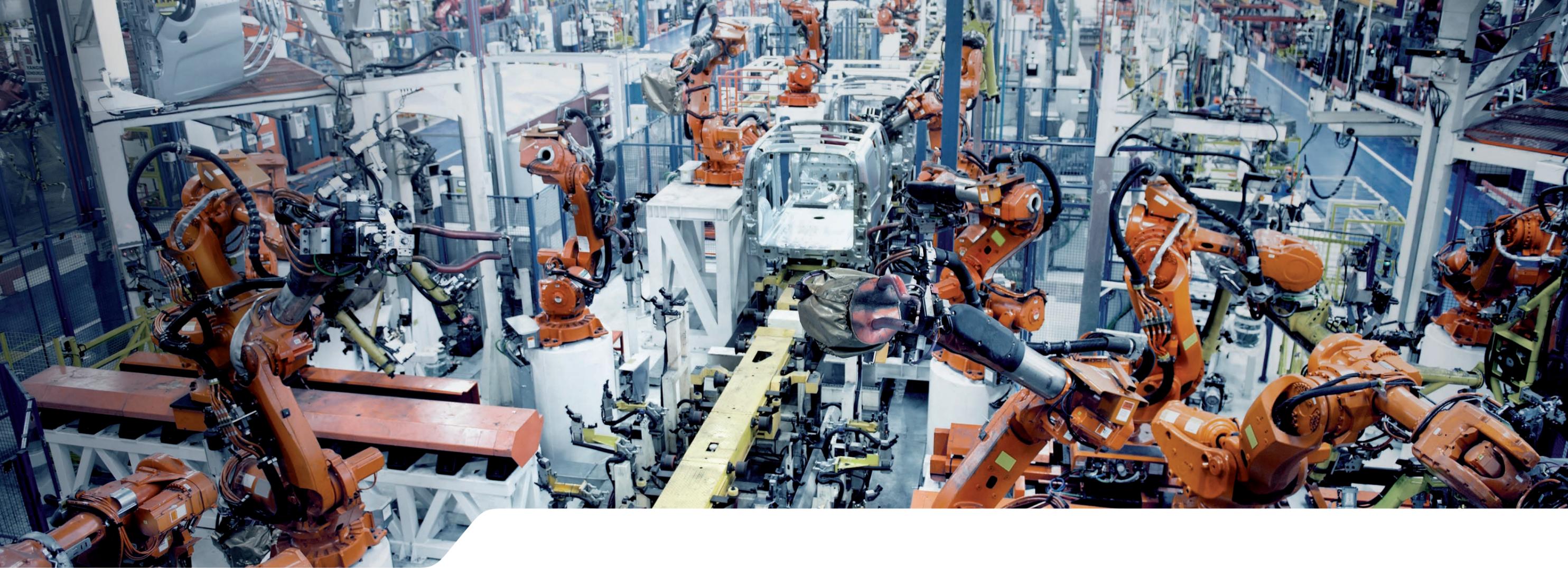


**Your automation is shaping the future**  
**We are ensuring optimum robot connectivity**  
Let's connect.



**Weidmüller** 



## Industry faces growing challenges

### We support you with optimum connectivity technology

Advancing globalisation and the increasing pressure of competition are presenting major challenges to industrial manufacturing enterprises. The demand for customised products is resulting in a greater variety of technologies and at the same time shorter product lifecycles. With products designed especially with the specific requirements of the industry in mind, Weidmüller helps machine constructors to handle their assembly, installation, commissioning and maintenance as simply and safely as possible.

We support and lead these trends with robust solutions for a secure network infrastructure, from management level to field level, for efficient energy and bus infrastructures and for professional switching and connectivity – from the electrical cabinet to the field.

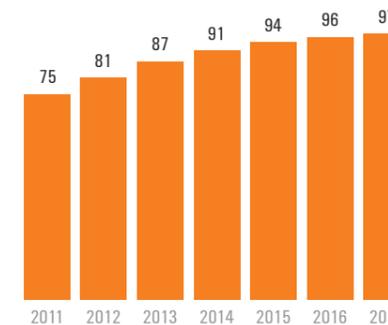
Robotic connectivity technology in all its variants follows these industrial trends with the result that Ethernet technology is gaining in importance in this industry application.

#### Reliable solutions for Industrial Connectivity

The increase in customers' needs for flexibility and scalable machine assembly is driven by customer demand and future technologies. Weidmüller is aware of the importance of a timely response to these needs.

With our dedicated range of products, we support you in reducing the footprint and wiring time while at the same time improving handling and maintenance. Throughout the design, manufacturing and later maintenance phases, Weidmüller ensures the availability and transmission of power, signals and data in robotic connectivity.

With a complete product range that is suitable for any specific application, Weidmüller offers first-class service with customised solutions – even under the harshest conditions – reliable solutions for Industrial Connectivity.



Forecasted trends in global automotive production for 2011 to 2017 (in million units)

Source: statista.com; PwC

## You need durable networking solutions

Our flexible components connect data, signals and power

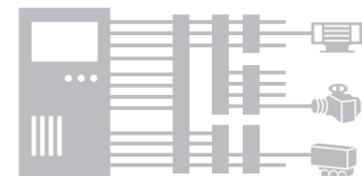
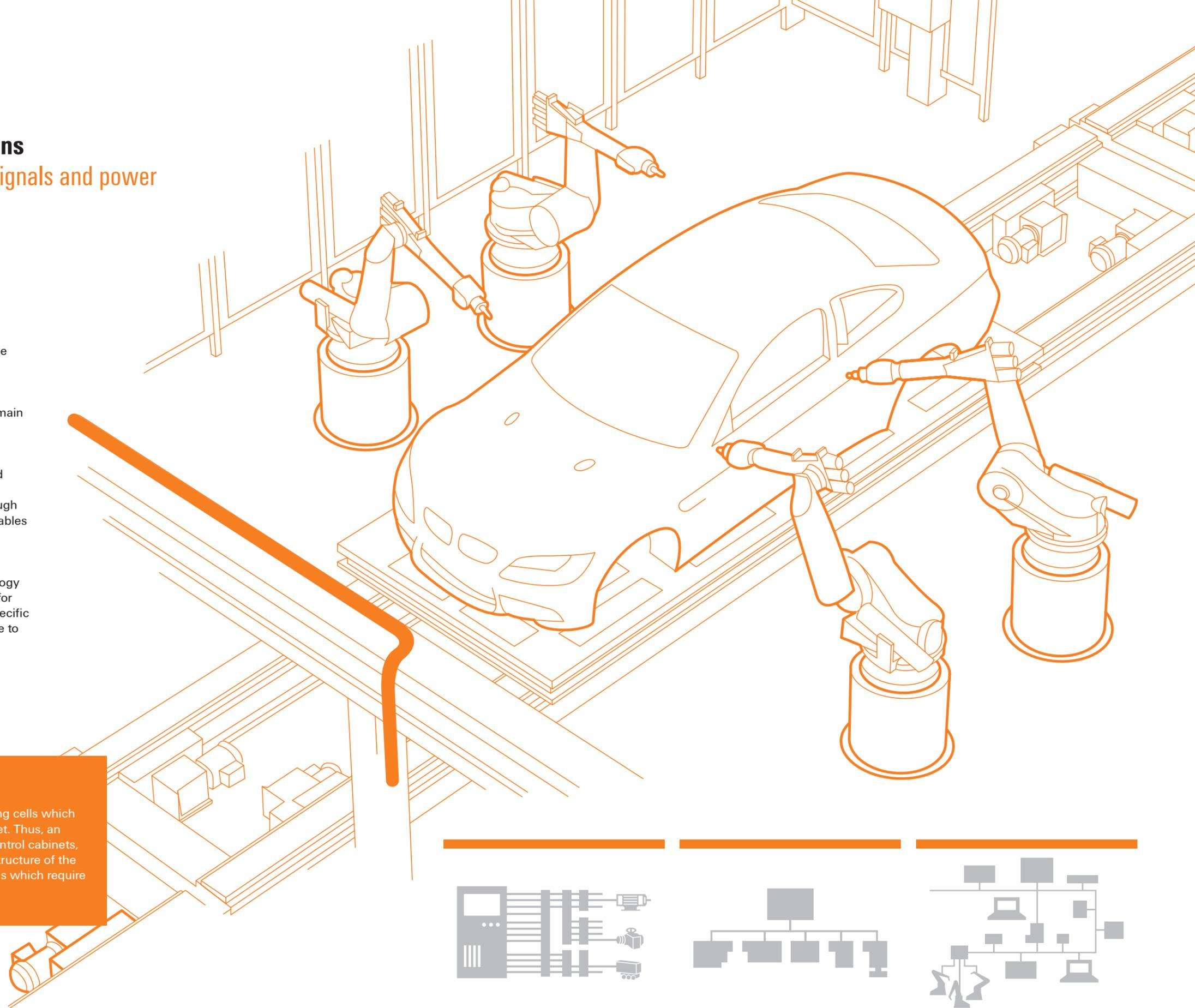
Efficient production, short product lifecycles and increasing cost pressures are trends which are continuously raising the degree of industrial automation. Your automation technology requires flexible connectivity solutions designed to meet both current and future requirements. Particularly when it comes to field wiring, i.e. wiring outside the protective cabinet, you require robust and reliable components which are quick and easy to install and which will remain up-to-date in the future.

We offer integrated and durable networking solutions for data, signals and power. You can build the flexible component you need for your application from our comprehensive range of products. These include connectivity solutions from Industrial Fieldbus through to Industrial Ethernet, sensor-actuator interfaces, pre-assembled cables and heavy duty connectors. You will benefit from a high degree of standardisation with maximum flexibility and scalability.

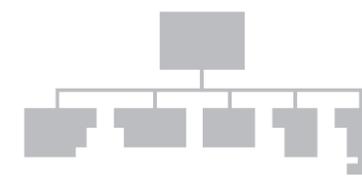
Industrial Connectivity means more than just connectivity technology and electronics. We view ourselves primarily as a reliable partner for industry. Our extensive know-how of production processes and specific applications means that we have the practical consulting expertise to facilitate solution-oriented and customised product development.

### Robot connectivity in automotive body shops

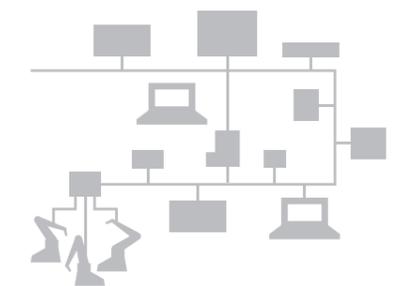
Automotive body shops feature a large number of manufacturing cells which make use of welding robots, each with their own control cabinet. Thus, an essential part for robots is the connection to their respective control cabinets, as well as the integration in the communication network infrastructure of the body shop. This installation system is suitable for all applications which require a sturdy, reliable and pluggable cabling solution.



Parallel Wiring



Decentralised Wiring



Distributed Wiring

## Safe and reliable wiring in distributed wiring technology

### With complete solutions of connectors and cables

Automation technology requires flexible connectivity solutions designed to meet customers' ever-increasing requirements. When it comes to field wiring, i.e. wiring outside the control cabinet, you depend on reliable components which are quick and easy to install and which will still be up-to-date in the future. The topic of Industrial Ethernet is playing an increasingly important role in this respect. With our innovative connectivity solutions, we support the PROFINET Sercos and EtherNet/IP network protocols with a complete solution of connectors and cables.



#### Tool-free assembly and powerful connections

You can securely plug the RJ45 connector directly into your machinery with very little effort and without the need for a single tool!

**STEADYTEC®** – a brand that stands for pioneering connection technology in the fields of data, energy and signal transmission. Established by leading names in this branch of industry, **STEADYTEC®** forms the basis for reliable, application-oriented and standardised solutions in the most demanding industrial environments

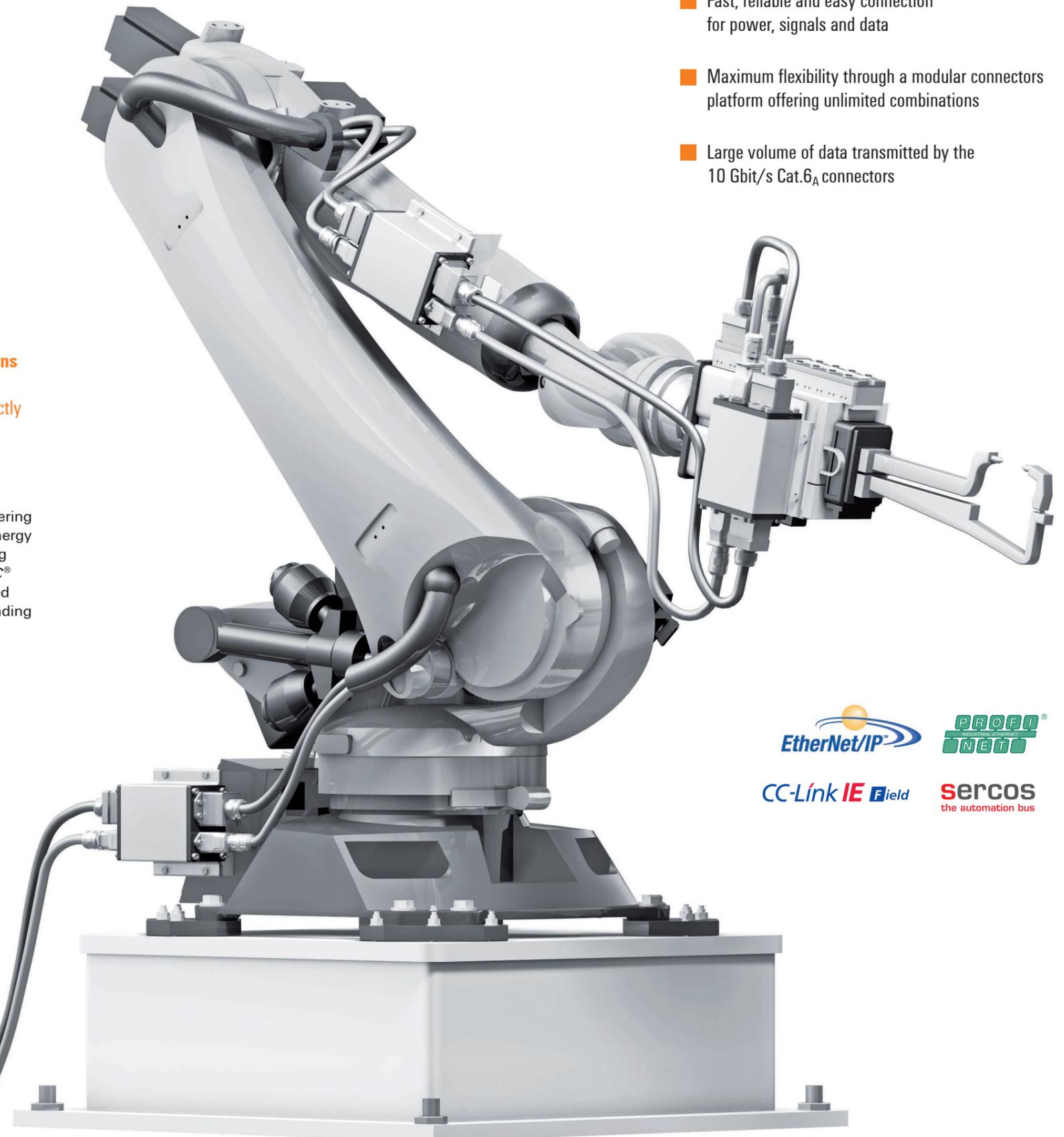


#### FreeCon

Junction box with or without diagnostic function, useful for copper and fibre optic cables. Customised solutions can be developed based on the requested type of Ethernet protocol and the connectors required.

The FreeCon line offers comprehensive cabling solutions for robotics cabling which comply with any Ethernet protocol cabling directive. It comprises custom-tuned, individual pluggable components intended for wiring the hose packets. This represents a complete solution since you can "Plug & Play" to join the three key elements of industrial automation: data, signals and power. Cable packets are used to establish the connection from the electrical cabinet to the robot base, from the robot base to the robot axis 3, and from robot axis 3 to the robot head. This innovative installation strategy offers major benefits for the user: less complexity during installation and quicker replacement of the hose packets during maintenance.

- Fast, reliable and easy connection for power, signals and data
- Maximum flexibility through a modular connectors platform offering unlimited combinations
- Large volume of data transmitted by the 10 Gbit/s Cat.6<sub>A</sub> connectors



## Your plant demands efficiency in distributed wiring technology

We facilitate communication between machines and equipment

PushPull connectors and Weidmüller's junction boxes are the basis for this new cabling standard in the automotive industry. The new PushPull connectors are an integral part of Weidmüller's power-signal-data installation system for the AIDA standard. The cabling standard for PROFINET installations was established on this foundation and so it also includes all the benefits of the **STEADYTEC**® technology!



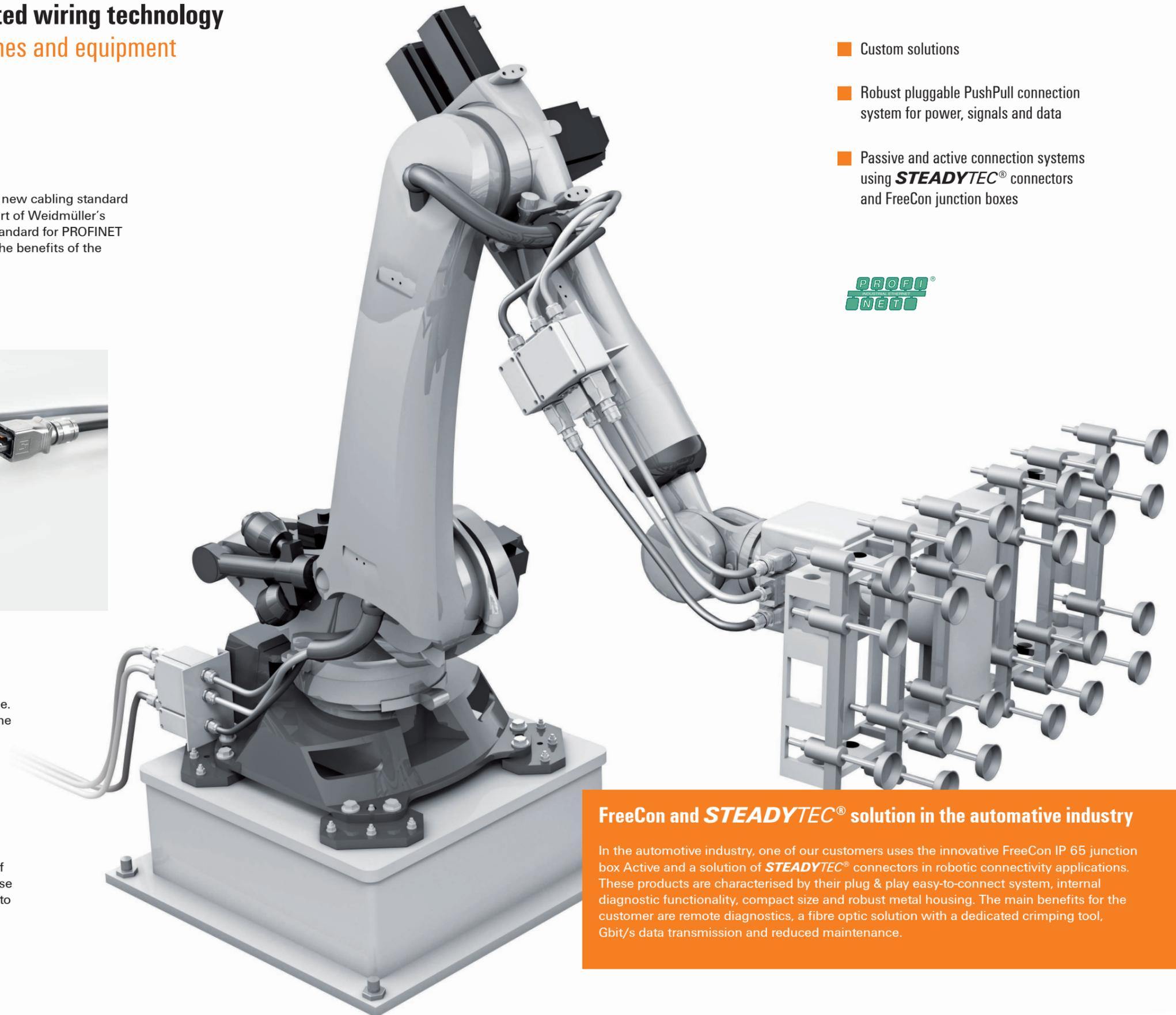
### FreeCon Active and Passive

FreeCon: A combined 2-way active junction box for PushPull power and PushPull data connectors. Repeater and media converter boxes are available. Both feature diagnostic functionality for monitoring the FO cable through the measurement of the attenuation and length of the hose package.

### German Manufacturers Commit to PROFINET

The automobile manufacturers that make up AIDA (Automation Initiative of German Domestic Automobile Manufacturers) are the drivers behind the use of Industrial Ethernet on the plant floor, as they show a clear commitment to PROFINET for communication between machines and equipment.

- Custom solutions
- Robust pluggable PushPull connection system for power, signals and data
- Passive and active connection systems using **STEADYTEC**® connectors and FreeCon junction boxes



### FreeCon and **STEADYTEC**® solution in the automotive industry

In the automotive industry, one of our customers uses the innovative FreeCon IP 65 junction box Active and a solution of **STEADYTEC**® connectors in robotic connectivity applications. These products are characterised by their plug & play easy-to-connect system, internal diagnostic functionality, compact size and robust metal housing. The main benefits for the customer are remote diagnostics, a fibre optic solution with a dedicated crimping tool, Gbit/s data transmission and reduced maintenance.

## You rely on decentralised wiring

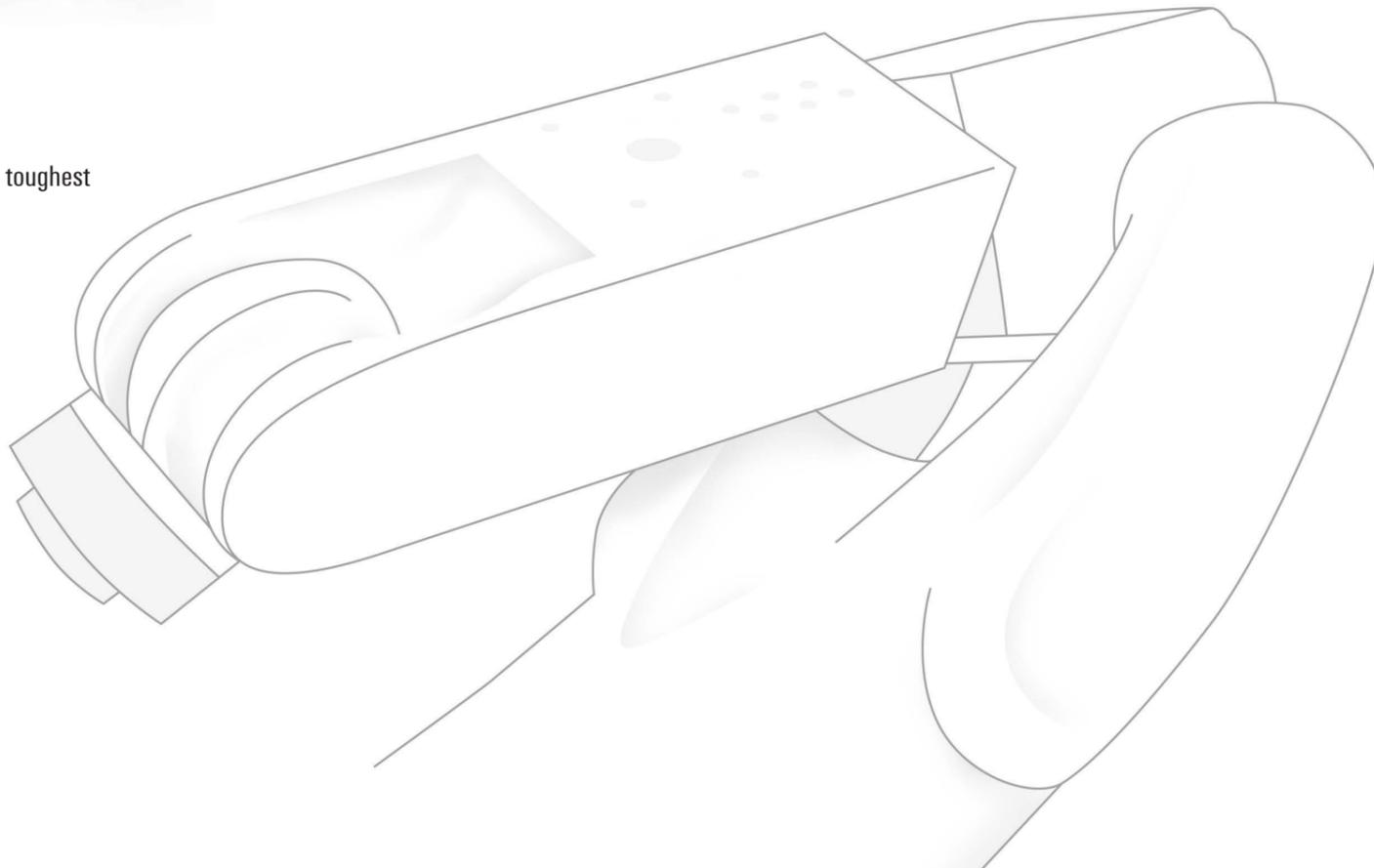
### We have got the widest range of cabling systems

With this wiring technology, RockStar® heavy duty connectors and sensor cord sets represent the most important products. Weidmüller's RockStar® heavy duty connector range is suitable for robotic as well as for a wide variety of other industrial applications. This gives you access to the widest range of products available on the market for your cabling systems. The connector insert, or contact insert, forms the heart of a RockStar® heavy duty connector – and Weidmüller offers them in many different variants and with different connection technologies. RockStar® inserts are fixed-pole inserts consisting of an insulating body and contact elements. The application-based design of a contact insert is determined by the electrical characteristics, mechanical specifications and the material used to make the insert.

All RockStar® heavy duty connector inserts are made from glass fibre reinforced polycarbonate. This material is distinguished by its low water absorption and high levels of dimensional stability made possible by the added glass fibres. This makes our rugged RockStar® inserts the ideal choice for solutions of up to 216 poles and a maximum of 110 A / 1000 V.



- One stop shop
- Reliable performance in the toughest environmental conditions
- Space-saving connection of sensors



#### Sensor/actuator distributor SAI Active

The Weidmüller sensor-actuator distributor SAI Active provides a fieldbus interface for digital communication. It is capable of merging all types of signals from the field and transmitting them without interference to the central control unit. The SAI Active remote I/O system is available in several variants to support different applications. A wide range of products for industrial automation is available to the user.



#### Sensor/actuator cables pre-assembled with M8/M12 connector at one end

Machinery designers frequently require individual cable lengths. Sensor cables with a connector fitted at one end only can be easily adapted to the specific situation. The cables are available in many different versions: straight, 90° and with all common pole numbers (3, 4 and 5).

Male plugs and female sockets can be assembled to suit individual customer requirements for connecting cables. Plugs and cables are in neutral black. Both connecting cables and bus cables are available and can be customised in terms of the length and termination based on the specific application.

Try our online assistant to configure your individual product:  
<http://galaxy.weidmueller.com>

### Fieldbus wiring technology in robotic connectivity

In robotic connectivity applications, a customer uses a fieldbus wiring technology system. RockStar® heavy duty connector products are used to connect robot cabinets to the robot arm and fieldbus connectors to connect sensors along the robot arm. The customer opted for a fieldbus connection to the I/O module installed in the robot arm to collect signals from the sensors. For fieldbus protocol connection, the customer required a reliable, shock and vibration proof M23 connector. The main benefits for the customer are the robust metal body connector with up to IP 69k protection, a wide range of connectors for signals and power, a large derating curve and global availability.



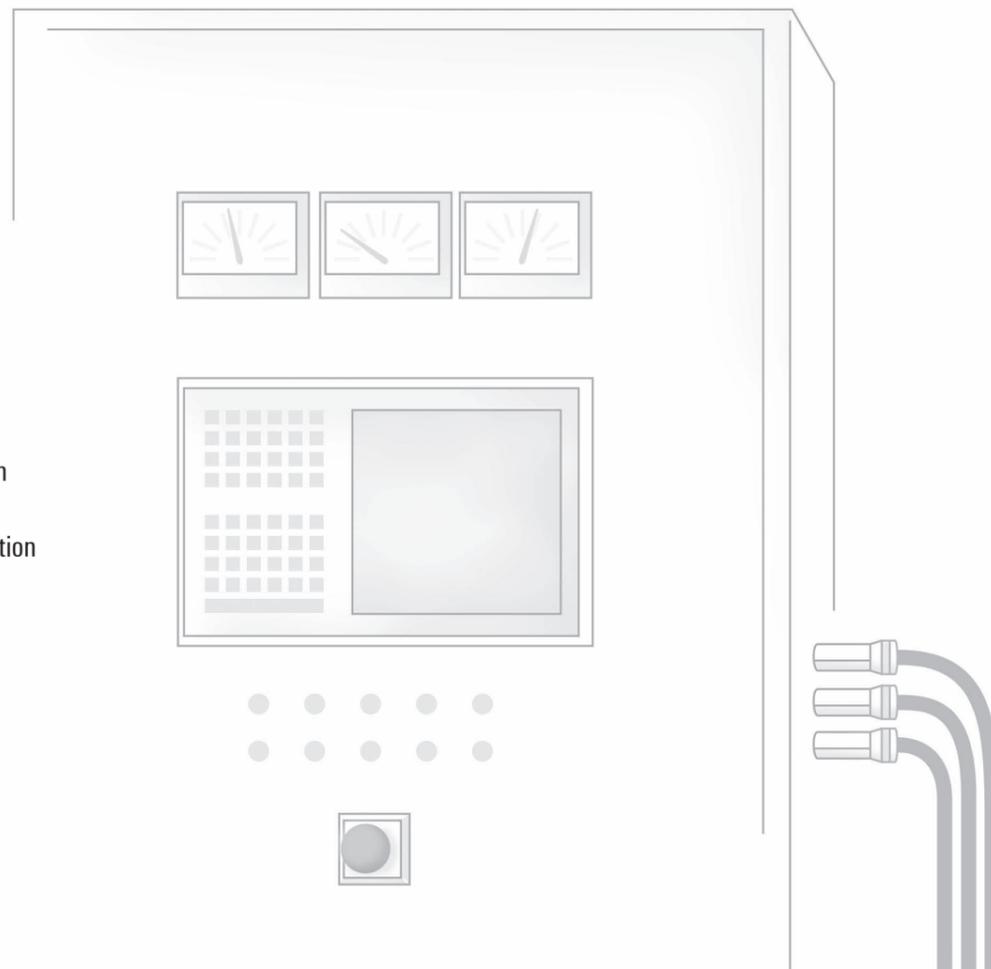
## Optimised cabinet wiring

### With our pre-assembled functional units

We take an innovative and practical approach and are fully committed to designing every product to make your work easier. The quality is spot on and mounting poses no problems. We therefore help you meet your deadlines, save you money and further improve your workflows, all of which strengthens your position and gives you a competitive edge!

Convenience and speed are important during the final phase when the electrical cabinet is being brought into operation. Pluggability is a key feature and one which we incorporate in a unique way into many of our connectors. Pre-assembled functional units can be easily and quickly connected together when you take advantage of these systems.

Furthermore, as the complexity of electrical cabinet grows, often the number of products required for the extra functionality grows too. Weidmüller provides simple solutions for complex applications. We simplify both the purchasing and storing of products required for your electrical cabinet project. Our requirements-based standardisation process allows us to track the trend towards reducing variants and article numbers. This helps you to efficiently manage your purchasing and logistics, while also delivering long-term cost savings.



- Line connection
- Robot arm connection
- Programming connection

#### Safe transmission

Not only are all available connections quick and easy to use – they are also 100% safe. A must for signal and data transmission.

#### Space-saving construction

From terminals with an extremely narrow width of just 3.5 mm to multi-level terminals with cross-connection options on several layers, our products enable you to save a significant amount of space, thus reducing the cabinet dimensions.

#### Simple wiring and reliable connection

We can provide you with a complete range of solutions for industrial cabling processing through multifunctional tools and machines that reduce the total working time while increasing your productivity.

### Cabinet robotic connectivity system

A cabinet robotic connectivity application where a customer, using a fieldbus wiring technology system, adopts different cabling exit methods from the cabinet using Weidmüller devices. The wide choice of available products simplifies the supplier selection and enables the customer to find just the right product to meet his specific connection requirements. The customer needs a one stop supplier of technology for the connection and transmission of data, signals and power, based on our comprehensive portfolio of IP 20 and IP 67 connectivity solutions for use both within the cabinet as well as in the field.



## You have high demands

Safety, performance and quality are our standard



As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signals and data. Immerse yourself in our world of Industrial Connectivity.

### Connected to you as a partner

Industrial Connectivity means more than just connectivity technology and electronics. We view ourselves primarily as a reliable partner for industry. Our extensive know-how of production processes and specific applications means that we have the practical consulting expertise to facilitate solution-oriented, customised product development.



### Lab tests

Every product and service we offer comes with the highest degree of quality assurance, so that you can rely on guaranteed first-class products.

The heart of our quality assurance is our in-house laboratory, which is certified according to EN ISO IEC 17025. Every product we create undergoes intensive testing here, starting in the development stage. For you and your applications, this means a high degree of safety, performance and quality based on international standards.



### 3-D data

To facilitate and optimise your design activities, Weidmüller provides you with three-dimensional CAD data of any of its components. As part of the Digital Product Development service, we provide support in the accurate creation of photo simulations and in installation planning.

We help the customer to identify potential blockage or failures early in the product or machine development process and support you by showing view corridors and shadow studies as frequently analysed parameters, which can then be used to determine the size, shape and other properties of the different modelling elements on your design.



### Galaxy – Cable Configurator

Galaxy offers you the opportunity to configure your specific cable quickly, easily and conveniently. Customised cable design according to your individual requirements in terms of the desired cladding material category and/or colour as well as the plug and length matched to your specific application.

<http://galaxy.weidmueller.com>

## **Weidmüller – Your partner in Industrial Connectivity**

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

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[www.weidmueller.com/countries](http://www.weidmueller.com/countries)



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