG0050MCAMCA-E	1059890050	0.40
IE-C5DD4UG0050MCAXXX-X	1059750050	0.41
IE-C5DD4UG0050MCSA70-E	1044470050	0.39
IE-C5DD4UG0050MCSMCS-E	1025950050	0.38
IE-C5DD4UG0050MCSXXX-X	1025940050	0.39
IE-C5DD4UG0050MSSMCS-E	1059330050	0.38
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IE-C5DD4UG0075DCADSA-E	2706230075	0.55
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IE-C5DD4UG0075DCSDCS-E	2706200075	0.54
IE-C5DD4UG0075DCSDSS-E	2706210075	0.54
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IE-C5DD4UG0075DCSXXX-E	2706150075	0.52
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IE-C5DD4UG0075DSSXXX-E	2706260075	0.52
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IE-C5DD4UG0100A2DA2D-E	1376510100	0.33
IE-C5DD4UG0100A2EA2E-X	1119730100	I.9
IE-C5DD4UG0100A2EA2E-X	1119730100	0.35
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IE-C5DD4UG0100DCADSA-E	2706230100	0.55
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IE-C5DD4UG0100DCSDSS-E	2706210100	0.54
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IE-C5DD4UG0100DSSXXX-E	2706260100	0.52
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IE-C5DD4UG0200A2DA2D-E	1376510200	0.33
IE-C5DD4UG0200A2EA2E-X	1119730200	0.35
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IE-C5DD4UG0200DCSDSS-E	2706210200	0.54
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IE-C5DD4UG0200DSAXXX-E	2706160200	0.53
IE-C5DD4UG0200DSSXXX-E	2706260200	0.52
IE-C5DD4UG0300DCSDCS-E	2706200300	0.54
IE-C5DD4UG0300DCSDSS-E	2706210300	0.54
IE-C5DD4UG0300DCSU20-E	2706250300	0.56
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IE-C5DE4UP0015PCAPSA-E	2717810015	0.51
IE-C5DE4UP0015PCAXXX-E	2717770015	0.49
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IE-C5DE4UP0015PCSPSS-E	2717790015	0.50
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IE-C5DE4UP0015PSAXXX-E	2717760015	0.49
IE-C5DE4UP0015PSSXXX-E	2717740015	0.48
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IE-C5DE4UP0030PCAPSA-E	2717810030	0.51
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IE-C5DE4UP0030PSAXXX-E	2717760030	0.49
IE-C5DE4UP0030PSSXXX-E	2717740030	0.48
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IE-C5DE4UP0050PCAPSA-E	2717810050	0.51
IE-C5DE4UP0050PCAXXX-E	2717770050	0.49
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IE-C5DE4UP0050PSAXXX-E	2717760050	0.49
IE-C5DE4UP0050PSSXXX-E	2717740050	0.48
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IE-C5DE4UP0075PCAPSA-E	2717810075	0.51
IE-C5DE4UP0075PCAXXX-E	2717770075	0.49
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IE-C5DE4UP0075PSAXXX-E	2717760075	0.49
IE-C5DE4UP0075PSSXXX-E	2717740075	0.48
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IE-C5DE4UP0100PCAPSA-E	2717810100	0.51
IE-C5DE4UP0100PCAXXX-E	2717770100	0.49
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IE-C5DE4UP0100PSSXXX-E	2717740100	0.48
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IE-C5DE4UP0200PSAXXX-E	2717760200	0.49
IE-C5DE4UP0200PSSXXX-E	2717740200	0.48
IE-C5DE4UP0300PCSPCS-E	2717780300	0.50
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IE-C5DE4UP0300PCSXXX-E	2717750300	0.48
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IE-C5DHAG-100	2763660000	M.8
IE-C5DHAG-100	2763660000	0.5
IE-C5DHAG-100	2763660000	0.19
IE-C5DHAG-500	2763460000	I.9
IE-C5DHAG-500	2763460000	M.7
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IE-C5DHAG-500	2763460000	0.19
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IE-C5DS4UG0005MBSMCS-E	1244130005	0.42
IE-C5DS4UG0005MBSXXX-E	1234770005	0.43
IE-C5DS4UG0010MBSA70-E	1234750010	0.42
IE-C5DS4UG0010MBSMCS-E	1244130010	0.42
IE-C5DS4UG0010MBSXXX-E	1234770010	0.43
IE-C5DS4UG0015MBSA70-E	1234750015	0.42
IE-C5DS4UG0015MBSMCS-E	1244130015	0.42
IE-C5DS4UG0015MBSXXX-E	1234770015	0.43
IE-C5DS4UG0020MBSA70-E	1234750020	0.42
IE-C5DS4UG0020MBSMCS-E	1244130020	0.42
IE-C5DS4UG0020MBSXXX-E	1234770020	0.43
IE-C5DS4UG0050MBSA70-E	1234750050	0.42
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IE-C5DS4UG0050MBSXXX-E	1234770050	0.43
IE-C5DS4VG-100	8898990000	I.9
IE-C5DS4VG-100	8898990000	0.5
IE-C5DS4VG-100	8898990000	0.17
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IE-C5DS4VG-500	2763470000	0.5
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IE-C5DS4VG0005A60A60-E	1522100005	0.34
IE-C5DS4VG0010A60A60-E	1522100010	I.8
IE-C5DS4VG0010A60A60-E	1522100010	0.34
IE-C5DS4VG0015A60A60-E	1522100015	0.34
IE-C5DS4VG0020A60A60-E	1522100020	0.34
IE-C5DS4VG0025A60A60-E	1522100025	0.34
IE-C5DS4VG0030A60A60-E	1522100030	I.8
IE-C5DS4VG0030A60A60-E	1522100030	0.34
IE-C5DS4VG0040A60A60-E	1522100040	0.34
IE-C5DS4VG0050A60A60-E	1522100050	I.8
IE-C5DS4VG0050A60A60-E	1522100050	0.34
IE-C5DS4VG0075A60A60-E	1522100075	0.34
IE-C5DS4VG0100A60A60-E	1522100100	I.8
IE-C5DS4VG0100A60A60-E	1522100100	0.34
IE-C5DS4VG0150A60A60-E	1522100150	0.34
IE-C5DS4VG0200A60A60-E	1522100200	0.34
IE-C5ED8UB-100	8960670000	0.5
IE-C5ED8UB-100	8960670000	0.16

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IE-C5ED8UB-1000	2781880000	0.5
IE-C5ED8UB-1000	2781880000	0.16
IE-C5ED8UB-500	2763480000	0.5
IE-C5ED8UB-500	2763480000	0.16
IE-C5ED8UG-100	8813210000	0.5
IE-C5ED8UG-100	8813210000	0.16
IE-C5ED8UG-1000	2781890000	0.5
IE-C5ED8UG-1000	2781890000	0.16
IE-C5ED8UG-500	2763490000	0.5
IE-C5ED8UG-500	2763490000	0.16
IE-C5ES8UG-100	8813200000	I.13
IE-C5ES8UG-100	8813200000	0.5
IE-C5ES8UG-100	8813200000	0.10
IE-C5ES8UG-500	2763500000	I.13
IE-C5ES8UG-500	2763500000	0.5
IE-C5ES8UG-500	2763500000	0.10
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IE-C5ES8UG0010B41B41-E	1066850000	I.13
IE-C5ES8UG0010B41B41-E	1066850000	0.47
IE-C5ES8UG0010M40M40-G	1166000010	0.28
IE-C5ES8UG0010P41P41-E	1106010000	I.13
IE-C5ES8UG0010P41P41-E	1106010000	0.47
IE-C5ES8UG0015M40M40-G	1166000015	0.28
IE-C5ES8UG0020B41B41-E	1066860000	I.13
IE-C5ES8UG0020B41B41-E	1066860000	0.47
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IE-C5ES8UG0020P41P41-E	1106020000	I.13
IE-C5ES8UG0020P41P41-E	1106020000	0.47
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IE-C5ES8UG0050B41B41-E	1066870000	I.13
IE-C5ES8UG0050B41B41-E	1066870000	0.47
IE-C5ES8UG0050M40M40-G	1166000050	0.28
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IE-C5ES8UG0050P41P41-E	1106030000	0.47
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IE-C5ES8UG0100B41B41-E	1066880000	0.47
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IE-C5ES8VB0004N40N40-B-K6KV	2813820004	0.30
IE-C5ES8VB0005N40N40-B-K6KV	2813820005	0.30
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IE-C5ES8VG0005N40N40-G-K6KV	2814800005	0.30
IE-C5ES8VG0010M40M40-G	1166020010	0.28
IE-C5ES8VG0010N40N40-G-K6KV	2814800010	0.30
IE-C5ES8VG0015M40M40-G	1166020015	0.28
IE-C5ES8VG0015N40N40-G-K6KV	2814800015	0.30
IE-C5ES8VG0020M40M40-G	1166020020	0.28
IE-C5ES8VG0020N40N40-G-K6KV	2814800020	0.30
IE-C5ES8VG0030M40M40-G	1166020030	0.28
IE-C5ES8VG0050M40M40-G	1166020050	0.28
IE-C5ES8VG0100M40M40-G	1166020100	0.28
IE-C5ES8VG0150M40M40-G	1166020150	0.28
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IE-C5G06LB0010F40F40-X-K6KV	3036970010	0.32
IE-C5G06LR0003F40F40-X-K6KV	2860910003	0.32
IE-C5G06LR0008F40F40-X-K6KV	2860910008	0.32
IE-C5G06LR0011F40F40-X-K6KV	2860910011	0.32
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IE-C5IT4UG-100	2764770000	0.18
IE-C5IT4UG-500	2763520000	I.9
IE-C5IT4UG-500	2763520000	0.5
IE-C5IT4UG-500	2763520000	0.18
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IE-C5IT4UG0020B2EB2E-X	1312690020	0.36
IE-C5IT4UG0030B2EB2E-X	1312690030	0.36
IE-C5IT4UG0050B2EB2E-X	1312690050	0.36
IE-C5IT4UG0100B2EB2E-X	1312690100	0.36
IE-C6EL8UG0010U40XCS-E	1457580010	0.46
IE-C6EL8UG0020U40XCS-E	1457580020	0.46
IE-C6EL8UG0030U40XCS-E	1457580030	0.46
IE-C6EL8UG0050U40XCS-E	1457580050	0.46
IE-C6EL8UG0100U40XCS-E	1457580100	0.46
IE-C6EL8UG0120U40XCS-E	1457580120	0.46
IE-C6FP8LB0002M40M40-B	1165900002	0.21
IE-C6FP8LB0005M40M40-B	1165900005	0.21
IE-C6FP8LB0010M40M40-B	1165900010	0.21
IE-C6FP8LB0015M40M40-B	1165900015	0.21
IE-C6FP8LB0020M40M40-B	1165900020	0.21
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IE-C6FP8LB0050M40M40-B	1165900050	0.21
IE-C6FP8LB0100M40M40-B	1165900100	0.21
IE-C6FP8LB0150M40M40-B	1165900150	0.21
IE-C6FP8LB0200M40M40-B	1165900200	0.21
IE-C6FP8LB0250M40M40-B	1165900250	0.21

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IE-C6FP8LD0003M40X40-Y	1312160003	0.27
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IE-C6FP8LD0005M40M40-D	1165940005	0.20
IE-C6FP8LD0005M40R40-D	2703330005	0.26
IE-C6FP8LD0005M40V40-D	1248280005	0.25
IE-C6FP8LD0005M40W40-D	1233160005	0.25
IE-C6FP8LD0005M40X40-Y	1312160005	0.27
IE-C6FP8LD0010M40L40-D	2703320010	0.26
IE-C6FP8LD0010M40M40-D	1165940010	0.20
IE-C6FP8LD0010M40R40-D	2703330010	0.26
IE-C6FP8LD0010M40V40-D	1248280010	0.25
IE-C6FP8LD0010M40W40-D	1233160010	0.25
IE-C6FP8LD0010M40X40-Y	1312160010	0.27
IE-C6FP8LD0012M40L40-D	2703320012	0.26
IE-C6FP8LD0012M40R40-D	2703330012	0.26
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IE-C6FP8LD0012M40W40-D	1233160012	0.25
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IE-C6FP8LD0015M40R40-D	2703330015	0.26
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IE-C6FP8LD0015M40W40-D	1233160015	0.25
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IE-C6FP8LD0030M40W40-D	1233160030	0.25
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IE-PIC-HYB-S-0,2-300	1135150000	M.7
IE-PIC-HYB-S-0,2-300	1135150000	M.53
IE-PIC-HYB-S-0,5-300	1096180000	M.7
IE-PIC-HYB-S-0,5-300	1096180000	M.53
IE-PIC-HYB-S-0,75-300	1068950000	M.7
IE-PIC-HYB-S-0,75-300	1068950000	M.53
IE-PIC-M12X-P-22/26	2664880000	M.45
IE-PIC-M12X-S-22/26	2673440000	M.45
IE-PM-RJ45-TH	1963580000	K.8
IE-PM-RJ45-TH	1963580000	M.27
IE-PP-RJ45	2552580000	O.20
IE-PP-RJ45	2552580000	O.21
IE-PP-RJ45	2552580000	O.22
IE-PP-RJ45	2552580000	O.23
IE-PP-RJ45	2552580000	O.24
IE-PP-RJ45	2552580000	O.25
IE-PP-RJ45	2552580000	O.26
IE-PP-RJ45	2552580000	O.27
IE-PP-RJ45	2552580000	O.28
IE-PP-RJ45	2552580000	O.29
IE-PP-RJ45	2552580000	O.30
IE-PP-RJ45	2552580000	O.31
IE-PP-RJ45	2552580000	O.33
IE-PP-RJ45	2552580000	O.34
IE-PP-RJ45	2552580000	O.39
IE-PP-RJ45	2552580000	O.42
IE-PP-RJ45	2552580000	O.46
IE-PP-RJ45	2552580000	O.61
IE-PP-RJ45	2552580000	O.62
IE-PP-V01P	1965690000	M.12
IE-PP-V01P	1965690000	M.16
IE-PP-V01P	1965690000	O.28
IE-PP-V04P	1963890000	M.19
IE-PP-V04P	1963890000	O.28
IE-PP-V05M	1968920000	M.25
IE-PP-V05M	1968920000	O.28
IE-PP-V14P	1058280000	M.2
IE-PP-V14P	1058280000	M.3
IE-PP-V14P	1058280000	M.7
IE-PP-V14P	1058280000	M.10
IE-PP-V14P	1058280000	O.28
IE-PS-M12X-180-P-TH-CG	2664820000	M.43
IE-PS-M12X-180-S-TH-CG	2672440000	M.43
IE-PS-M12X-90-P-TH-CG	2702710000	M.43
IE-PS-M12X-90-S-TH-CG	2702720000	M.43
IE-PS-M12X-P-AWG22/27FH	2007500000	M.41
IE-PS-M12X-P-FH	1324020000	M.41
IE-PS-M12X-S-FH	1516330000	M.42
IE-PS-RJ45-FH-180-A-1.1	1992850000	K.5
IE-PS-RJ45-FH-180-A-1.1-CG	2703440000	K.5
IE-PS-RJ45-FH-180-A-1.6	1992820000	K.5
IE-PS-RJ45-FH-180-A-1.6-CG	2703390000	K.5
IE-PS-RJ45-FH-180-B-1.1	1992860000	K.5
IE-PS-RJ45-FH-180-B-1.1-CG	2703460000	K.5
IE-PS-RJ45-FH-180-B-1.6	1992830000	K.5
IE-PS-RJ45-FH-180-B-1.6-CG	2703410000	K.5
IE-PS-RJ45-FH-180-P-1.6	1992840000	K.7
IE-PS-RJ45-FH-180-P-1.6-CG	2703420000	K.7
IE-PS-RJ45-FH-90-A-1.1	1518080000	K.6
IE-PS-RJ45-FH-90-A-1.6	1992870000	K.6
IE-PS-RJ45-FH-90-B-1.1	1518090000	K.6
IE-PS-RJ45-FH-90-B-1.6	1992890000	K.6
IE-PS-RJ45-FH-90-P-1.6	1518100000	I.8
IE-PS-RJ45-FH-90-P-1.6	1518100000	K.7
IE-PS-RJ45-FH-BK	1963600000	K.4
IE-PS-RJ45-FH-BK-A	1132040000	I.12
IE-PS-RJ45-FH-BK-A	1132040000	K.4
IE-PS-RJ45-FH-BK-B	1132050000	I.12
IE-PS-RJ45-FH-BK-B	1132050000	K.4
IE-PS-RJ45-FH-BK-P	1132060000	I.8
IE-PS-RJ45-FH-BK-P	1132060000	K.4
IE-PS-RJ45-TH-BK	1963590000	I.12
IE-PS-RJ45-TH-BK	1963590000	K.8
IE-PS-RJ45-TH-BK-P	2584980000	K.9
IE-PS-SCRJ1-POF	1206720000	I.8
IE-PS-SCRJ1-POF	1206720000	I.12
IE-PS-SCRJ1-POF	1206720000	K.10
IE-PS-SCRJ1-POF-QA	2564950000	I.8
IE-PS-SCRJ1-POF-QA	2564950000	K.10
IE-PS-SPO-S-FH-180	2726040000	J.12
IE-PS-SPO-S-FH-2-180	3150000000	J.14
IE-PS-SPO-S-FH-2-180	3150000000	J.18
IE-PS-SPO-S-FH-2-180	3150000000	K.2
IE-PS-V01M-2SC-POF	1963280000	I.12
IE-PS-V01M-RJ45-FH	1963120000	I.12
IE-PS-V01M-RJ45-FH	1963120000	M.12
IE-PS-V01M-RJ45-FH-BP	1963130000	M.12
IE-PS-V01M-RJ45-TH	1963140000	I.12
IE-PS-V01M-RJ45-TH	1963140000	M.12
IE-PS-V01M-RJ45-TH-BP	1963150000	M.12
IE-PS-V01P-RJ45-FH	1012490000	I.12
IE-PS-V01P-RJ45-FH	1012490000	M.16
IE-PS-V01P-RJ45-FH-BP	1012570000	M.16
IE-PS-V01P-RJ45-TH	1012470000	I.12
IE-PS-V01P-RJ45-TH	1012470000	M.16
IE-PS-V01P-RJ45-TH-BP	1012560000	M.16
IE-PS-V04P-RJ45-FH	1963160000	M.19
IE-PS-V04P-RJ45-FH-B	1271240000	M.19
IE-PS-V04P-RJ45-FH-BP	1963170000	M.19
IE-PS-V04P-RJ45-TH	1963180000	M.19
IE-PS-V04P-RJ45-TH-BP	1963190000	M.19
IE-PS-V05M-A-RJ45-FH	1077300000	M.25
IE-PS-V05M-RJ45-FH	1963200000	M.25
IE-PS-V05M-RJ45-FH-B	1271250000	M.25
IE-PS-V05M-RJ45-TH	1963110000	M.25
IE-PS-V14M-2SC-POF	1191550000	I.9
IE-PS-V14M-2SC-POF	1191550000	M.10
IE-PS-V14M-2SC-POF-QA	2568260000	I.9
IE-PS-V14M-2SC-POF-QA	2568260000	M.10
IE-PS-V14M-HYB-10P	1072910000	I.9
IE-PS-V14M-HYB-10P	1072910000	M.7
IE-PS-V14M-RJ45-FH-P	1012170000	I.9
IE-PS-V14M-RJ45-FH-P	1012170000	M.2
IE-PS-V14M-RJ45-TH	1012160000	M.3
IE-PS-V14M-RJ45-TH-P	2768740000	I.9
IE-PS-V14M-RJ45-TH-P	2768740000	M.2
IE-PS-VAPM-5P-2.5	2465440000	I.8
IE-PS-VAPM-5P-2.5	2465440000	M.59
IE-PS-VAPM-5P-2.5-QT	2912590000	I.8
IE-PS-VAPM-5P-2.5-QT	2912590000	M.59
IE-REDU-6-8-PS-VAPM	2531330000	M.59
IE-S-IP67	8808370000	N.16
IE-S1DS2LE-100	2926120000	J.16
IE-S1DS2LE-100	2926120000	O.5
IE-S1DS2LE-100	2926120000	O.6
IE-S1DS2LE-500	2924350000	J.16
IE-S1DS2LE-500	2924350000	O.5
IE-S1DS2LE-500	2924350000	O.6
IE-S1DS2UE-100	2926110000	J.16
IE-S1DS2UE-100	2926110000	O.5
IE-S1DS2UE-100	2926110000	O.6
IE-S1DS2UE-500	2924340000	J.16
IE-S1DS2UE-500	2924340000	O.5
IE-S1DS2UE-500	2924340000	O.6
IE-S1DS2VE0010T02T02-E	3123990010	J.12
IE-S1DS2VE0020T02T02-E	3123990020	J.12
IE-S1DS2VE0020TM1TM1-E	2726050020	J.12
IE-S1DS2VE0020TM1TM2-E	2726060020	J.12
IE-S1DS2VE0020TM2TM2-E	2726070020	J.12
IE-S1DS2VE0030T02T02-E	3123990030	J.12
IE-S1DS2VE0050T02T02-E	3123990050	J.12
IE-S1DS2VE0050TM1TM1-E	2726050050	J.12
IE-S1DS2VE0100TM1TM1-E	2726050100	J.12
IE-S1DS2VE0150TM1TM1-E	2726050150	J.12
IE-S1ES2LE-100	2926140000	J.17
IE-S1ES2LE-100	2926140000	O.5
IE-S1ES2LE-100	2926140000	O.7
IE-S1ES2LE-500	2924370000	J.17
IE-S1ES2LE-500	2924370000	O.5
IE-S1ES2LE-500	2924370000	O.7
IE-S1ES2UE-100	2926130000	J.17
IE-S1ES2UE-100	2926130000	O.5
IE-S1ES2UE-100	2926130000	O.7
IE-S1ES2UE-500	2924360000	J.17
IE-S1ES2UE-500	2924360000	O.5
IE-S1ES2UE-500	2924360000	O.7
IE-SCRJ-IP67-POF-100	1278430000	M.10
IE-SCRJ-IP67-POF-100	1278430000	M.56
IE-SCRJ1-IP20-POF-100	1278420000	K.10
IE-SFP-1GE-MM-03	2779110000	H.7
IE-SFP-1GE-SM-20	2779120000	H.7
IE-SFP-1GE-SM-40	2779130000	H.7
IE-SFP-1FE-MM-2	2682450000	H.4
IE-SFP-1FE-SM-60	2682470000	H.4
IE-SFP-1GE-MM-05	2682480000	H.5
IE-SFP-1GE-MM-2	2682490000	H.5
IE-SFP-1GE-RJ45	2766120000	H.6
IE-SFP-1GE-SM-10	2682500000	H.5
IE-SFP-1GE-SM-10-BIDI-TX1310	2682520000	H.5
IE-SFP-1GE-SM-10-BIDI-TX1550	2682530000	H.5
IE-SFP-1GE-SM-20-BIDI-TX1310	2682540000	H.5
IE-SFP-1GE-SM-20-BIDI-TX1550	2682550000	H.5
IE-SFP-1GE-SM-40	2682510000	H.5
IE-SR-2TX-WL	2682590000	D.4
IE-SR-2TX-WL-4G-EU	2682560000	D.5
IE-SR-2TX-WL-4G-US-V	2682580000	D.6
IE-SR-4GT	2873910000	D.10
IE-SR-4GT-LTE/4G-EU	2873920000	D.11
IE-SR-4GT-LTE/4G-USEMEA	2873930000	D.12
IE-SR-4GT-LTE/4G-USEMEA-M	2990440000	D.14
IE-SR-4GT-M	2990450000	D.13
IE-SR-4TX	2751270000	D.7
IE-SR-4TX-LTE/4G-EU	2751280000	D.8
IE-SR-4TX-LTE/4G-USEMEA	2739630000	D.9
IE-SW-AL05LM-5TX	2682250000	C.4
IE-SW-AL06LM-4TX-2SC	2682260000	C.5
IE-SW-AL06LM-4TX-2SCS	2682270000	C.6
IE-SW-AL06M-4GTPOE-2GESFP	2682430000	C.24
IE-SW-AL08M-6TX-2GT	2682290000	C.16
IE-SW-AL08M-8GT	2682350000	C.19
IE-SW-AL08M-8GTPOE	2682420000	C.25
IE-SW-AL08M-8TX	2682280000	C.7
IE-SW-AL10M-8TX-2GC	2740420000	C.17
IE-SW-AL12M-8GT-4GESFP	2682340000	C.20
IE-SW-AL12M-8GTPOE-4GESFP-120W	3109760000	C.26
IE-SW-AL12M-8GTPOE-4GESFP-240W	3109770000	C.27
IE-SW-AL14M-12GT-2GESFP	2682360000	C.21
IE-SW-AL16M-16TX	2682310000	C.8
IE-SW-AL18M-16TX-2GC	2682330000	C.18
IE-SW-AL24M-16GT-8GESFP	2682370000	C.22
IE-SW-AL24M-24TX	2682320000	C.9
IE-SW-AL26M-22GTPOE-2GCPOE-2GESFP	3109780000	C.28
IE-SW-BI-04-4TX-HV	3195570000	B.4
IE-SW-BI-04-4TX-LV	3195560000	B.4
IE-SW-BLB-05-1GT-4GTPOE	2908210000	B.30
IE-SW-BLB-05-1TX-4POE	2908200000	B.16
IE-SW-BLB-05-4GT-1GESFP	2908180000	B.24
IE-SW-BLB-05-4TX-1FESFP	2908140000	B.10
IE-SW-BLB-05-5GT	2908070000	B.23
IE-SW-BLB-05-5GT-C	2908100000	B.23
IE-SW-BLB-05-5TX	2908030000	B.10
IE-SW-BLB-08-6TX-2FESFP	2908160000	B.11
IE-SW-BLB-08-7TX-1FESFP	2908150000	B.12
IE-SW-BLB-08-8GT	2908080000	B.25
IE-SW-BLB-08-8GT-C	2908110000	B.25
IE-SW-BLB-08-8GTPOE	2908230000	B.31
IE-SW-BLB-08-8POE	2908220000	B.17
IE-SW-BLB-08-8TX	2908040000	B.11
IE-SW-BLB-10-8GT-2GESFP	2908190000	B.26
IE-SW-BLB-16-14GT-2GESFP	2908130000	B.28
IE-SW-BLB-16-16GT	2908090000	B.27
IE-SW-BLB-16-16GT-C	2908120000	B.27
IE-SW-BLB-16-16TX	2908050000	B.13
IE-SW-BLB-18-16TX-2GESFP	2908170000	B.18
IE-SW-BLB-24-24TX	2908060000	B.14
IE-SW-EL05-5GT	2682210000	B.19
IE-SW-EL05-5TX	2682130000	B.5
IE-SW-EL08-6TX-2SC	2682170000	B.6
IE-SW-EL08-6TX-2SCS	2682180000	B.6
IE-SW-EL08-8GT	2682230000	B.20
IE-SW-EL08-8GT-MINI	2705000000	B.20
IE-SW-EL08-8TX	2682140000	B.5
IE-SW-EL10-8GT-2GESFP	2682240000	B.21
IE-SW-EL10-8GTPOE-2GESFP	2682410000	B.29
IE-SW-ELB-05-5GT	2828560000	B.22
IE-SW-ELB-05-5TX	2828540000	B.7
IE-SW-ELB-08-6TX-2FESFP	2828600000	B.8
IE-SW-ELB-08-8GT	2828570000	B.22
IE-SW-ELB-08-8TX	2828550000	B.8
IE-SW-ELB-16-16TX	2828580000	B.9
IE-SW-IP67-8FEM12	3130670000	B.15
IE-SW-L3-AL20M-8GT-12GESFP	3109750000	C.23
IE-SW-L3-SL28M-HV	2875580000	C.37
IE-SW-L3-SL28M-LV	2875590000	C.38
IE-SW-SL10M-7TX-3GC-HV	2778950000	C.29
IE-SW-SL10M-7TX-3GC-LV	2778960000	C.30
IE-SW-SL20M-8GT-12GESFP-HV	2778970000	C.31
IE-SW-SL20M-8GT-12GESFP-LV	2778980000	C.32
IE-SW-SL26M-24TX-2GC-HV	2778990000	C.33
IE-SW-SL26M-24TX-2GC-LV	2779000000	C.34
IE-SW-SL28M-HV	2779010000	C.35
IE-SW-SL28M-LV	2779020000	C.36
IE-SW-SPE05-4T1LMPODL-1TX	3012120000	B.34
IE-SW-SPE05-4T1LMPODL-1TX	3012120000	J.12
IE-SW-VL05M-5TX	1504280000	C.10
IE-SW-VL05MT-5TX	1504310000	C.10
IE-SW-VL08MT-5TX-1SC-2SCS	1345240000	C.15
IE-SW-VL08MT-6TX-2SC	1344770000	C.12
IE-SW-VL08MT-6TX-2SCS	1241020000	C.14
IE-SW-VL08MT-6TX-2ST	1240990000	C.13
IE-SW-VL08MT-8TX	1240940000	C.11
IE-SWM-SL02-2GC-PRP/HSR	2985050000	C.41
IE-SWM-SL02-2GESFP+	2779210000	C.44
IE-SWM-SL04-4GESFP	2779200000	C.43
IE-SWM-SL04-4GESFP+	2779220000	C.44
IE-SWM-SL04-4SC	2779170000	C.39
IE-SWM-SL04-4SCS	2779160000	C.39
IE-SWM-SL04-4ST	2779190000	C.40
IE-SWM-SL04-4STS	2779180000	C.40
IE-SWM-SL08-8GESFP	2779150000	C.42
IE-SWM-SL08-8GT	2779140000	C.42
IE-TO-LCD-MM	8947010000	K.20
IE-TO-LCD-SM	8947020000	K.20
IE-TO-RJ12-C	2861240000	K.17
IE-TO-RJ45-C	8946920000	I.8
IE-TO-RJ45-C	8946920000	I.12
IE-TO-RJ45-C	8946920000	K.15
IE-TO-RJ45-C-LP	2812440000	I.8
IE-TO-RJ45-C-LP	2812440000	K.16
IE-TO-RJ45-C-ZP-C5	2819260000	K.16
IE-TO-RJ45-FJ-A	8946930000	I.12
IE-TO-RJ45-FJ-A	8946930000	K.13
IE-TO-RJ45-FJ-B	8946940000	I.12
IE-TO-RJ45-FJ-B	8946940000	K.13
IE-TO-RJ45-FJ-P	8946950000	I.8
IE-TO-RJ45-FJ-P	8946950000	K.13
IE-TO-SCD-MM	8946970000	K.19
IE-TO-SCD-SM	8946980000	K.19
IE-TO-SCRJ-MM	8946990000	I.8
IE-TO-SCRJ-MM	8946990000	I.12
IE-TO-SCRJ-MM	8946990000	K.19
IE-TO-SCRJ-SM	8947000000	I.8
IE-TO-SCRJ-SM	8947000000	I.12
IE-TO-SCRJ-SM	8947000000	K.19
IE-TO-SPO-C-LP	2870790000	J.12
IE-TO-USB	8946960000	K.18
IE-TO-USB-AB	1438180000	K.18
IE-USB-3.0-A-A-0.5M	2581730005	L.28
IE-USB-3.0-A-A-0.5M	2581730005	L.48
IE-USB-3.0-A-A-0.5M	2581730005	M.55
IE-USB-3.0-A-A-0.5M	2581730005	O.63
IE-USB-3.0-A-A-1.8M	2581730018	L.28
IE-USB-3.0-A-A-1.8M	2581730018	L.48
IE-USB-3.0-A-A-1.8M	2581730018	M.55
IE-USB-3.0-A-A-1.8M	2581730018	O.63
IE-USB-3.0-A-A-3M	2581730030	L.28
IE-USB-3.0-A-A-3M	2581730030	L.48
IE-USB-3.0-A-A-3M	2581730030	M.55
IE-USB-3.0-A-A-3M	2581730030	O.63
IE-USB-3.0-A-A-5M	2581730050	L.28
IE-USB-3.0-A-A-5M	2581730050	L.48
IE-USB-3.0-A-A-5M	2581730050	M.55
IE-USB-3.0-A-A-5M	2581730050	O.63
IE-USB-A-A-0.3M	1993550003	O.63
IE-USB-A-A-0.5M	1993550005	L.28
IE-USB-A-A-0.5M	1993550005	L.48
IE-USB-A-A-0.5M	1993550005	M.55
IE-USB-A-A-0.5M	1993550005	O.63
IE-USB-A-A-1.0M	1993550010	L.28
IE-USB-A-A-1.0M	1993550010	L.48
IE-USB-A-A-1.0M	1993550010	M.55
IE-USB-A-A-1.0M	1993550010	O.63
IE-USB-A-A-1.5M	1993550015	L.28
IE-USB-A-A-1.5M	1993550015	L.48
IE-USB-A-A-1.5M	1993550015	M.55
IE-USB-A-A-1.5M	1993550015	O.63
IE-USB-A-A-1.8M	1993550018	L.28
IE-USB-A-A-1.8M	1993550018	L.48
IE-USB-A-A-1.8M	1993550018	M.55
IE-USB-A-A-1.8M	1993550018	O.63
IE-USB-A-A-3.0M	1993550030	L.28
IE-USB-A-A-3.0M	1993550030	L.48
IE-USB-A-A-3.0M	1993550030	M.55
IE-USB-A-A-3.0M	1993550030	O.63
IE-USB-A-C-2.0M	2838380020	O.65
IE-USB-A-MICRO-1.8M	1487980000	O.65
IE-WALLMOUNT-KIT-MODEL-A	3032760000	H.18
IE-WALLMOUNT-KIT-MODEL-B	3032770000	H.18
IE-WL-BL-AP-CL-EU	2536600000	G.5
IE-WL-BL-AP-CL-US	2536660000	G.5
IE-WL-VL-AP-BR-CL-EU	2536680000	G.7
IE-WL-VL-AP-BR-CL-US	2536700000	G.7
IE-WLT-BL-AP-CL-EU	2536650000	G.5
IE-WLT-BL-AP-CL-US	2536670000	G.5
IE-WLT-VL-AP-BR-CL-EU	2536690000	G.7
IE-WLT-VL-AP-BR-CL-US	2536710000	G.7
IE-XM-6D-RJ45/RJ45-IP67	8829450000	M.28
IE-XM-6U-RJ45/RJ45-IP67	8829440000	M.28
IE-XM-RJ45/IDC	8808360000	K.14
IE-XM-RJ45/IDC-IP67	8808440000	M.28
IE-XM-RJ45/RJ45	8879050000	K.15
IE-XM-RJ45/RJ45-IP67	8808450000	M.28
IE-XM-ST/ST	8808340000	K.20
IE-XR-RJ45/RJ45-2	8952950000	K.11
IE-XR-RJ45/RJ45-2	8952950000	M.28
IE-XRJ45/IDC	8808330000	K.12
IE-XRJ45/IDC	8808330000	M.28

K

KOF SET ESD	9205210000	O.11
KOHS 19	9205010000	O.17
KOHS 9.5+19	9205000000	O.17
KOK 52 X 91	2008410000	L.15
KOK 52 X 91	2008410000	L.16
KOK 52 X 91	2008410000	L.17
KOK 52 X 91	2008410000	O.17
KOPD 10.0	9205020000	O.17
KT 12	9002660000	O.9
KT 22	1157830000	O.9
KT 8	9002650000	O.8
KT 8S	2876450000	O.8
KT MINI	2876460000	O.10

L

LAN USB TESTER	9205400000	O.7
LM SPE 5.08/02/135 3.5SN OR BX	3089370000	J.13
LM SPE 5.08/02/135 3.5SN OR BX	3089370000	J.15
LM SPE 5.08/03/135 3.5SN OR BX	3089380000	J.13
LM SPE 5.08/03/135 3.5SN OR BX	3089380000	J.15
LSF-SMT SPE 3.50/02/135 3.5SN BK TU	3077550000	J.13
LSF-SMT SPE 3.50/02/135 3.5SN BK TU	3077550000	J.15
LSF-SMT SPE 3.50/03/135 3.5SN BK TU	3077560000	J.13
LSF-SMT SPE 3.50/03/135 3.5SN BK TU	3077560000	J.15
LSF-SMT SPE 5.00/02/135 3.5SN BK TU	3077570000	J.13
LSF-SMT SPE 5.00/02/135 3.5SN BK TU	3077570000	J.15
LSF-SMT SPE 5.00/03/135 3.5SN BK TU	3077630000	J.13
LSF-SMT SPE 5.00/03/135 3.5SN BK TU	3077630000	J.15

M

M-PRINT PRO	1905490000	O.31
MEKA BL CST	9032020000	O.4
MTS SPE 5/02 H T4 B T	3095900000	J.13

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MTS SPE 5/02 H T4 B T	3095900000	J.15
MTS SPE 5/02 V T4 B T	3095920000	J.13
MTS SPE 5/02 V T4 B T	3095920000	J.15
MTS SPE 5/03 H T4 B T	3095910000	J.13
MTS SPE 5/03 H T4 B T	3095910000	J.15
MTS SPE 5/03 V T4 B T	3095980000	J.13
MTS SPE 5/03 V T4 B T	3095980000	J.15
MULTI-STRIPAX IE-POF	1208880000	M.10
MULTI-STRIPAX IE-POF	1208880000	M.56
MULTI-STRIPAX IE-POF	1208880000	Q.12

P

PJ ADV TEXTILE COVER	2592960000	Q.31
PJ ADV TNAW	1338710000	Q.31
PJ ADV TNTK INK C	1338680000	Q.31
PJ ADV TNTK INK K	1338690000	Q.31
PJ ADV TNTK INK M	1338670000	Q.31
PJ ADV TNTK INK SET	1338720000	Q.31
PJ ADV TNTK INK Y	1338650000	Q.31
PJ CON FLUID SET	2715650000	Q.31
PJ CON INK C	2715610000	Q.31
PJ CON INK K	2715640000	Q.31
PJ CON INK M	2715620000	Q.31
PJ CON INK SET	2715600000	Q.31
PJ CON INK Y	2715630000	Q.31
PJ CON WASTE PAD	2715660000	Q.31
PRINTJET CONNECT	2715590000	Q.31
PUNCH DOWN TOOL PDT	9013970000	Q.16

R

REMOVAL TOOL HD	1866730000	K.10
RM-KIT	1241440000	F.5
RM-KIT	1241440000	F.6
RM-KIT	1241440000	F.7
RM-KIT	1241440000	G.5
RM-KIT	1241440000	G.7
RM-KIT	1241440000	H.17

S

SAI-M12-KBC-18/20	2664860000	M.37
SAI-M12-KBC-20/22	2664870000	M.37
SAI-M12-KBC-22/24	2673730000	M.37
SAI-M12-KBC-26/28	2673740000	M.37
SAI-M12-KSC-18/20	2664840000	M.37
SAI-M12-KSC-20/22	2664850000	M.37
SAI-M12-KSC-22/24	2673710000	M.37
SAI-M12-KSC-26/28	2673720000	M.37
SAI-SK-M12 BU	8425960000	Q.28
SAI-SK-M12-UNI 2029	2330260000	Q.28
SAIBGC-M-4D-4/9-M12-CG	2672420000	M.35
SAIBGC-M-4D-4/9-M12-WDF-CG	2664780000	M.35
SAIBGP-M-4D-4/8-M12	2681700000	M.34
SAIBGS-M-4D-6/8-M12	1892130000	M.33
SAIBGZ-M-4D-6/8-M12	1892130001	M.32
SAIBWC-M-4D-4/9-M12-CG	2702700000	M.36
SAIBWP-M-4D-4/8-M12	2681710000	M.34
SAIBWZ-M-4D-6/8-M12	1139330000	M.32
SAISGC-M-4D-4/9-M12-CG	2664810000	M.35
SAISGC-M-4D-4/9-M12-WDF	2664790000	M.35
SAISGP-M-4D-4/8-M12	2681680000	M.34
SAISGS-M-4D-6/8-M12	1892120000	M.33
SAISGZ-M-4D-6/8-M12	1892120001	M.32
SAISWC-M-4D-4/9-M12-CG	2702690000	M.36
SAISWP-M-4D-4/8-M12	2681690000	M.34
SAISWZ-M-4D-6/8-M12	1803930001	M.32
SCISSORS KEVLAR	1208910000	M.10
SCISSORS KEVLAR	1208910000	M.56
SCISSORS KEVLAR	1208910000	Q.12
SCISSORS KEVLAR	1208910000	Q.14
SCREWTY SET	1910000000	M.42
SCREWTY SET	1910000000	Q.38
SCREWTY SET	1910000000	Q.39
SCREWTY SET	1910000000	Q.42
SCREWTY SET	1910000000	Q.43
SCREWTY SET	1910000000	Q.48
SCREWTY SET	1910000000	Q.49
SCREWTY SET	1910000000	Q.50
SCREWTY SET	1910000000	Q.51
SCREWTY SET	1910000000	Q.52
SCREWTY SET	1910000000	Q.53
SCREWTY SET	1910000000	Q.54
SCREWTY SET	1910000000	Q.55
SCREWTY SET	1910000000	Q.56
SCREWTY SET-DM	1920000000	M.42
SCREWTY SET-DM	1920000000	Q.38
SCREWTY SET-DM	1920000000	Q.39
SCREWTY SET-DM	1920000000	Q.42
SCREWTY SET-DM	1920000000	Q.43
SCREWTY SET-DM	1920000000	Q.48
SCREWTY SET-DM	1920000000	Q.49
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SCREWTY SET-DM	1920000000	Q.53
SCREWTY SET-DM	1920000000	Q.54
SCREWTY SET-DM	1920000000	Q.55
SCREWTY SET-DM	1920000000	Q.56
SCREWTY-M12	1900000000	Q.38
SCREWTY-M12	1900000000	Q.39
SCREWTY-M12	1900000000	Q.42
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SCREWTY-M12	1900000000	Q.56
SCREWTY-M12 F	1900020000	M.42
SCREWTY-M12 F-DM	1900021000	M.42
SCREWTY-M12-DM	1900001000	Q.38
SCREWTY-M12-DM	1900001000	Q.39
SCREWTY-M12-DM	1900001000	Q.42
SCREWTY-M12-DM	1900001000	Q.43
SCREWTY-M12-DM	1900001000	Q.48
SCREWTY-M12-DM	1900001000	Q.49
SCREWTY-M12-DM	1900001000	Q.50
SCREWTY-M12-DM	1900001000	Q.51
SCREWTY-M12-DM	1900001000	Q.52
SCREWTY-M12-DM	1900001000	Q.53
SCREWTY-M12-DM	1900001000	Q.54
SCREWTY-M12-DM	1900001000	Q.55
SCREWTY-M12-DM	1900001000	Q.56
SEE ESD 120	9205130000	Q.11
SEE ESD 125	9204750000	Q.11
SM 27/18 K MC NE GR	1073340000	L.14
SM 27/18 K MC NE GR	1073340000	L.15
SM 27/18 K MC NE GR	1073340000	L.16
SM 27/18 K MC NE GR	1073340000	L.17
SM 27/18 K MC NE SI	1713760000	L.14
SM 27/18 K MC NE SI	1713760000	L.15
SM 27/18 K MC NE SI	1713760000	L.16
SM 27/18 K MC NE SI	1713760000	L.17
SM 27/18 K MC NE WS	1707270000	L.14
SM 27/18 K MC NE WS	1707270000	L.15
SM 27/18 K MC NE WS	1707270000	L.16
SM 27/18 K MC NE WS	1707270000	L.17
SM 27/18 MC NE WS	1699860000	L.46
SM 27/18 MC NE WS	1699860000	L.47
SM 27/18 MC NE WS	1699860000	L.48
SM-H 27/18 SW	1716630000	L.46
SM-H 27/18 SW	1716630000	L.47
SM-H 27/18 SW	1716630000	L.48
SPE M12F DC BPM16 RV 2.0 6 TY	3228140000	J.15
SPE M12F DC BPM16 RV 2.0 6 TY	3228140000	J.20
SPE M12F DC BPM16 RV 2.0 6 TY	3228140000	M.30
SPE M12F DC FPM16 RV 2.0 6 TY	3228130000	J.15
SPE M12F DC FPM16 RV 2.0 6 TY	3228130000	J.20
SPE M12F DC FPM16 RV 2.0 6 TY	3228130000	M.30
SPE M12F DD RV 2.0 6 TY	3180870000	J.15
SPE M12F DD RV 2.0 6 TY	3180870000	J.21
SPE M12F DD RV 2.0 6 TY	3180870000	M.31
SPE P20 R1H 2.1 6 N/N RL	3234500000	J.15
SPE P20 R1H 2.1 6 N/N RL	3234500000	J.19
SPE P20 R1H 2.1 6 N/N RL	3234500000	K.3
SPE P20 R1H 2.1 6 N/N TU	3150600000	J.15
SPE P20 R1H 2.1 6 N/N TU	3150600000	J.19
SPE P20 R1H 2.1 6 N/N TU	3150600000	K.3
SPE P20 R1H 2.1 6 YG/YG RL	3234510000	J.15
SPE P20 R1H 2.1 6 YG/YG RL	3234510000	J.19
SPE P20 R1H 2.1 6 YG/YG TU	3150590000	J.15
SPE P20 R1H 2.1 6 YG/YG TU	3150590000	J.19
SPE P20 R1H 2.1 6 YG/YG TU	3150590000	K.3
SUPER CUT	9205150000	Q.11
SVSE ESD 130	9205140000	Q.11
SZE ESD 130	9204770000	Q.11

T

TM 4/12 HF/HB	1719840000	0.8
TM 4/12 HF/HB	1719840000	0.9
TM 4/12 HF/HB	1719840000	0.10
TM 4/12 HF/HB	1719840000	0.11
TM 4/12 HF/HB	1719840000	0.12
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TM 4/12 HF/HB	1719840000	0.61
TM 4/12 HF/HB	1719840000	0.62
TM 4/12 HF/HB	1719840000	P.3
TM 4/12 HF/HB	1719840000	Q.34
TM 4/18 HF/HB	1719850000	0.8
TM 4/18 HF/HB	1719850000	0.9
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TM 4/18 HF/HB	1719850000	0.11
TM 4/18 HF/HB	1719850000	0.12
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TM 4/18 HF/HB	1719850000	0.14
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TM 4/18 HF/HB	1719850000	0.19
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TM 4/18 HF/HB	1719850000	0.61
TM 4/18 HF/HB	1719850000	0.62
TM 4/18 HF/HB	1719850000	P.3
TM 4/18 HF/HB	1719850000	Q.34
TM-I 12 MC NE GE	1718411687	0.8
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TM-I 18 MC NE GE	1718431687	0.8
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TM-I 18 MC NE GE	1718431687	P.3
TM-I 18 MC NE GE	1718431687	Q.34
TM-I 18 MC NE WS	1718431044	Q.34
TOOL SET IE-POF	1208930000	M.10
TOOL SET IE-POF	1208930000	M.56
TOOL SET IE-POF	1208930000	P.3
TOOL SET IE-POF	1208930000	Q.12
TT 8 RS MP 8	9202800000	K.8
TT 8 RS MP 8	9202800000	M.3
TT 8 RS MP 8	9202800000	M.50
TT 8 RS MP 8	9202800000	N.16
TT 8 RS MP 8	9202800000	Q.5

U

U-LINK-1-CONNECTION-1Y	2870130000	E.7
U-LINK-100-DEVICES-1Y	2870100000	E.6
U-LINK-1000-DEVICES-1Y	2924220000	E.6
U-LINK-250-DEVICES-1Y	2870110000	E.6
U-LINK-50-DEVICES-1Y	2870090000	E.6
U-LINK-500-DEVICES-1Y	2870120000	E.6
U-LINK-BASIC-EXTENSION-1Y	3024610000	E.6
U-LINK-CNSERVER-1Y	2870140000	E.7

V

VDATA CAT6	1348590000	Q.35
VFSKHV/1,5-2,5/485	1491920000	L.38
VFSKHV/1,5-2,5/638	1491940000	L.42
VT SF 5/21 MC NE WS V0	1689470001	0.8
VT SF 5/21 MC NE WS V0	1689470001	0.9
VT SF 5/21 MC NE WS V0	1689470001	0.10
VT SF 5/21 MC NE WS V0	1689470001	0.11
VT SF 5/21 MC NE WS V0	1689470001	0.12
VT SF 5/21 MC NE WS V0	1689470001	0.13
VT SF 5/21 MC NE WS V0	1689470001	0.14
VT SF 5/21 MC NE WS V0	1689470001	0.15
VT SF 5/21 MC NE WS V0	1689470001	0.16
VT SF 5/21 MC NE WS V0	1689470001	0.17
VT SF 5/21 MC NE WS V0	1689470001	0.18
VT SF 5/21 MC NE WS V0	1689470001	0.19
VT SF 5/21 MC NE WS V0	1689470001	0.29
VT SF 5/21 MC NE WS V0	1689470001	P.3
VT SF 5/21 MC NE WS V0	1689470001	P.4
VT SF 5/21 MC NE WS V0	1689470001	P.5
VT SF 5/21 MC NE WS V0	1689470001	P.6
VT SF 5/21 MC NE WS V0	1689470001	P.7
VT SF 5/21 MC NE WS V0	1689470001	P.8
VT SF 5/21 MC NE WS V0	1689470001	P.9
VT SF 5/21 MC NE WS V0	1689470001	P.10
VT SF 5/21 MC NE WS V0	1689470001	P.11
VT SF 5/21 MC NE WS V0	1689470001	P.12
VT SF 5/21 MC NE WS V0	1689470001	P.13
VT SF 5/21 MC NE WS V0	1689470001	Q.34
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VT SF 6/21 MC NE WS V0	1730560001	P.3
VT SF 6/21 MC NE WS V0	1730560001	P.4
VT SF 6/21 MC NE WS V0	1730560001	P.5
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VT SF 6/21 MC NE WS V0	1730560001	P.8
VT SF 6/21 MC NE WS V0	1730560001	P.9
VT SF 6/21 MC NE WS V0	1730560001	P.10
VT SF 6/21 MC NE WS V0	1730560001	P.11
VT SF 6/21 MC NE WS V0	1730560001	P.12
VT SF 6/21 MC NE WS V0	1730560001	P.13
VT SF 6/21 MC NE WS V0	1730560001	Q.34

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1010000000

1010840015	IE-C5DB4RE0015MCSXXX-X	0.58
1010840030	IE-C5DB4RE0030MCSXXX-X	0.58
1010840050	IE-C5DB4RE0050MCSXXX-X	0.58
1010840100	IE-C5DB4RE0100MCSXXX-X	0.58
1010850015	IE-C5DB4RE0015MCSMCS-E	0.57
1010850030	IE-C5DB4RE0030MCSMCS-E	0.57
1010850050	IE-C5DB4RE0050MCSMCS-E	0.57
1010850100	IE-C5DB4RE0100MCSMCS-E	0.57
1011540000	IE-BHS-V14M-RJA	M.4
1011540000	IE-BHS-V14M-RJA	M.5
1011540000	IE-BHS-V14M-RJA	M.6
1011540000	IE-BHS-V14M-RJA	M.8
1011560000	IE-PH-V14M-RJ	M.2
1011560000	IE-PH-V14M-RJ	M.3
1011560000	IE-PH-V14M-RJ	M.7
1012160000	IE-PS-V14M-RJ45-TH	M.3
1012170000	IE-PS-V14M-RJ45-FH-P	I.9
1012170000	IE-PS-V14M-RJ45-FH-P	M.2
1012310000	IE-BSS-V14M-RJ45-C	I.8
1012310000	IE-BSS-V14M-RJ45-C	M.5
1012320000	IE-BSS-V14M-RJ45-FJ-A	M.4
1012370000	IE-BS-V01P-RJ45-C	I.12
1012370000	IE-BS-V01P-RJ45-C	M.17
1012380000	IE-BS-V01P-RJ45-FJ-A	I.12
1012380000	IE-BS-V01P-RJ45-FJ-A	M.17
1012440000	IE-PH-V01P	M.16
1012460000	IE-PH-V01P-BP	M.16
1012470000	IE-PS-V01P-RJ45-TH	I.12
1012470000	IE-PS-V01P-RJ45-TH	M.16
1012490000	IE-PS-V01P-RJ45-FH	I.12
1012490000	IE-PS-V01P-RJ45-FH	M.16
1012560000	IE-PS-V01P-RJ45-TH-BP	M.16
1012570000	IE-PS-V01P-RJ45-FH-BP	M.16
1016960000	IE-BH-V01P	M.17
1018790000	IE-FCM-RJ45-C	I.8
1018790000	IE-FCM-RJ45-C	I.12
1018790000	IE-FCM-RJ45-C	L.47
1018810000	IE-FCM-RJ45-FJ-A	I.12
1018810000	IE-FCM-RJ45-FJ-A	L.46
1018820000	IE-FCM-RJ45-FJ-B	I.12
1018820000	IE-FCM-RJ45-FJ-B	L.46
1018830000	IE-FCM-RJ45-FJ-P	I.8
1018830000	IE-FCM-RJ45-FJ-P	L.46
1018840000	IE-FCM-USB-A	L.48
1019570000	IE-BI-USB-A	L.18
1019570000	IE-BI-USB-A	L.19
1019570000	IE-BI-USB-A	L.21
1019570000	IE-BI-USB-A	L.23
1019570000	IE-BI-USB-A	L.24
1019570000	IE-BI-USB-A	L.25
1019570000	IE-BI-USB-A	L.26
1019570000	IE-BI-USB-A	L.28
1019570000	IE-BI-USB-A	M.55

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1025940010	IE-C5DD4UG0010MCSXXX-X	0.39
1025940015	IE-C5DD4UG0015MCSXXX-X	0.39
1025940030	IE-C5DD4UG0030MCSXXX-X	0.39
1025940050	IE-C5DD4UG0050MCSXXX-X	0.39
1025940100	IE-C5DD4UG0100MCSXXX-X	0.39
1025950005	IE-C5DD4UG0005MCSMCS-E	0.38
1025950015	IE-C5DD4UG0015MCSMCS-E	0.38
1025950030	IE-C5DD4UG0030MCSMCS-E	0.38
1025950050	IE-C5DD4UG0050MCSMCS-E	0.38
1025950100	IE-C5DD4UG0100MCSMCS-E	0.38

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1044470010	IE-C5DD4UG0010MCSA70-E	0.39
1044470015	IE-C5DD4UG0015MCSA70-E	0.39
1044470030	IE-C5DD4UG0030MCSA70-E	0.39
1044470050	IE-C5DD4UG0050MCSA70-E	0.39
1044470100	IE-C5DD4UG0100MCSA70-E	0.39
1045780000	IE-OP-V04P-1S	N.13
1045960000	IE-CC-V04P	M.21
1047940000	IE-BHD-V14M	I.8
1047940000	IE-BHD-V14M	M.4
1047940000	IE-BHD-V14M	M.5
1047940000	IE-BHD-V14M	M.6
1047940000	IE-BHD-V14M	M.11
1047950000	IE-BHC-V14M-RJA	M.4
1047950000	IE-BHC-V14M-RJA	M.5
1047950000	IE-BHC-V14M-RJA	M.6

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1058100000	IE-PH-V14M-F0	M.10
1058120000	IE-BSS-V14M-SCRJ-MM-C	I.8
1058120000	IE-BSS-V14M-SCRJ-MM-C	M.11
1058130000	IE-BSS-V14M-LCD-MM-C	M.11
1058140000	IE-BSS-V14M-SCRJ-SM-C	I.8
1058140000	IE-BSS-V14M-SCRJ-SM-C	M.11
1058150000	IE-BSS-V14M-LCD-SM-C	M.11
1058250000	IE-BSC-V14M-RJ45-C	I.8
1058250000	IE-BSC-V14M-RJ45-C	M.5
1058270000	IE-BSC-V14M-RJ45-FJ-A	M.4
1058280000	IE-PP-V14P	M.2
1058280000	IE-PP-V14P	M.3
1058280000	IE-PP-V14P	M.7
1058280000	IE-PP-V14P	M.10
1058280000	IE-PP-V14P	Q.28
1058310000	IE-BP-V14P	M.4
1058310000	IE-BP-V14P	M.5
1058310000	IE-BP-V14P	M.6
1058310000	IE-BP-V14P	M.8
1058310000	IE-BP-V14P	M.11
1058310000	IE-BP-V14P	N.2
1058310000	IE-BP-V14P	N.3
1058310000	IE-BP-V14P	N.4
1058310000	IE-BP-V14P	N.6
1058310000	IE-BP-V14P	N.7
1058310000	IE-BP-V14P	Q.28
1059330005	IE-C5DD4UG0005MSSMCS-E	0.38
1059330015	IE-C5DD4UG0015MSSMCS-E	0.38
1059330030	IE-C5DD4UG0030MSSMCS-E	0.38
1059330050	IE-C5DD4UG0050MSSMCS-E	0.38
1059330100	IE-C5DD4UG0100MSSMCS-E	0.38
1059340015	IE-C5DB4RE0015MSSMCS-E	0.57
1059340030	IE-C5DB4RE0030MSSMCS-E	0.57
1059340050	IE-C5DB4RE0050MSSMCS-E	0.57
1059340100	IE-C5DB4RE0100MSSMCS-E	0.57
1059750015	IE-C5DD4UG0015MCAXXX-X	0.41
1059750030	IE-C5DD4UG0030MCAXXX-X	0.41
1059750050	IE-C5DD4UG0050MCAXXX-X	0.41
1059750100	IE-C5DD4UG0100MCAXXX-X	0.41
1059770015	IE-C5DD4UG0015MCSMCA-E	0.40
1059770030	IE-C5DD4UG0030MCSMCA-E	0.40
1059770100	IE-C5DD4UG0100MCSMCA-E	0.40
1059890015	IE-C5DD4UG0015MCAMCA-E	0.40
1059890030	IE-C5DD4UG0030MCAMCA-E	0.40
1059890050	IE-C5DD4UG0050MCAMCA-E	0.40
1059890100	IE-C5DD4UG0100MCAMCA-E	0.40
1059900015	IE-C5DB4RE0015MCAXXX-X	0.60
1059900030	IE-C5DB4RE0030MCAXXX-X	0.60
1059900050	IE-C5DB4RE0050MCAXXX-X	0.60
1059900100	IE-C5DB4RE0100MCAXXX-X	0.60
1059940015	IE-C5DB4RE0015MCSMCA-E	0.59
1059940030	IE-C5DB4RE0030MCSMCA-E	0.59
1059940050	IE-C5DB4RE0050MCSMCA-E	0.59
1059940100	IE-C5DB4RE0100MCSMCA-E	0.59
1059970015	IE-C5DB4RE0015MCAMCA-E	0.59
1059970030	IE-C5DB4RE0030MCAMCA-E	0.59
1059970050	IE-C5DB4RE0050MCAMCA-E	0.59
1059970100	IE-C5DB4RE0100MCAMCA-E	0.59

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1061820000	IE-CC-V01P	I.13
1061820000	IE-CC-V01P	M.18
1061830000	IE-OP-V01P-1S	I.13
1061830000	IE-OP-V01P-1S	N.11
1062550000	IE-FM5Z2V00005MLD0LD0X	P.9
1062570000	IE-FM5Z2V00002MLD0LD0X	P.9
1062580000	IE-FM5Z2V00010MLD0LD0X	P.9
1062590000	IE-BSC-V14M-SCRJ-MM-C	I.8
1062590000	IE-BSC-V14M-SCRJ-MM-C	M.11
1062600000	IE-BSC-V14M-SCRJ-SM-C	I.8
1062600000	IE-BSC-V14M-SCRJ-SM-C	M.11
1062610000	IE-BSC-V14M-LCD-MM-C	M.11
1062620000	IE-BSC-V14M-LCD-SM-C	M.11
1066850000	IE-C5ES8UG0010B41B41-E	I.13
1066850000	IE-C5ES8UG0010B41B41-E	0.47
1066860000	IE-C5ES8UG0020B41B41-E	I.13
1066860000	IE-C5ES8UG0020B41B41-E	0.47
1066870000	IE-C5ES8UG0050B41B41-E	I.13
1066870000	IE-C5ES8UG0050B41B41-E	0.47
1066880000	IE-C5ES8UG0100B41B41-E	I.13
1066880000	IE-C5ES8UG0100B41B41-E	0.47
1067410000	IE-PI-SCRJ-POF	M.10
1067410000	IE-PI-SCRJ-POF	M.56
1068820000	IE-CD-V14MRJ/VAPM24V-C-MA	I.9
1068820000	IE-CD-V14MRJ/VAPM24V-C-MA	N.3
1068830000	IE-CD-V14MRJ/VAPM24V-FJ	I.9
1068830000	IE-CD-V14MRJ/VAPM24V-FJ	N.2
1068840000	IE-CD-V14MHYB-10P-C-MA	I.9
1068840000	IE-CD-V14MHYB-10P-C-MA	N.7
1068850000	IE-CD-V14MHYB-10P-FJ	I.9
1068850000	IE-CD-V14MHYB-10P-FJ	N.6
1068870000	IE-CD-V14MRJ-C-MA	I.9
1068870000	IE-CD-V14MRJ-C-MA	N.3
1068880000	IE-CD-V14MRJ-FJ	I.9
1068880000	IE-CD-V14MRJ-FJ	N.2
1068930000	IE-BP-VAPP	M.60
1068930000	IE-BP-VAPP	N.2
1068930000	IE-BP-VAPP	N.3
1068930000	IE-BP-VAPP	N.5
1068930000	IE-BP-VAPP	Q.28
1068950000	IE-PIC-HYB-S-0,75-300	M.7
1068950000	IE-PIC-HYB-S-0,75-300	M.53
1068970000	IE-BIC-HYB-P-0,75-300	I.8
1068970000	IE-BIC-HYB-P-0,75-300	M.8
1068970000	IE-BIC-HYB-P-0,75-300	M.54
1068970000	IE-BIC-HYB-P-0,75-300	N.6
1068990000	IE-PI-HYB-10P	M.53
1069010000	IE-BI-HYB-10P	M.54

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1072900000	IE-BSS-V14M-HYB-10P-FJ	I.8
1072900000	IE-BSS-V14M-HYB-10P-FJ	M.8
1072910000	IE-PS-V14M-HYB-10P	I.9
1072910000	IE-PS-V14M-HYB-10P	M.7
1073340000	SM 27/18 K MC NE GR	L.14
1073340000	SM 27/18 K MC NE GR	L.15
1073340000	SM 27/18 K MC NE GR	L.16
1073340000	SM 27/18 K MC NE GR	L.17
1077300000	IE-PS-V05M-A-RJ45-FH	M.25

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1085260000	IE-BSS-V14M-RJ45-FJ-P	I.8
1085260000	IE-BSS-V14M-RJ45-FJ-P	M.4

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1096150000	IE-BIC-HYB-P-0,5-300	I.8
1096150000	IE-BIC-HYB-P-0,5-300	M.8
1096150000	IE-BIC-HYB-P-0,5-300	M.54
1096150000	IE-BIC-HYB-P-0,5-300	N.6
1096180000	IE-PIC-HYB-S-0,5-300	M.7
1096180000	IE-PIC-HYB-S-0,5-300	M.53
1099580000	IE-CD-MA	N.2
1099580000	IE-CD-MA	N.6

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1106010000	IE-C5ES8UG0010P41P41-E	I.13
1106010000	IE-C5ES8UG0010P41P41-E	0.47
1106020000	IE-C5ES8UG0020P41P41-E	I.13
1106020000	IE-C5ES8UG0020P41P41-E	0.47
1106030000	IE-C5ES8UG0050P41P41-E	I.13
1106030000	IE-C5ES8UG0050P41P41-E	0.47
1106040000	IE-C5ES8UG0100P41P41-E	I.13
1106040000	IE-C5ES8UG0100P41P41-E	0.47

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1119580000	HTF HYB	M.7
1119580000	HTF HYB	M.8
1119580000	HTF HYB	M.53
1119580000	HTF HYB	M.54
1119580000	HTF HYB	N.6
1119580000	HTF HYB	Q.15
1119730010	IE-C5DD4UG0010A2EA2E-X	I.9
1119730010	IE-C5DD4UG0010A2EA2E-X	0.35
1119730020	IE-C5DD4UG0020A2EA2E-X	0.35
1119730030	IE-C5DD4UG0030A2EA2E-X	I.9
1119730030	IE-C5DD4UG0030A2EA2E-X	0.35
1119730050	IE-C5DD4UG0050A2EA2E-X	I.9
1119730050	IE-C5DD4UG0050A2EA2E-X	0.35
1119730100	IE-C5DD4UG0100A2EA2E-X	I.9
1119730100	IE-C5DD4UG0100A2EA2E-X	0.35
1119730150	IE-C5DD4UG0150A2EA2E-X	0.35
1119730200	IE-C5DD4UG0200A2EA2E-X	0.35

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1122710000	IE-CD-V04PRJ-C-MA	N.13

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1131380000	IE-BI-USB-AB	L.18
1131380000	IE-BI-USB-AB	L.19
1131380000	IE-BI-USB-AB	L.21
1131380000	IE-BI-USB-AB	L.23
1131380000	IE-BI-USB-AB	L.24
1131380000	IE-BI-USB-AB	L.25
1131380000	IE-BI-USB-AB	L.26
1131380000	IE-BI-USB-AB	L.28
1131380000	IE-BI-USB-AB	M.55
1132010000	IE-PI-RJ45-FH-A	M.49
1132020000	IE-PI-RJ45-FH-B	M.49
1132030000	IE-PI-RJ45-FH-P	M.49
1132040000	IE-PS-RJ45-FH-BK-A	I.12
1132040000	IE-PS-RJ45-FH-BK-A	K.4
1132050000	IE-PS-RJ45-FH-BK-B	I.12
1132050000	IE-PS-RJ45-FH-BK-B	K.4
1132060000	IE-PS-RJ45-FH-BK-P	I.8
1132060000	IE-PS-RJ45-FH-BK-P	K.4
1135150000	IE-PIC-HYB-S-0,2-300	M.7
1135150000	IE-PIC-HYB-S-0,2-300	M.53
1135160000	IE-BIC-HYB-P-0,2-300	M.8
1135160000	IE-BIC-HYB-P-0,2-300	M.54
1135160000	IE-BIC-HYB-P-0,2-300	N.6
1139330000	SAIBWZ-M-4D-6/8-M12	M.32

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1157830000	KT 22	Q.9

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1165900002	IE-C6FP8LB0002M40M40-B	0.21
1165900005	IE-C6FP8LB0005M40M40-B	0.21
1165900010	IE-C6FP8LB0010M40M40-B	0.21
1165900015	IE-C6FP8LB0015M40M40-B	0.21
1165900020	IE-C6FP8LB0020M40M40-B	0.21
1165900030	IE-C6FP8LB0030M40M40-B	0.21
1165900050	IE-C6FP8LB0050M40M40-B	0.21
1165900100	IE-C6FP8LB0100M40M40-B	0.21
1165900150	IE-C6FP8LB0150M40M40-B	0.21
1165900200	IE-C6FP8LB0200M40M40-B	0.21
1165900250	IE-C6FP8LB0250M40M40-B	0.21
1165940002	IE-C6FP8LD0002M40M40-D	0.20
1165940005	IE-C6FP8LD0005M40M40-D	0.20
1165940010	IE-C6FP8LD0010M40M40-D	0.20
1165940015	IE-C6FP8LD0015M40M40-D	0.20
1165940020	IE-C6FP8LD0020M40M40-D	0.20
1165940030	IE-C6FP8LD0030M40M40-D	0.20
1165940050	IE-C6FP8LD0050M40M40-D	0.20
1165940075	IE-C6FP8LD0075M40M40-D	0.20
1165940100	IE-C6FP8LD0100M40M40-D	0.20
1165940150	IE-C6FP8LD0150M40M40-D	0.20
1165940200	IE-C6FP8LD0200M40M40-D	0.20
1165940250	IE-C6FP8LD0250M40M40-D	0.20
1166000005	IE-C5ES8UG0005M40M40-G	0.28
1166000010	IE-C5ES8UG0010M40M40-G	0.28
1166000015	IE-C5ES8UG0015M40M40-G	0.28
1166000020	IE-C5ES8UG0020M40M40-G	0.28
1166000030	IE-C5ES8UG0030M40M40-G	0.28
1166000050	IE-C5ES8UG0050M40M40-G	0.28
1166000100	IE-C5ES8UG0100M40M40-G	0.28
1166000150	IE-C5ES8UG0150M40M40-G	0.28
1166000200	IE-C5ES8UG0200M40M40-G	0.28
1166020005	IE-C5ES8VG0005M40M40-G	0.28
1166020010	IE-C5ES8VG0010M40M40-G	0.28
1166020015	IE-C5ES8VG0015M40M40-G	0.28
1166020020	IE-C5ES8VG0020M40M40-G	0.28
1166020030	IE-C5ES8VG0030M40M40-G	0.28
1166020050	IE-C5ES8VG0050M40M40-G	0.28
1166020100	IE-C5ES8VG0100M40M40-G	0.28
1166020150	IE-C5ES8VG0150M40M40-G	0.28
1166020200	IE-C5ES8VG0200M40M40-G	0.28
1166030002	IE-C6FP8LR0002M40M40-R	0.22
1166030005	IE-C6FP8LR0005M40M40-R	0.22
1166030010	IE-C6FP8LR0010M40M40-R	0.22
1166030015	IE-C6FP8LR0015M40M40-R	0.22
1166030020	IE-C6FP8LR0020M40M40-R	0.22
1166030030	IE-C6FP8LR0030M40M40-R	0.22
1166030050	IE-C6FP8LR0050M40M40-R	0.22
1166030100	IE-C6FP8LR0100M40M40-R	0.22
1166030150	IE-C6FP8LR0150M40M40-R	0.22
1166030200	IE-C6FP8LR0200M40M40-R	0.22
1166030250	IE-C6FP8LR0250M40M40-R	0.22

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1173030005	IE-C5DD4UG0005A20A20-E	0.33
1173030010	IE-C5DD4UG0010A20A20-E	0.33
1173030020	IE-C5DD4UG0020A20A20-E	0.33
1173030030	IE-C5DD4UG0030A20A20-E	0.33
1173030050	IE-C5DD4UG0050A20A20-E	0.33
1173030100	IE-C5DD4UG0100A20A20-E	0.33
1173030150	IE-C5DD4UG0150A20A20-E	0.33
1173030200	IE-C5DD4UG0200A20A20-E	0.33
1174830000	IE-FM6D2UE0020MLD0LD0X	P.10

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1191550000	IE-PS-V14M-2SC-POF	I.9
1191550000	IE-PS-V14M-2SC-POF	M.10

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1201270002	IE-C6FP8LM0002M40M40-M	0.23
1201270005	IE-C6FP8LM0005M40M40-M	0.23
1201270010	IE-C6FP8LM0010M40M40-M	0.23
1201270015	IE-C6FP8LM0015M40M40-M	0.23
1201270020	IE-C6FP8LM0020M40M40-M	0.23
1201270030	IE-C6FP8LM0030M40M40-M	0.23
1201270050	IE-C6FP8LM0050M40M40-M	0.23
1201270100	IE-C6FP8LM0100M40M40-M	0.23
1201270150	IE-C6FP8LM0150M40M40-M	0.23
1201270200	IE-C6FP8LM0200M40M40-M	0.23
1206720000	IE-PS-SCRJ1-POF	I.8
1206720000	IE-PS-SCRJ1-POF	I.12
1206720000	IE-PS-SCRJ1-POF	K.10
1208870000	HTX-IE-POF	K.10
1208870000	HTX-IE-POF	M.10
1208870000	HTX-IE-POF	M.56
1208870000	HTX-IE-POF	P.3
1208870000	HTX-IE-POF	Q.12
1208870000	HTX-IE-POF	Q.13
1208880000	MULTI-STRIPAX IE-POF	M.10
1208880000	MULTI-STRIPAX IE-POF	M.56
1208880000	MULTI-STRIPAX IE-POF	Q.12
1208910000	SCISSORS KEVLAR	M.10
1208910000	SCISSORS KEVLAR	M.56
1208910000	SCISSORS KEVLAR	Q.12
1208910000	SCISSORS KEVLAR	Q.14
1208930000	TOOL SET IE-POF	M.10
1208930000	TOOL SET IE-POF	M.56
1208930000	TOOL SET IE-POF	P.3
1208930000	TOOL SET IE-POF	Q.12

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1220000000		
1220310040	IE-C5DB4WE0040MCSA70-E	0.61
1220930000	IE-FM6D2UE0005MLD0LD0X	P.10
1221010000	IE-BS-V01M-SCRJ-MM	I.12
1221010000	IE-BS-V01M-SCRJ-MM	M.14
1221020000	IE-BS-V01M-SCRJ-SM	I.12
1221020000	IE-BS-V01M-SCRJ-SM	M.14
1221030000	IE-BHD-V01M-SCA	M.14
1222550000	IE-FCM-USB-AB	L.48
1230000000		
1233160005	IE-C6FP8LD0005M40W40-D	0.25
1233160010	IE-C6FP8LD0010M40W40-D	0.25
1233160012	IE-C6FP8LD0012M40W40-D	0.25
1233160015	IE-C6FP8LD0015M40W40-D	0.25
1233160020	IE-C6FP8LD0020M40W40-D	0.25
1233160030	IE-C6FP8LD0030M40W40-D	0.25
1233160050	IE-C6FP8LD0050M40W40-D	0.25
1233160100	IE-C6FP8LD0100M40W40-D	0.25
1234750005	IE-C5DS4UG0005MBSA70-E	0.42
1234750010	IE-C5DS4UG0010MBSA70-E	0.42
1234750015	IE-C5DS4UG0015MBSA70-E	0.42
1234750020	IE-C5DS4UG0020MBSA70-E	0.42
1234750050	IE-C5DS4UG0050MBSA70-E	0.42
1234770005	IE-C5DS4UG0005MBSXXX-E	0.43
1234770010	IE-C5DS4UG0010MBSXXX-E	0.43
1234770015	IE-C5DS4UG0015MBSXXX-E	0.43
1234770020	IE-C5DS4UG0020MBSXXX-E	0.43
1234770050	IE-C5DS4UG0050MBSXXX-E	0.43
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1240990000	IE-SW-VL08MT-6TX-2ST	C.13
1241020000	IE-SW-VL08MT-6TX-2SCS	C.14
1241400000	IE-MC-VL-1TX-1SC	F.5
1241410000	IE-MC-VL-1TX-1ST	F.5
1241420000	IE-MC-VL-1TX-1SCS	F.5
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1242080000	IE-CS-2TX-1RS232/485	F.6
1242090000	IE-CS-2TX-2RS232/485	F.6
1244130005	IE-C5DS4UG0005MBSMCS-E	0.42
1244130010	IE-C5DS4UG0010MBSMCS-E	0.42
1244130015	IE-C5DS4UG0015MBSMCS-E	0.42
1244130020	IE-C5DS4UG0020MBSMCS-E	0.42
1244130050	IE-C5DS4UG0050MBSMCS-E	0.42
1248280005	IE-C6FP8LD0005M40V40-D	0.25
1248280010	IE-C6FP8LD0010M40V40-D	0.25
1248280012	IE-C6FP8LD0012M40V40-D	0.25
1248280015	IE-C6FP8LD0015M40V40-D	0.25
1248280020	IE-C6FP8LD0020M40V40-D	0.25
1248280030	IE-C6FP8LD0030M40V40-D	0.25
1248280050	IE-C6FP8LD0050M40V40-D	0.25
1248280100	IE-C6FP8LD0100M40V40-D	0.25
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1251580010	IE-C6FP8LY0010M40M40-Y	0.24
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1251580020	IE-C6FP8LY0020M40M40-Y	0.24
1251580030	IE-C6FP8LY0030M40M40-Y	0.24
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1251590015	IE-C6FP8LG0015M40M40-G	0.22
1251590020	IE-C6FP8LG0020M40M40-G	0.22
1251590030	IE-C6FP8LG0030M40M40-G	0.22
1251590050	IE-C6FP8LG0050M40M40-G	0.22
1251590100	IE-C6FP8LG0100M40M40-G	0.22
1251590150	IE-C6FP8LG0150M40M40-G	0.22
1251590200	IE-C6FP8LG0200M40M40-G	0.22
1251590250	IE-C6FP8LG0250M40M40-G	0.22
1251610002	IE-C6FP8LE0002M40M40-E	0.21
1251610005	IE-C6FP8LE0005M40M40-E	0.21
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1251610020	IE-C6FP8LE0020M40M40-E	0.21
1251610030	IE-C6FP8LE0030M40M40-E	0.21
1251610050	IE-C6FP8LE0050M40M40-E	0.21
1251610100	IE-C6FP8LE0100M40M40-E	0.21
1251610150	IE-C6FP8LE0150M40M40-E	0.21
1251610200	IE-C6FP8LE0200M40M40-E	0.21
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1273430010	IE-FPOZ2EE0001MSJOSJ0-X	I.12
1273430010	IE-FPOZ2EE0001MSJOSJ0-X	P.4
1273430030	IE-FPOZ2EE0003MSJOSJ0-X	I.8
1273430030	IE-FPOZ2EE0003MSJOSJ0-X	I.12
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1273430050	IE-FPOZ2EE0005MSJOSJ0-X	I.8
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1273430050	IE-FPOZ2EE0005MSJOSJ0-X	P.4
1273430100	IE-FPOZ2EE0010MSJOSJ0-X	I.8
1273430100	IE-FPOZ2EE0010MSJOSJ0-X	I.12
1273430100	IE-FPOZ2EE0010MSJOSJ0-X	P.4
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1276880000	IE-FM5Z2V00001MLD0LD0X	P.9
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1286890000	IE-MC-VLT-1TX-1ST	F.5
1286900000	IE-MC-VLT-1TX-1SCS	F.5
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1302000000	IE-AD-BHS-V14M-RJA	M.9
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1307610020	IE-C5DD4UG0020B2EB2E-X	0.36
1307610030	IE-C5DD4UG0030B2EB2E-X	0.36
1307610050	IE-C5DD4UG0050B2EB2E-X	0.36
1307610100	IE-C5DD4UG0100B2EB2E-X	0.36
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1312160004	IE-C6FP8LD0004M40X40-Y	0.27
1312160005	IE-C6FP8LD0005M40X40-Y	0.27
1312160010	IE-C6FP8LD0010M40X40-Y	0.27
1312160020	IE-C6FP8LD0020M40X40-Y	0.27
1312160030	IE-C6FP8LD0030M40X40-Y	0.27
1312160050	IE-C6FP8LD0050M40X40-Y	0.27
1312160100	IE-C6FP8LD0100M40X40-Y	0.27
1312160150	IE-C6FP8LD0150M40X40-Y	0.27
1312160200	IE-C6FP8LD0200M40X40-Y	0.27
1312690010	IE-C5IT4UG0010B2EB2E-X	0.36
1312690020	IE-C5IT4UG0020B2EB2E-X	0.36
1312690030	IE-C5IT4UG0030B2EB2E-X	0.36
1312690050	IE-C5IT4UG0050B2EB2E-X	0.36
1312690100	IE-C5IT4UG0100B2EB2E-X	0.36
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1344680000	IE-C7FS8LG-305M	0.5
1344680000	IE-C7FS8LG-305M	0.13
1344690000	IE-C7FS8LE-305M	0.5
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1344770000	IE-SW-VL08MT-6TX-2SC	C.12
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1350120100	IE-CSPS5VS0100VAPVAP-X	0.37
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1367100000	IE-CC-NM-RPSMAM-4M	H.12
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1376510005	IE-C5DD4UG0005A2DA2D-E	0.33
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1376510050	IE-C5DD4UG0050A2DA2D-E	0.33
1376510100	IE-C5DD4UG0100A2DA2D-E	0.33
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1398070015	IE-C6KS8VG0015XCSXCS-E	0.44
1398070030	IE-C6KS8VG0030XCSXCS-E	0.44
1398070050	IE-C6KS8VG0050XCSXCS-E	0.44
1398070100	IE-C6KS8VG0100XCSXCS-E	0.44
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1403680150	IE-CSPD5US0150VAPVAP-X	0.37
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1421710020	IE-C5DB4WE0020A70A70-E	0.62
1421710030	IE-C5DB4WE0030A70A70-E	0.62
1421710040	IE-C5DB4WE0040A70A70-E	0.62
1421710050	IE-C5DB4WE0050A70A70-E	0.62
1421710100	IE-C5DB4WE0100A70A70-E	0.62
1421710200	IE-C5DB4WE0200A70A70-E	0.62
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1433930030	IE-FM6Z2L00003MLD0LD0-X	P.6
1433930050	IE-FM6Z2L00005MLD0LD0-X	P.6
1433930100	IE-FM6Z2L00010MLD0LD0-X	P.6
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1433940010	IE-FM5Z2L00001MLD0LD0-X	P.6
1433940020	IE-FM5Z2L00002MLD0LD0-X	P.6
1433940030	IE-FM5Z2L00003MLD0LD0-X	P.6
1433940050	IE-FM5Z2L00005MLD0LD0-X	P.6
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1433950030	IE-FSMZ2LY0003MLD0LD0-X	P.7
1433950050	IE-FSMZ2LY0005MLD0LD0-X	P.7
1433950100	IE-FSMZ2LY0010MLD0LD0-X	P.7
1433960005	IE-FM6Z2L00005DSDOSD0-X	P.5
1433960010	IE-FM6Z2L00001MSDOSD0-X	P.5
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1449420250	IE-FSMD2UE0025MSDESDEX	P.13
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1449470005	IE-C6KS8VG0005XCSXXX-E	0.44
1449470015	IE-C6KS8VG0015XCSXXX-E	0.44
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1457580050	IE-C6EL8UG0050U40XCS-E	0.46
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1491190000	IE-CC-NM-SMAM-4M	H.15
1491210000	IE-CC-NM-SMAM-6M	H.15
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1491940000	VFSKHV/1,5-2,5/638	L.42
1491970000	WFSKHV/1,5-2,5	L.42
1499940000	IE-CC-8W-FA-IP67	Q.3

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1504280000	IE-SW-VL05M-5TX	C.10
1504310000	IE-SW-VL05MT-5TX	C.10

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1514940000	IE-AD-M12DRJ45-MF-90	M.38
1514970000	IE-AD-M12DRJ45-MF-180	M.38
1516330000	IE-PS-M12X-S-FH	M.42
1516340000	IE-BS-M12X-S-FH	M.42
1518080000	IE-PS-RJ45-FH-90-A-1.1	K.6
1518090000	IE-PS-RJ45-FH-90-B-1.1	K.6
1518100000	IE-PS-RJ45-FH-90-P-1.6	I.8
1518100000	IE-PS-RJ45-FH-90-P-1.6	K.7

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1529580000	IE-FC-SET-SPDED001-KN-P	L.44

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1718411687	TM-I 12 MC NE GE	0.17
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1719840000	TM 4/12 HF/HB	0.19
1719840000	TM 4/12 HF/HB	0.29
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1719850000	TM 4/18 HF/HB	0.41
1719850000	TM 4/18 HF/HB	0.59
1719850000	TM 4/18 HF/HB	0.60
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1900000000	SCREWTY-M12	0.48
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1900000000	SCREWTY-M12	0.51
1900000000	SCREWTY-M12	0.52
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1900001000	SCREWTY-M12-DM	0.52
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2584420000	CABTITE SE 23-24 LRG GY	Q.18
2584430000	CABTITE SE 22-23 LRG GY	Q.18
2584440000	CABTITE SE 21-22 LRG GY	Q.18
2584450000	CABTITE SE 20-21 LRG GY	Q.18
2584460000	CABTITE SE 19-20 LRG GY	Q.18
2584470000	CABTITE SE 18-19 LRG GY	Q.18
2584480000	CABTITE SE 17-18 LRG GY	Q.18
2584490000	CABTITE SE 16-17 LRG GY	Q.18
2584500000	CABTITE SE 15-16 LRG GY	Q.18
2584510000	CABTITE SE 14-15 LRG GY	Q.18
2584520000	CABTITE BSE LRG GY	Q.18
2584550000	CABTITE SE 15-16 SML GY	Q.18
2584560000	CABTITE SE 14-15 SML GY	Q.18
2584570000	CABTITE SE 13-14 SML GY	Q.18
2584590000	CABTITE SE 12-13 SML GY	Q.18
2584600000	CABTITE SE 11-12 SML GY	Q.18
2584610000	CABTITE SE 10-11 SML GY	Q.18
2584630000	CABTITE SE 9-10 SML GY	Q.18
2584650000	CABTITE SE 8-9 SML GY	Q.18
2584660000	CABTITE SE 7-8 SML GY	Q.18
2584670000	CABTITE SE 7-8 SML BK	Q.18
2584680000	CABTITE SE 4-5 SML BK	Q.18
2584690000	CABTITE SE 6-7 SML BK	Q.18
2584710000	CABTITE SE 5-6 SML BK	Q.18
2584730000	CABTITE SE 3-4 SML BK	Q.18
2584760000	CABTITE SE 2-3 SML BK	Q.18
2584780000	CABTITE SE 1.5-2 SML BK	Q.18
2584790000	CABTITE BSE SML BK	Q.18
2584800000	CABTITE SE 2/ASI SML GY	Q.18
2584810000	CABTITE SE 1/ASI SML GY	Q.18
2584820000	CABTITE SE 2/8 SML GY	Q.18
2584830000	CABTITE SE 2/7 SML GY	Q.18
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2584860000	CABTITE SE 4/3-4 SML GY	Q.18
2584870000	CABTITE SE 4/2-3 SML GY	Q.18
2584890000	CABTITE SE 2/5-6 SML GY	Q.18
2584900000	CABTITE SE 2/4-5 SML GY	Q.18
2584910000	CABTITE SE 33-34 LRG GY	Q.18
2584920000	CABTITE SE 32-33 LRG GY	Q.18
2584980000	IE-PS-RJ45-TH-BK-P	K.9
2588270000	IE-CDM-V14MRJSCP/VAPM-C II	I.9
2588270000	IE-CDM-V14MRJSCP/VAPM-C II	N.9

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2592960000	PJ ADV TEXTILE COVER	Q.31
2595510000	CABTITE SE 33-34 LRG BK	Q.18
2595520000	CABTITE SE 34-35 LRG BK	Q.18
2595530000	CABTITE SE 34-35 LRG GY	Q.18

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2614210000	IE-CWZ-RJ45-TH-P	M.2
2614210000	IE-CWZ-RJ45-TH-P	Q.6

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2635120000	CABTITE SC M5X25 SET	Q.19
2635120000	CABTITE SC M5X25 SET	Q.20
2635120000	CABTITE SC M5X25 SET	Q.21
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2637360000	CABTITE TOOL ATSE PA	Q.19
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2652280000	CABTITE SE 3/5-6 SML BK	Q.18
2652290000	CABTITE SE 3/5-6 SML GY	Q.18
2652300000	CABTITE BP 2MM PA	Q.24
2652310000	CABTITE BP 3MM PA	Q.24
2652320000	CABTITE BP 4MM PA	Q.24
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2652340000	CABTITE BP 6MM PA	Q.24
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2652400000	CABTITE BP 12MM PA	Q.24
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2664790000	SAISGC-M-4D-4/9-M12-WDF	M.35
2664810000	SAISGC-M-4D-4/9-M12-CG	M.35
2664820000	IE-PS-M12X-180-P-TH-CG	M.43
2664840000	SAI-M12-KSC-18/20	M.37
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2673440000	IE-PIC-M12X-S-22/26	M.45
2673710000	SAI-M12-KSC-22/24	M.37
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2682260000	IE-SW-AL06LM-4TX-2SC	C.5
2682270000	IE-SW-AL06LM-4TX-2SCS	C.6
2682280000	IE-SW-AL08M-8TX	C.7
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2701550010	IE-C6FP8LV0010M40M40-V	O.23
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2701550020	IE-C6FP8LV0020M40M40-V	O.23
2701550030	IE-C6FP8LV0030M40M40-V	O.23
2701550050	IE-C6FP8LV0050M40M40-V	O.23
2701550100	IE-C6FP8LV0100M40M40-V	O.23
2701550150	IE-C6FP8LV0150M40M40-V	O.23
2701550200	IE-C6FP8LV0200M40M40-V	O.23
2702690000	SAISWC-M-4D-4/9-M12-CG	M.36
2702700000	SAIBWC-M-4D-4/9-M12-CG	M.36
2702710000	IE-PS-M12X-90-P-TH-CG	M.43
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2703320005	IE-C6FP8LD0005M40L40-D	O.26
2703320010	IE-C6FP8LD0010M40L40-D	O.26
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2703320030	IE-C6FP8LD0030M40L40-D	O.26
2703320050	IE-C6FP8LD0050M40L40-D	O.26
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2703330020	IE-C6FP8LD0020M40R40-D	O.26
2703330030	IE-C6FP8LD0030M40R40-D	O.26
2703330050	IE-C6FP8LD0050M40R40-D	O.26
2703330100	IE-C6FP8LD0100M40R40-D	O.26
2703390000	IE-PS-RJ45-FH-180-A-1.6-CG	K.5
2703410000	IE-PS-RJ45-FH-180-B-1.6-CG	K.5
2703420000	IE-PS-RJ45-FH-180-P-1.6-CG	K.7
2703440000	IE-PS-RJ45-FH-180-A-1.1-CG	K.5
2703460000	IE-PS-RJ45-FH-180-B-1.1-CG	K.5
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2706150050	IE-C5DD4UG0050DCSXXX-E	O.52
2706150075	IE-C5DD4UG0075DCSXXX-E	O.52
2706150100	IE-C5DD4UG0100DCSXXX-E	O.52
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2706150300	IE-C5DD4UG0300DCSXXX-E	O.52
2706160030	IE-C5DD4UG0030DSAXXX-E	O.53
2706160050	IE-C5DD4UG0050DSAXXX-E	O.53
2706160075	IE-C5DD4UG0075DSAXXX-E	O.53
2706160100	IE-C5DD4UG0100DSAXXX-E	O.53
2706160200	IE-C5DD4UG0200DSAXXX-E	O.53
2706160300	IE-C5DD4UG0300DSAXXX-E	O.53
2706190030	IE-C5DD4UG0030DCAXXX-E	O.53
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2706200015	IE-C5DD4UG0015DCSDCS-E	O.54
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2706200100	IE-C5DD4UG0100DCSDCS-E	O.54
2706200200	IE-C5DD4UG0200DCSDCS-E	O.54
2706200300	IE-C5DD4UG0300DCSDCS-E	O.54
2706210030	IE-C5DD4UG0030DCSDSS-E	O.54
2706210050	IE-C5DD4UG0050DCSDSS-E	O.54
2706210075	IE-C5DD4UG0075DCSDSS-E	O.54
2706210100	IE-C5DD4UG0100DCSDSS-E	O.54
2706210200	IE-C5DD4UG0200DCSDSS-E	O.54
2706210300	IE-C5DD4UG0300DCSDSS-E	O.54
2706220015	IE-C5DD4UG0015DCADCA-E	O.55
2706220030	IE-C5DD4UG0030DCADCA-E	O.55
2706220050	IE-C5DD4UG0050DCADCA-E	O.55
2706220075	IE-C5DD4UG0075DCADCA-E	O.55
2706220100	IE-C5DD4UG0100DCADCA-E	O.55
2706230030	IE-C5DD4UG0030DCADSA-E	O.55
2706230050	IE-C5DD4UG0050DCADSA-E	O.55
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2706250015	IE-C5DD4UG0015DCSU20-E	O.56
2706250030	IE-C5DD4UG0030DCSU20-E	O.56
2706250050	IE-C5DD4UG0050DCSU20-E	O.56
2706250075	IE-C5DD4UG0075DCSU20-E	O.56
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2706260030	IE-C5DD4UG0030DSSXXX-E	O.52
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2706260075	IE-C5DD4UG0075DSSXXX-E	O.52
2706260100	IE-C5DD4UG0100DSSXXX-E	O.52
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2717400015	IE-C5DE4UP0015PSSXXX-E	O.48
2717740030	IE-C5DE4UP0030PSSXXX-E	O.48
2717740050	IE-C5DE4UP0050PSSXXX-E	O.48
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2717740100	IE-C5DE4UP0100PSSXXX-E	O.48
2717740200	IE-C5DE4UP0200PSSXXX-E	O.48
2717740300	IE-C5DE4UP0300PSSXXX-E	O.48
2717750015	IE-C5DE4UP0015PCSXXX-E	O.48
2717750030	IE-C5DE4UP0030PCSXXX-E	O.48
2717750050	IE-C5DE4UP0050PCSXXX-E	O.48
2717750075	IE-C5DE4UP0075PCSXXX-E	O.48
2717750100	IE-C5DE4UP0100PCSXXX-E	O.48
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2717760100	IE-C5DE4UP0100PSAXXX-E	0.49
2717760200	IE-C5DE4UP0200PSAXXX-E	0.49
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2717770100	IE-C5DE4UP0100PCAXXX-E	0.49
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2717780030	IE-C5DE4UP0030PCSPCS-E	0.50
2717780050	IE-C5DE4UP0050PCSPCS-E	0.50
2717780075	IE-C5DE4UP0075PCSPCS-E	0.50
2717780100	IE-C5DE4UP0100PCSPCS-E	0.50
2717780200	IE-C5DE4UP0200PCSPCS-E	0.50
2717780300	IE-C5DE4UP0300PCSPCS-E	0.50
2717790015	IE-C5DE4UP0015PCSPSS-E	0.50
2717790030	IE-C5DE4UP0030PCSPSS-E	0.50
2717790050	IE-C5DE4UP0050PCSPSS-E	0.50
2717790075	IE-C5DE4UP0075PCSPSS-E	0.50
2717790100	IE-C5DE4UP0100PCSPSS-E	0.50
2717790200	IE-C5DE4UP0200PCSPSS-E	0.50
2717790300	IE-C5DE4UP0300PCSPSS-E	0.50
2717800015	IE-C5DE4UP0015PCAPCA-E	0.51
2717800030	IE-C5DE4UP0030PCAPCA-E	0.51
2717800050	IE-C5DE4UP0050PCAPCA-E	0.51
2717800075	IE-C5DE4UP0075PCAPCA-E	0.51
2717800100	IE-C5DE4UP0100PCAPCA-E	0.51
2717810015	IE-C5DE4UP0015PCAPSA-E	0.51
2717810030	IE-C5DE4UP0030PCAPSA-E	0.51
2717810050	IE-C5DE4UP0050PCAPSA-E	0.51
2717810075	IE-C5DE4UP0075PCAPSA-E	0.51
2717810100	IE-C5DE4UP0100PCAPSA-E	0.51

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2723030075	IE-C6HD8UG0075A40XCS-E	0.45
2723030100	IE-C6HD8UG0100A40XCS-E	0.45
2723030150	IE-C6HD8UG0150A40XCS-E	0.45
2723040010	IE-C6HD8UG0010XCSXCS-E	0.45
2723040030	IE-C6HD8UG0030XCSXCS-E	0.45
2723040050	IE-C6HD8UG0050XCSXCS-E	0.45
2723040075	IE-C6HD8UG0075XCSXCS-E	0.45
2723040100	IE-C6HD8UG0100XCSXCS-E	0.45
2723040150	IE-C6HD8UG0150XCSXCS-E	0.45
2726040000	IE-PS-SP0-S-FH-180	J.12
2726050020	IE-S1DS2VE0020TM1TM1-E	J.12
2726050050	IE-S1DS2VE0050TM1TM1-E	J.12
2726050100	IE-S1DS2VE0100TM1TM1-E	J.12
2726050150	IE-S1DS2VE0150TM1TM1-E	J.12
2726060020	IE-S1DS2VE0020TM1TM2-E	J.12
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2743560000	CABTITE EP A 24/17 GY	Q.25
2743570000	CABTITE EP A 24/18 GY	Q.25
2743580000	CABTITE EP A 24/19 GY	Q.25
2743590000	CABTITE EP A 24/26 GY	Q.25
2743600000	CABTITE EP A 24/42 GY	Q.25
2743610000	CABTITE EP A 24/48 GY	Q.25
2743620000	CABTITE EP A 24/50 GY	Q.25
2743630000	CABTITE EP B 24/12 GY	Q.25
2743640000	CABTITE EP B 24/14 GY	Q.25
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2743660000	CABTITE EP B 24/18 GY	Q.25
2743670000	CABTITE EP B 24/19 GY	Q.25
2743680000	CABTITE EP B 24/26 GY	Q.25
2743690000	CABTITE EP B 24/42 GY	Q.25
2743700000	CABTITE EP B 24/48 GY	Q.25
2743710000	CABTITE EP B 24/50 GY	Q.25
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2747900000	IE-BS-M12X-180-S-TH	M.44
2747910000	IE-BS-M12X-90-P-TH	M.44
2747920000	IE-BS-M12X-90-S-TH	M.44

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2763430000	IE-C5AS4VG-500	I.9
2763430000	IE-C5AS4VG-500	0.5
2763430000	IE-C5AS4VG-500	0.17
2763440000	IE-C5CS8VG-500	I.13
2763440000	IE-C5CS8VG-500	0.5
2763440000	IE-C5CS8VG-500	0.8
2763450000	IE-C5DD4UG-500	I.9
2763450000	IE-C5DD4UG-500	0.5
2763450000	IE-C5DD4UG-500	0.18
2763460000	IE-C5DHAG-500	I.9
2763460000	IE-C5DHAG-500	M.7
2763460000	IE-C5DHAG-500	M.8
2763460000	IE-C5DHAG-500	0.5
2763460000	IE-C5DHAG-500	0.19
2763470000	IE-C5DS4VG-500	I.9
2763470000	IE-C5DS4VG-500	0.5
2763470000	IE-C5DS4VG-500	0.17
2763480000	IE-C5ED8UB-500	0.5
2763480000	IE-C5ED8UB-500	0.16
2763490000	IE-C5ED8UG-500	0.5
2763490000	IE-C5ED8UG-500	0.16
2763500000	IE-C5ES8UG-500	I.13
2763500000	IE-C5ES8UG-500	0.5
2763500000	IE-C5ES8UG-500	0.10
2763510000	IE-C5ES8VG-500	I.13
2763510000	IE-C5ES8VG-500	0.5
2763510000	IE-C5ES8VG-500	0.10
2763520000	IE-C5IT4UG-500	I.9
2763520000	IE-C5IT4UG-500	0.5
2763520000	IE-C5IT4UG-500	0.18
2763530000	IE-C7BS8UG-500	0.5
2763530000	IE-C7BS8UG-500	0.9
2763540000	IE-C7BS8VG-500	0.5
2763540000	IE-C7BS8VG-500	0.9
2763550000	IE-C7ES8UG-500	0.5
2763550000	IE-C7ES8UG-500	0.11
2763560000	IE-C7ES8VG-500	0.5
2763560000	IE-C7ES8VG-500	0.11
2763640000	IE-FPOD2UG-500	I.9
2763640000	IE-FPOD2UG-500	I.13
2763640000	IE-FPOD2UG-500	P.3
2763660000	IE-C5DHAG-100	M.7
2763660000	IE-C5DHAG-100	M.8
2763660000	IE-C5DHAG-100	0.5
2763660000	IE-C5DHAG-100	0.19
2764770000	IE-C5IT4UG-100	0.5
2764770000	IE-C5IT4UG-100	0.18
2766120000	IE-SFP-1GE-RJ45	H.6
2768720000	IE-PI-RJ45-TH-P	M.2
2768740000	IE-PS-V14M-RJ45-TH-P	I.9
2768740000	IE-PS-V14M-RJ45-TH-P	M.2

2770000000

2778950000	IE-SW-SL10M-7TX-3GC-HV	C.29
2778960000	IE-SW-SL10M-7TX-3GC-LV	C.30
2778970000	IE-SW-SL20M-8GT-12GESFP-HV	C.31
2778980000	IE-SW-SL20M-8GT-12GESFP-LV	C.32
2778990000	IE-SW-SL26M-24TX-2GC-HV	C.33
2779000000	IE-SW-SL26M-24TX-2GC-LV	C.34
2779010000	IE-SW-SL28M-HV	C.35
2779020000	IE-SW-SL28M-LV	C.36
2779110000	IE-SFP-10GE-MM-03	H.7
2779120000	IE-SFP-10GE-SM-20	H.7
2779130000	IE-SFP-10GE-SM-40	H.7
2779140000	IE-SWM-SL08-8GT	C.42
2779150000	IE-SWM-SL08-8GESFP	C.42
2779160000	IE-SWM-SL04-4SCS	C.39
2779170000	IE-SWM-SL04-4SC	C.39
2779180000	IE-SWM-SL04-4STS	C.40
2779190000	IE-SWM-SL04-4ST	C.40
2779200000	IE-SWM-SL04-4GESFP	C.43
2779210000	IE-SWM-SL02-2GESFP+	C.44
2779220000	IE-SWM-SL04-4GESFP+	C.44
2779310000	CABTITE EP 24/13 GY	Q.26
2779320000	CABTITE EP 24/14 GY	Q.26
2779330000	CABTITE EP 24/16 GY	Q.26
2779340000	CABTITE EP 24/16-1 GY	Q.26
2779350000	CABTITE EP 24/17 GY	Q.26
2779360000	CABTITE EP 24/20 GY	Q.26
2779370000	CABTITE EP 24/21 GY	Q.26
2779380000	CABTITE EP 24/32 GY	Q.26
2779910000	IE-C7FP8LV-305M	0.5
2779910000	IE-C7FP8LV-305M	0.14

2780000000

2781880000	IE-C5ED8UB-1000	0.5
2781880000	IE-C5ED8UB-1000	0.16
2781890000	IE-C5ED8UG-1000	0.5
2781890000	IE-C5ED8UG-1000	0.16
2781950000	IE-FPOB2EG-500	I.9
2781950000	IE-FPOB2EG-500	I.13
2781950000	IE-FPOB2EG-500	P.3
2782300000	IE-KEY-RJ45/IDC-1	K.12
2787920000	IE-CC-SMAM-SMAF-1M	H.15
2787930000	IE-CC-SMAM-SMAF-3M	H.15
2787940000	IE-CC-SMAM-SMAF-5M	H.15
2787950000	IE-CC-RPSMAM-RPSMAF-1M	H.12
2787960000	IE-CC-RPSMAM-RPSMAF-3M	H.12
2787970000	IE-CC-RPSMAM-RPSMAF-5M	H.12
2788010000	IE-CC-NM-SMAM-1M	H.15
2788020000	IE-CC-NM-SMAM-3M	H.15
2788030000	IE-CC-NM-SMAM-5M	H.15
2788040000	IE-CC-NM-RPSMAM-1M	H.12
2788050000	IE-CC-NM-RPSMAM-3M	H.12
2788060000	IE-CC-NM-RPSMAM-5M	H.12
2788070000	IE-ANT-WL-DB-MIMO-DO-RPSMAM	H.11
2788110000	IE-ANT-WL-DB-SISO-LO-NF	H.11
2788120000	IE-ANT-CELL-MIMO-DO-SMAM	H.13
2788130000	IE-ANT-CELL-SISO-EO-SMAM	H.14
2788150000	IE-ANT-CELL-SISO-LO-NF	H.14
2788470000	IE-ANT-MOUNT-POLE-NF	H.16

2810000000

2812440000	IE-TO-RJ45-C-LP	I.8
2812440000	IE-TO-RJ45-C-LP	K.16
2813820003	IE-C5ES8VB0003N40N40-B-K6KV	0.30
2813820004	IE-C5ES8VB0004N40N40-B-K6KV	0.30
2813820005	IE-C5ES8VB0005N40N40-B-K6KV	0.30
2813820010	IE-C5ES8VB0010N40N40-B-K6KV	0.30
2813820015	IE-C5ES8VB0015N40N40-B-K6KV	0.30
2813820020	IE-C5ES8VB0020N40N40-B-K6KV	0.30
2813820025	IE-C5ES8VB0025N40N40-B-K6KV	0.30
2813820050	IE-C5ES8VB0050N40N40-B-K6KV	0.30
2814800003	IE-C5ES8VG0003N40N40-G-K6KV	0.30
2814800005	IE-C5ES8VG0005N40N40-G-K6KV	0.30
2814800010	IE-C5ES8VG0010N40N40-G-K6KV	0.30
2814800015	IE-C5ES8VG0015N40N40-G-K6KV	0.30
2814800020	IE-C5ES8VG0020N40N40-G-K6KV	0.30
2819260000	IE-TO-RJ45-C-ZP-C5	K.16

2820000000

2828540000	IE-SW-ELB-05-5TX	B.7
2828550000	IE-SW-ELB-08-8TX	B.8
2828560000	IE-SW-ELB-05-5GT	B.22
2828570000	IE-SW-ELB-08-8GT	B.22
2828580000	IE-SW-ELB-16-16TX	B.9
2828600000	IE-SW-ELB-08-6TX-2FESFP	B.8

2830000000

2838380020	IE-USB-A-C-2.0M	0.65

2860000000

2860910003	IE-C5G06LR0003F40F40-X-K6KV	0.32
2860910008	IE-C5G06LR0008F40F40-X-K6KV	0.32
2860910011	IE-C5G06LR0011F40F40-X-K6KV	0.32
2861240000	IE-TO-RJ12-C	K.17
2861260000	IE-BI-SP0-C	J.12
2861260000	IE-BI-SP0-C	L.18
2861260000	IE-BI-SP0-C	L.19
2861260000	IE-BI-SP0-C	L.21
2861260000	IE-BI-SP0-C	L.23
2861260000	IE-BI-SP0-C	L.24
2861260000	IE-BI-SP0-C	L.25
2861260000	IE-BI-SP0-C	L.26

2870000000

2870090000	U-LINK-50-DEVICES-1Y	E.6
2870100000	U-LINK-100-DEVICES-1Y	E.6
2870110000	U-LINK-250-DEVICES-1Y	E.6
2870120000	U-LINK-500-DEVICES-1Y	E.6
2870130000	U-LINK-1-CONNECTION-1Y	E.7
2870140000	U-LINK-CNSERVER-1Y	E.7
2870790000	IE-TO-SP0-C-LP	J.12
2870820000	IE-FCM-SP0-C	J.12
2873910000	IE-SR-4GT	D.10
2873920000	IE-SR-4GT-LTE/4G-EU	D.11
2873930000	IE-SR-4GT-LTE/4G-USEMEA	D.12
2875580000	IE-SW-L3-SL28M-HV	C.37
2875590000	IE-SW-L3-SL28M-LV	C.38
2876450000	KT 8S	Q.8
2876460000	KT MINI	Q.10

2890000000

2891450000	CABTITE FRFT 4-1	Q.21
2891470000	CABTITE FRFT 4-1 SET	Q.21
2891480000	CABTITE FRFT 10/6	Q.21
2891500000	CABTITE FRFT 10/6 SET	Q.21
2891510000	CABTITE FRFT 16/8	Q.22
2891530000	CABTITE FRFT 16/8 SET	Q.22
2891540000	CABTITE FRFT 24/10	Q.22
2891560000	CABTITE FRFT 24/10 SET	Q.22
2897320000	IE-FC-DIP-PWC-3A/2ST/1D9	L.19

2900000000

2902340000	IE-FCI-PWB-2USB-A/C-5V	L.41
2902350000	IE-FCI-PWB-2USB-C-5V	L.40
2903650005	IE-FM5Z2LM0005LD0LD0-X	P.6
2903650010	IE-FM5Z2LM0010LD0LD0-X	P.6
2903650015	IE-FM5Z2LM0015LD0LD0-X	P.6
2903650020	IE-FM5Z2LM0020LD0LD0-X	P.6
2903650030	IE-FM5Z2LM0030LD0LD0-X	P.6
2903650050	IE-FM5Z2LM0050LD0LD0-X	P.6
2907560000	CABTITE OFRL BK	Q.21
2907560000	CABTITE OFRL BK	Q.22
2908030000	IE-SW-BLB-05-5TX	B.10
2908040000	IE-SW-BLB-08-8TX	B.11
2908050000	IE-SW-BLB-16-16TX	B.13
2908060000	IE-SW-BLB-24-24TX	B.14
2908070000	IE-SW-BLB-05-5GT	B.23
2908080000	IE-SW-BLB-08-8GT	B.25
2908090000	IE-SW-BLB-16-16GT	B.27
2908100000	IE-SW-BLB-05-5GT-C	B.23
2908110000	IE-SW-BLB-08-8GT-C	B.25
2908120000	IE-SW-BLB-16-16GT-C	B.27
2908130000	IE-SW-BLB-16-14GT-2GESFP	B.28
2908140000	IE-SW-BLB-05-4TX-1FESFP	B.10
2908150000	IE-SW-BLB-08-7TX-1FESFP	B.12
2908160000	IE-SW-BLB-08-6TX-2FESFP	B.11
2908170000	IE-SW-BLB-18-16TX-2GESFP	B.18
2908180000	IE-SW-BLB-05-4GT-1GESFP	B.24
2908190000	IE-SW-BLB-10-8GT-2GESFP	B.26
2908200000	IE-SW-BLB-05-1TX-4POE	B.16
2908210000	IE-SW-BLB-05-1GT-4GTPOE	B.30
2908220000	IE-SW-BLB-08-8POE	B.17
2908230000	IE-SW-BLB-08-8GTPOE	B.31

2910000000

2912590000	IE-PS-VAPM-5P-2.5-QT	I.8
2912590000	IE-PS-VAPM-5P-2.5-QT	M.59

2920000000

2924220000	U-LINK-1000-DEVICES-1Y	E.6
2924340000	IE-S1DS2UE-500	J.16
2924340000	IE-S1DS2UE-500	0.5
2924340000	IE-S1DS2UE-500	0.6
2924350000	IE-S1DS2LE-500	J.16
2924350000	IE-S1DS2LE-500	0.5
2924350000	IE-S1DS2LE-500	0.6
2924360000	IE-S1ES2UE-500	J.17
2924360000	IE-S1ES2UE-500	0.5
2924360000	IE-S1ES2UE-500	0.7
2924370000	IE-S1ES2LE-500	J.17
2924370000	IE-S1ES2LE-500	0.5
2924370000	IE-S1ES2LE-500	0.7
2926110000	IE-S1DS2UE-100	J.16
2926110000	IE-S1DS2UE-100	0.5
2926110000	IE-S1DS2UE-100	0.6
2926120000	IE-S1DS2LE-100	J.16
2926120000	IE-S1DS2LE-100	0.5
2926120000	IE-S1DS2LE-100	0.6
2926130000	IE-S1ES2UE-100	J.17
2926130000	IE-S1ES2UE-100	0.5
2926130000	IE-S1ES2UE-100	0.7
2926140000	IE-S1ES2LE-100	J.17
2926140000	IE-S1ES2LE-100	0.5
2926140000	IE-S1ES2LE-100	0.7

2970000000

2971460000	IE-FC-DFM-PWPC	L.43

2980000000

2985050000	IE-SWM-SL02-2GC-PRP/HSR	C.41

2990000000

2990440000	IE-SR-4GT-LTE/4G-USEMEA-M	D.14
2990450000	IE-SR-4GT-M	D.13

3000000000

3009480002	IE-C6OP8LO020CN40N40-O-K4KV	0.31
3009480003	IE-C6OP8LO030CN40N40-O-K4KV	0.31
3009490002	IE-C6OP8LB020CN40N40-B-K4KV	0.31
3009490003	IE-C6OP8LB030CN40N40-B-K4KV	0.31
3009630000	IE-C6OP8LO015CN40N40-O-K4KV	0.31
3009730000	IE-C6OP8LB015CN40N40-B-K4KV	0.31

3010000000

3012120000	IE-SW-SPE05-4T1LMPODL-1TX	B.34
3012120000	IE-SW-SPE05-4T1LMPODL-1TX	J.12

3020000000

3024610000	U-LINK-BASIC-EXTENSION-1Y	E.6

3030000000

3032760000	IE-WALLMOUNT-KIT-MODEL-A	H.18
3032770000	IE-WALLMOUNT-KIT-MODEL-B	H.18
3036970003	IE-C5G06LB0003F40F40-X-K6KV	0.32
3036970010	IE-C5G06LB0010F40F40-X-K6KV	0.32

3040000000

3041950000	IE-FC-SFPP-KNOB	L.16
3042050000	IE-FCI-DP-FF	L.22
3042050000	IE-FCI-DP-FF	L.30
3042060000	IE-FC-IP-PWB/1DP	L.22

3070000000

3077550000	LSF-SMT SPE 3.50/02/135 3.5SN BK TU	J.13
3077550000	LSF-SMT SPE 3.50/02/135 3.5SN BK TU	J.15

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3077560000	LSF-SMT SPE 3.50/03/135 3.5SN BK TU	J.15
3077570000	LSF-SMT SPE 5.00/02/135 3.5SN BK TU	J.13
3077570000	LSF-SMT SPE 5.00/02/135 3.5SN BK TU	J.15
3077630000	LSF-SMT SPE 5.00/03/135 3.5SN BK TU	J.13
3077630000	LSF-SMT SPE 5.00/03/135 3.5SN BK TU	J.15

3080000000

3088740000	IE-FCI-PWB-DE-BK	L.33
3089370000	LM SPE 5.08/02/135 3.5SN OR BX	J.13
3089370000	LM SPE 5.08/02/135 3.5SN OR BX	J.15
3089380000	LM SPE 5.08/03/135 3.5SN OR BX	J.13
3089380000	LM SPE 5.08/03/135 3.5SN OR BX	J.15

3090000000

3095900000	MTS SPE 5/02 H T4 B T	J.13
3095900000	MTS SPE 5/02 H T4 B T	J.15
3095910000	MTS SPE 5/03 H T4 B T	J.13
3095910000	MTS SPE 5/03 H T4 B T	J.15
3095920000	MTS SPE 5/02 V T4 B T	J.13
3095920000	MTS SPE 5/02 V T4 B T	J.15
3095980000	MTS SPE 5/03 V T4 B T	J.13
3095980000	MTS SPE 5/03 V T4 B T	J.15

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3109750000	IE-SW-L3-AL20M-8GT-12GESFP	C.23
3109760000	IE-SW-AL12M-8GTPOE-4GESFP-120W	C.26
3109770000	IE-SW-AL12M-8GTPOE-4GESFP-240W	C.27
3109780000	IE-SW-AL26M-22GTPOE-2GCPOE-2GESFP	C.28
3109790000	IE-MC-EL-1GT-1GESFP	F.4

3120000000

3123990010	IE-S1DS2VE0010T02T02-E	J.12
3123990020	IE-S1DS2VE0020T02T02-E	J.12
3123990030	IE-S1DS2VE0030T02T02-E	J.12
3123990050	IE-S1DS2VE0050T02T02-E	J.12

3130000000

3130670000	IE-SW-IP67-8FEM12	B.15

3150000000

3150000000	IE-PS-SPO-S-FH-2-180	J.14
3150000000	IE-PS-SPO-S-FH-2-180	J.18
3150000000	IE-PS-SPO-S-FH-2-180	K.2
3150590000	SPE P20 R1H 2.1 6 YG/YG TU	J.15
3150590000	SPE P20 R1H 2.1 6 YG/YG TU	J.19
3150590000	SPE P20 R1H 2.1 6 YG/YG TU	K.3
3150600000	SPE P20 R1H 2.1 6 N/N TU	J.15
3150600000	SPE P20 R1H 2.1 6 N/N TU	J.19
3150600000	SPE P20 R1H 2.1 6 N/N TU	K.3

3170000000

3174750000	IE-INJ-EL01-1GTPOE++	B.33

3180000000

3180870000	SPE M12F DD RV 2.0 6 TY	J.15
3180870000	SPE M12F DD RV 2.0 6 TY	J.21
3180870000	SPE M12F DD RV 2.0 6 TY	M.31

3190000000

3195560000	IE-SW-BI-04-4TX-LV	B.4
3195570000	IE-SW-BI-04-4TX-HV	B.4

3220000000

3228130000	SPE M12F DC FPM16 RV 2.0 6 TY	J.15
3228130000	SPE M12F DC FPM16 RV 2.0 6 TY	J.20
3228130000	SPE M12F DC FPM16 RV 2.0 6 TY	M.30
3228140000	SPE M12F DC BPM16 RV 2.0 6 TY	J.15
3228140000	SPE M12F DC BPM16 RV 2.0 6 TY	J.20
3228140000	SPE M12F DC BPM16 RV 2.0 6 TY	M.30

3230000000

3234500000	SPE P20 R1H 2.1 6 N/N RL	J.15
3234500000	SPE P20 R1H 2.1 6 N/N RL	J.19
3234500000	SPE P20 R1H 2.1 6 N/N RL	K.3
3234510000	SPE P20 R1H 2.1 6 YG/YG RL	J.15
3234510000	SPE P20 R1H 2.1 6 YG/YG RL	J.19

8420000000

8425960000	SAI-SK-M12 BU	Q.28

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8808330000	IE-XRJ45/IDC	K.12
8808330000	IE-XRJ45/IDC	M.28
8808340000	IE-XM-ST/ST	K.20
8808360000	IE-XM-RJ45/IDC	K.14
8808370000	IE-S-IP67	N.16
8808380000	IE-P-IP67	M.27

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8808420000	IE-CT	Q.7
8808440000	IE-XM-RJ45/IDC-IP67	M.28
8808450000	IE-XM-RJ45/RJ45-IP67	M.28

8810000000

8813090000	IE-C-IP67	M.29
8813100000	IE-P	K.8
8813110000	IE-P63	K.8
8813120000	IE-P70	K.8
8813130000	IE-C7BS8VG-100	Q.5
8813130000	IE-C7BS8VG-100	Q.9
8813140000	IE-C7BS8UG-100	Q.5
8813140000	IE-C7BS8UG-100	Q.9
8813150000	IE-C5CS8VG-100	I.13
8813150000	IE-C5CS8VG-100	Q.5
8813150000	IE-C5CS8VG-100	Q.8
8813160000	IE-C5CS8UG-100	I.13
8813160000	IE-C5CS8UG-100	Q.5
8813160000	IE-C5CS8UG-100	Q.8
8813170000	IE-C7ES8VG-100	Q.5
8813170000	IE-C7ES8VG-100	Q.11
8813180000	IE-C7ES8UG-100	Q.5
8813180000	IE-C7ES8UG-100	Q.11
8813190000	IE-C5ES8VG-100	I.13
8813190000	IE-C5ES8VG-100	Q.5
8813190000	IE-C5ES8VG-100	Q.10
8813200000	IE-C5ES8UG-100	I.13
8813200000	IE-C5ES8UG-100	Q.5
8813200000	IE-C5ES8UG-100	Q.10
8813210000	IE-C5ED8UG-100	Q.5
8813210000	IE-C5ED8UG-100	Q.16
8813270000	IE-FM6Z2V00001MSTOST0X	P.8
8813280000	IE-FM6Z2V00002MSTOST0X	P.8
8813290000	IE-FM6Z2V00003MSTOST0X	P.8
8813300000	IE-FM5Z2V00001MSDOSD0X	P.8
8813310000	IE-FM5Z2V00002MSDOSD0X	P.8
8813320000	IE-FM5Z2V00003MSDOSD0X	P.8
8813330000	IE-FM6Z2V00001MSDOSD0X	P.8
8813340000	IE-FM6Z2V00002MSDOSD0X	P.8
8813350000	IE-FM6Z2V00003MSDOSD0X	P.8
8813390000	IE-FM5Z2V00002MSTOSD0X	P.9
8813400000	IE-FM6Z2V00002MSTOSD0X	P.9
8813490000	IE-DPC	Q.28
8813500000	IE-DM	K.14
8813500000	IE-DM	K.15
8813500000	IE-DM	K.20

8820000000

8829440000	IE-XM-6U-RJ45/RJ45-IP67	M.28
8829450000	IE-XM-6D-RJ45/RJ45-IP67	M.28

8870000000

8876350050	IE-FM5Z2V00005MSDOSD0X	P.8
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Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
32758 Detmold, Germany
T +49 5231 14-0
F +49 5231 14-292083
www.weidmueller.com

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