

You have strict requirements for industrial controls

We connect them to the technology of the future

OMNIMATE - Device Connectivity



Innovative connections for industrial controls

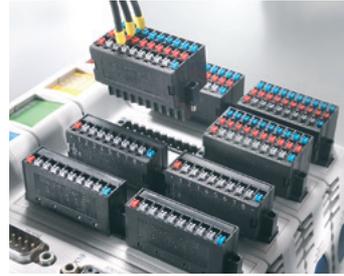
Advancements are constantly being made in semiconductor technology for industrial automation. They make it possible to manufacture increasingly more complex controls. At the same time, cost pressure and the demands of plant safety also increase. Furthermore, standards across all industries have to be complied with and automation know-how must be kept in tip-top shape.

We have been closely monitoring developments in electrical engineering and processing through all their stages and our range of products meets the trends and in many cases anticipates them. One example is our pin headers, which were optimised for the automated assembly and reflow soldering processes in advance. We are specialists in industrial connectivity. With an eye on practical application, we can support you in all your needs for automation and systems technology (measurement, industrial process and control technology), particularly in the areas of sensor actuator interfaces and power supplies.

We think you will be very pleased with our broad spectrum of products, particularly those in the OMNIMATE family. You have a choice of device connectivity products which you can trust to be perfectly suited to your application needs. Our customer service staff is on hand to advise you in the selection process. In addition, our online configurator, located on our website, can help you put together your own entire product from the comfort of your computer. You can also find a 3D CAD tool for your product development free of charge under our Downloads section online. To round off our service, we offer our unique, on-demand 72-hour sample service, which ensures that you get the sample you request directly on site within three days.

Let's connect.

OMNIMATE – device connectivity and electronics housings



OMNIMATE Signal includes PCB terminals and PCB plug-in connectors for automation and systems engineering equipment, as well as sensor-actuator interfaces and power supplies.



OMNIMATE Power includes PCB terminals, PCB plug-in connectors and feedthrough terminals for use in power electronics – particularly in inverters, frequency converters, servo drives, heavy-duty power supplies and motor starters.



OMNIMATE Housing – The perfect enclosures for industrial electronics, for mounting on 35 mm top-hat rails (DIN rails) in the electrical cabinet. Used for controller, signal conversion and machine safety applications.



OMNIMATE Services – Take advantage of our global 72-hour sample service free of charge in the online catalogue or at www.sample-service.com. For the best design-in-process – from specification stage to full component integration.

1.

Power supply & peripherals

Reliable power is indispensable for your industrial applications. The power supply component is the central element for providing a filtered, regulated voltage. Power supply typically requires a larger connection cross-section. Power to neighbouring modules will also have to be supplied via cross-connects.

With our OMNIMATE Signal Series 5.0x plug-in connectors, we offer you secure connectivity for your voltage supply, features specific solutions and increased security details for modern control technology.

For example, you can further secure the plug-in connectors using clips, locks or screws. Depending on your application, you can choose between PUSH IN (spring) or screw connections.

Secure plug-in connections can even be guaranteed for special installation conditions using the lock-and-release mechanism, which can be operated intuitively and without tools.

Clear connection tagging, available for all OMNIMATE products, ensures error-free cabling. Illuminated displays feature light guides from a status LED on the board to the front panel.

2.

Core unit

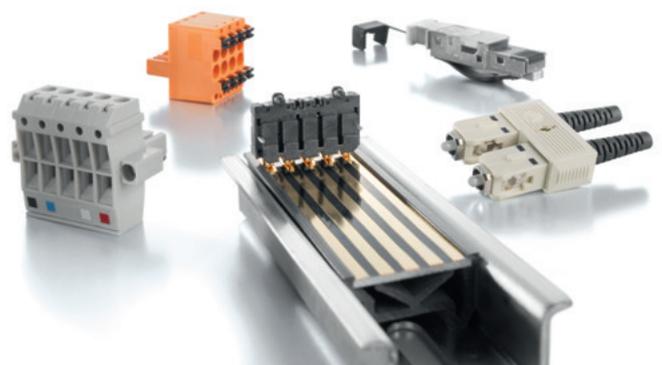
The core unit is at the heart of your controls. It contains the central processing unit (CPU), where all information is processed. The output parameters will be determined by the input variables.

Secure plug-in connectors with integrated cross-connections like the BLDZ 5.08DN and the BLDF 5.08 represent the bus interfaces to the individual modules on the front plate. Alternatively, continuous contact for the DIN-rail buses can be established on the back, as in the CH20M electronics housing.

The Ethernet protocol has become the standard for communications with the outside world. Weidmüller provides various interfaces based on RJ45 and FO which are either located directly in the component assembly or connected through a bus interface.



PCB terminals and connectors, in 5.08 pitch, with "PUSH IN" or screw wire connections



Communication through industrial-quality plug-in bus connectors for single conductor connections, RJ45 or fibre-optic

3. Fieldbus interface

You require industrial-quality, data connections to ensure the data connectivity for your industrial controls. In particular, the subassemblies which can be connected to a superordinate Fieldbus system, e.g. PROFIBUS, PROFINET, CAN, SERCOS or EtherCAT, make enormous demands on the quality of communication. Today, Industrial Ethernet is used predominantly in this area and is the general standard for networking and configuring automation components.

Based on our Industrial Ethernet components, we offer connection solutions in IP67 and IP65 for network connectivity and position feedback. These are not only for devices, but for components in the field as well. Our industrial quality data connections guarantee secure data transmission. The interfaces comply with international standard IEC 61076-3-106 (114).



Rapid communication using IP6x junction boxes, couplings and plug-in connectors

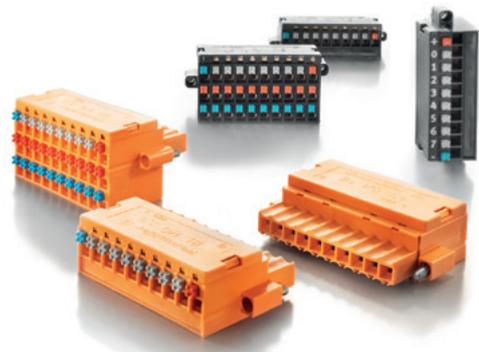
4. Input card

There are sensors throughout the industrial process chain to monitor the conditions at each step. These sensors send signals in both digital and analogue form. To ensure plant operation as automation steadily increases, you need extremely precise signal processing – in the smallest space possible.

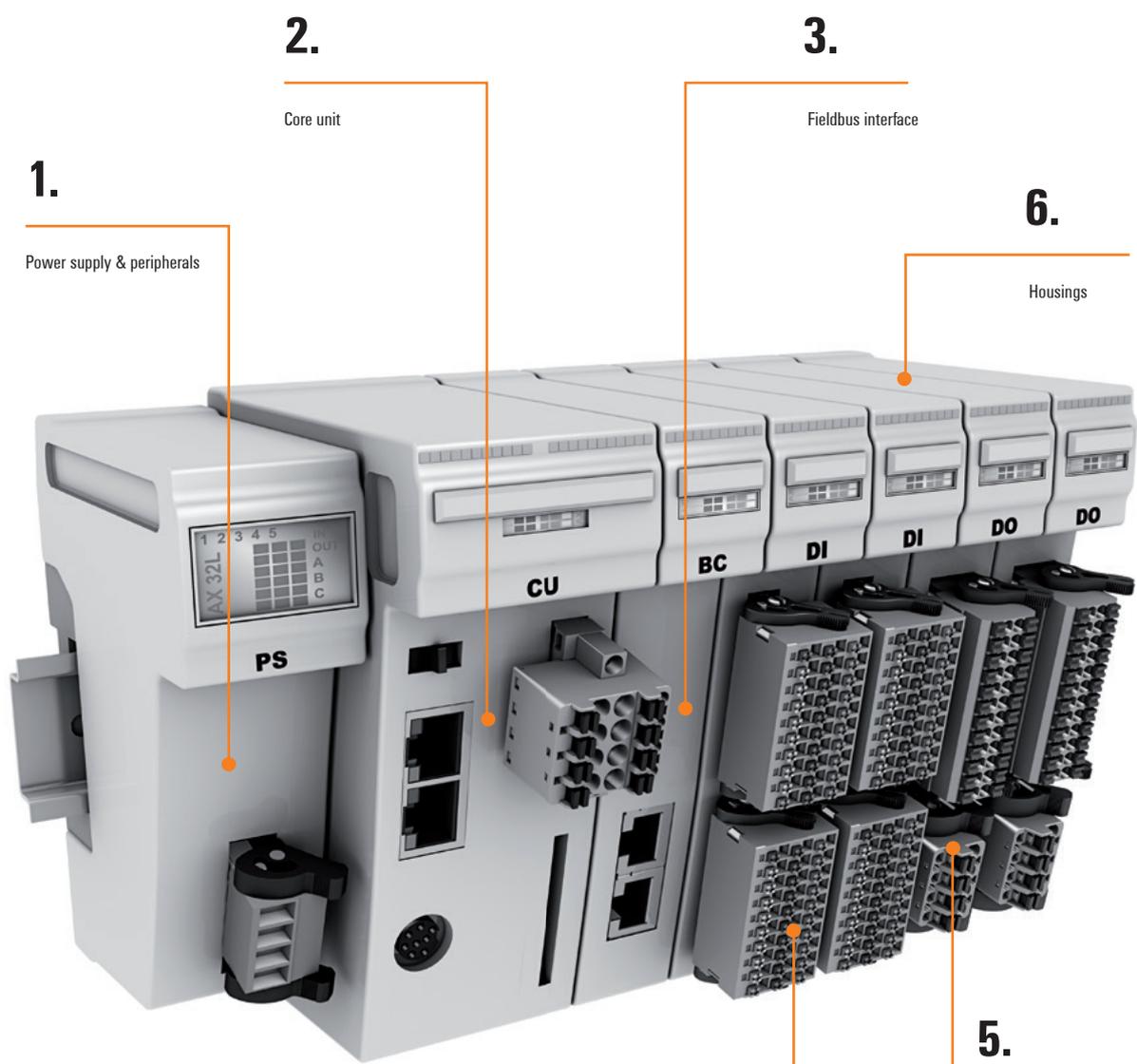
Weidmüller offers a product range tailored to the requirements of sensor signals for signal processing. For example, the BL-I/O is the smallest 3.50 mm pluggable solution for connecting a three-wire system. The integrated signal display shows the correct cabling of sensors even when the controller is switched off. The integrated electrical distribution supplies the needed power to 8 sensors. Solid PUSH IN wire connectors guarantee that the sensors run continuously and securely.

Additional 3.50, 3.81 and 5.00/5.08 mm plug-in solutions offer virtually limitless design options at the connectivity level. Our product range of male connectors means the assembly components can be produced cost effectively and are equipped for the automated SMT process.

PCB terminals with PUSH IN connectors offer you a cost-effective alternative to plug-in solutions. They can be produced in either the wave solder process or uncompromisingly in the reflow process.



PCB BL-I/O plug-in connectors with PUSH IN connections for the most compact solution



1.

Power supply & peripherals

2.

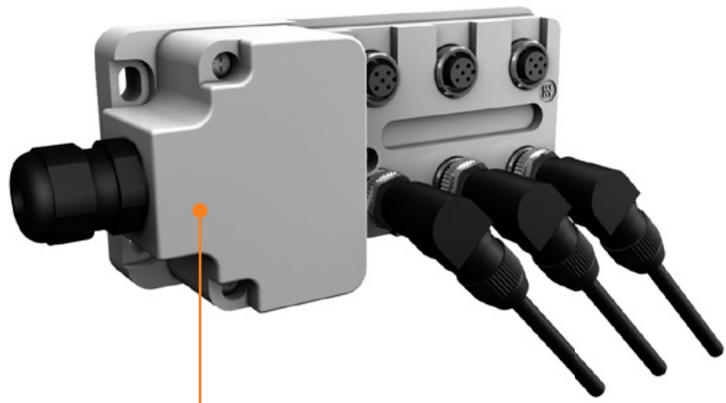
Core unit

3.

Fieldbus interface

6.

Housings



7.

SAI plug-in connectors and modules for field wiring

5.

Output card

4.

Input card

5. Output card

For a secure process, the actuators need more than the supply of precise status information; they also need highly secure connections to control relays, valves, and motors. And these should take up as little space as possible unless the need for larger connection cross-sections, cable lengths or switching voltage requires larger types of constructions.

Our B2CF plug-in connectors are both extremely compact and easy to use. Up to four levels in pitch 3.50 mm can be stacked to create a connection cross-section of up to 1.5 mm². The actuator conductors can be connected quickly and securely using the PUSH IN spring action.

The BLF 5.0x with PUSH IN connection is well suited for connection cross-section with particularly stringent demands.



Compact B2CF 3.5 mm PCB plug-in connectors in two rows of PUSH IN connection

6. Housings

Modern controls in block or sliced construction need a modular, scalable, universal housing concept.

Electronics housings carry out a multitude of functions: They integrate, protect, isolate and connect the individual electronics components and their operating and display elements. They thereby become the interface in the electronics cabinet between the various sensors, cable levels and actuators of the control system.

The CH20M (Component Housing IP20 Modular) system offers you an innovative platform for your applications and are primed for the future. We feel sure that you will be extremely pleased with the enormous degree of flexibility and customisation, whilst delivering simplified planning due to standardisation. For example, like a "tailored suit off the rack", CH20M unifies modularity in a consistent design with extensive freedom to mix and match along with vast scalability.

Other benefits include greater cost effectiveness and production process security thanks to the automated assembly and reflow processing (SMT) across all module widths as well as the greater net layout space.

In terms of utilisation, the system features highly secure operation and ease of use. Reliable operation and simplicity of service are ensured by numerous innovative details such as integrated self-coding, ergonomic release clips, being finger-safe on both sides, leading contact, as well as sealable and self-stopping hinged covers.



CH20M electronic component housing in module widths of 6 mm to 67.5 mm

7. SAI plug-in connectors and modules for field wiring

When connecting sensors and actuators, modules are increasingly being used outside the protected electrical cabinet. This means that the module components have to be even more robust.

Weidmüller offers both IP65 and IP69K round plug-in connectors depending on the application. The M8 and M12 round plug-in connectors are widely recognised as the best connectivity technology for wiring sensor and actuator signals for your industrial applications. For motors and multi-pole cables, the M23 products have been considered best-in-class for many years now.

The product range is extremely broad, spanning across from various built-in plugs to moulded cables, through to distributor modules. In addition to the standard components, we have also developed tailored solutions. For example, we can deliver customised cable lengths starting with a quantity of one. We also supply an IP67 housing which can be adequately sealed without any additional moulding beyond its own electronics module.

Looking for more detailed information?

Enter one of the search terms below into our online catalogue, at <http://catalog.weidmueller.com>

1. Power supply & peripherals

OMNIMATE Signal connector
BLF 5.08, BLZP 5.08, BLT 5.08

OMNIMATE Signal PCB terminals
LMF, LL 5.00/5.08, LL 9.52

2. Core unit

OMNIMATE Signal connector
BLDF 5.08, BLDT 5.08, BLDZ DN 5.08 (Device Net), B2L 3.50 QV

Passive Industrial Ethernet
IE-PS-RJ45, IE-PS-SCD, IE-PS-SCRJ1

3. Fieldbus interface

Passive Industrial Ethernet
IE-BS-V04, IE-BSS-V14, IE-BSC-V14, IE-PS-V04, IE-PS-V14, IE-CD-V14

4. Input card

OMNIMATE Signal connector
BL-I/O 3.50, B2CF 3.50, BL 3.50, BLZF 3.50, BCZ 3.81, BCF 3.81

OMNIMATE Signal PCB terminals
LSF-SMT 3.50/3.81, LMF

5. Output card

OMNIMATE Signal connector
BLF 5.08, BLT 5.08, BLZP 5.08, BLC 5.08, BCZ 3.81, BCF 3.81, BL-I/O 3.50, BL 3.50, BLZF 3.50, B2CF 3.50

OMNIMATE Signal PCB terminals
LMF, LSF-SMT 3.81/3.50

6. Housings

OMNIMATE Housing
CH20M, PF RS

7. SAI plug-in connectors and modules for field wiring

SAI cables and empty enclosures
SAIL-M8, SAIE-M8, SAIL-M12, SAIE-M12, SAIB-M23, SAIS-M23, SAIL-M23, SAI GHDE



SAI IP6x housing and cables

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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