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.

Your local Weidmüller partner can be found on our website:
www.weidmueller.com/countries

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www.weidmueller.com

Remote I/O
Catalogue 2015
Let’s connect.
Smooth machine start-up
thanks to wirelessly integrated remote I/O systems

Your I/O technology can be smoothly integrated in your usual engineering system with modules which adapt to your individual circumstances and are quick to get up and running.

Whether you opt for the IP 67 version directly on the panel or in the cabinet in an IP 20 housing, I/O systems from Weidmüller enable wireless integration in existing programming environments. Intelligent functions mean you are ready instantly.

With your practical equipment, our remote I/O systems optimise your machines and processes. Let’s connect

IP 20

  u-remote.

IP 67

B.1 Modular Communication. Robust.
  SAI aktiv.
u-remote.

Weidmüller u-remote – our innovative remote I/O concept with IP 20 which focuses purely on user benefits: tailored planning, faster installation, safer start-up, minimised downtimes. For considerably improved performance and greater productivity.
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<td>System overview</td>
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</table>
You automate high-performance machines and production lines
u-remote generates maximum efficiency in your projects

You want to perform your machine development operations – from the automation concept to the stable machine operation – in such a way that they are fast, high-performance, smooth and deliver identifiable added value for your customers. The decisive factors for your project’s success are consistently efficient processes and unique functions.

With u-remote you’re laying the foundation for this. By implementing powerful and easy-to-use signal connection components, you will reap early on the advantages for installation work, machine commissioning and subsequent service applications at your customers’ premises.

From planning to operation, u-remote allows you to speed up all processes and opens up new possibilities for intelligent system architecture. The result available to you is an innovative I/O system which is the perfect response to growing complexity in machine and factory automation thanks to its powerful flexibility and simple handling.

Our formula:
“More Performance. Simplified. u-remote.”

Innovative functions for more efficient automation solutions
With u-remote, Weidmüller has completely rethought the I/O technology for IP20 environments. You can thus expect a system that is full of clever details and allows you to install innovative, cost-saving and easy-to-handle automation solutions in your project.
Introduction

Why waste space?
Design your cabinets one size smaller: u-remote, with the highest connection density on a module, offers you the most slender module width and a far lower space requirement for power-feed modules - an unrivalled channel density and extremely flexible design options.

Intelligently separated
u-remote separates the supply for inputs and outputs using two 10 A current paths which are able to withstand high loads. High productivity translates into fewer power-feed modules and therefore more space and less planning. And your system can be quickly maintained while retaining full diagnostic capability, as inputs and outputs can be switched off independently of one another.

Simply plug and go
The plug-in connection level allows sensors and actuators to be connected with pre-assembled cables. This means improved time benefits, better handling, and minimises the number of mistakes in system wiring. Decentralised automation modules in particular are so very easy to transfer into productive operation.

Diagnostics, even without a control connection
u-remote simplifies machine commissioning section-by-section and accelerates maintenance work with its integrated web server. Thanks to the high performance diagnostic tool, you can simulate the functionality of inputs and outputs prior to control connection. You can conduct plain text error analyses using any standard browser - whether you're working on-site or remotely.

Simply plug and go
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Intelligently separated
u-remote separates the supply for inputs and outputs using two 10 A current paths which are able to withstand high loads. High productivity translates into fewer power-feed modules and therefore more space and less planning. And your system can be quickly maintained while retaining full diagnostic capability, as inputs and outputs can be switched off independently of one another.
Achieving higher productivity is so easy
u-remote combines powerful technologies with efficient processes

Zero errors with greater performance
The clearly structured single-row connection strip assists with assignment to the circuit diagrams. Especially when working to tight deadlines, this prevents wiring mistakes and problems during service work.
Unique: The innovative HD modules with 32 ports allow for connection of 8 individually pluggable 4-wire sensors.

Improve system availability
The system simply runs on and on. The permanent base allows electronics to be replaced without interrupting communication, or the supply of voltage to your remote I/O system. A reliable solution for minimising machine downtime.

Extremely fast with huge power reserves
The u-remote has outstanding electronic performance, with the high-speed system bus achieving up to 256 DI/DOs in 20 µs. u-remote offers an extremely fast response time and precise mapping of processes in the system, with up to 1024 I/O channels per station, as well as huge power reserves for future use.
One glance and you can see everything going on
Clear assignment of status and diagnosis has never been this simple. With one LED on the channel and status displays on each module, you can easily see all you need on u-remote. The technician can see and rectify errors without delay. Indispensable benefits for a safe start-up and rapid system maintenance.

Direct insertion – direct savings
u-remote is equipped with “PUSH IN” direct connection technology. The conductor with wire end ferrule is simply inserted in the clamping unit until the stop is reached – job done! This technology delivers time savings of up to 50 percent, compared to conventional wire-connection methods, and without losses on safety.

A single power supply is enough
Keep your remote I/O station as small as possible and simplify your planning. u-remote has a 4 A supply path, which allows 64 I/O modules to be operated with just one power supply on the coupler.

Speed things up with modularity
The modular structure of u-remote ensures rapid start-up and simple service. The compact design enables intuitive handling which reduces wiring mistakes and therefore lessens the start-up times for machines and systems. u-remote speeds up the replacement of electronics without the need to alter wiring during maintenance work, so improving system availability.

u-remote.
u-remote from Weidmüller is the reliable interface between field bus and field level in automation. The modular system is based on various components: a field bus coupler, up to 64 I/O modules, optional power-feed modules and a wealth of accessories, such as markers and terminating elements.

The field bus coupler is the central link between the various field bus standards and the u-remote system bus. At the same time, up to 64 I/O modules are supplied via its integrated power contacts. The well-engineered technology of the connection system enables 2 x 10 A to be supplied for the input and output modules and the system voltage to be fully supplied through the field bus coupler.

Every field bus coupler provides direct access to the u-remote system via a web server without additional software having to be installed. This means that the system can be parameterised and its configuration checked. Inputs and outputs can also be checked or influenced. The connection may take the form of an Ethernet-based field bus or micro USB.

The u-remote field bus couplers are integrated in the standard simple manner. The corresponding development environments of the control systems and the device description files available online, e.g. GSD, ESD, EDS oder XML, can be used to easily perform the necessary settings.

The modularly structured I/O modules are unique in that they allow the sensor and actuator wiring to be designed in both a robust and plug-in manner. This allows the electronics to be replaced at any time even with permanent wiring without downstream I/O module operations being affected. This achieves an invaluable time saving, in terms of both wiring inaccessible cabinets and rapidly replacing sensors. Thanks to the "PUSH IN" technology for up to 1.5 mm², in their narrowest form of 11.5 mm, the modularly structured u-remote I/O modules can be used for all sensor and actuator connections with a very high connection density. A clear status and diagnosis display on the connection also ensures rapid and precise checks for individual sensors and actuators.
PROFIBUS field bus coupler
DP-V1; Web server tool;
Sub-D connection

In automation technology, the PROFIBUS-DP standard enables the controlled incorporation of sensors and actuators via one central control unit. The UR20-FBC-PB-DP field bus coupler is a PROFIBUS-DP-V1 participant certified by the Profibus user organisation. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The PROFIBUS-DP coupler has a Sub-D plug-in connector and supports all services according to the DP-V1 specification. Two rotary coding switches are used to address individual PROFIBUS participants.

The coupler can be activated with a system-independent web server application via the USB service interface. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the field bus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the PROFIBUS-DP products from Weidmüller make full use of all the latest technological possibilities, such as GSD files and diagnosis messages, they actively support your application in the most important tasks – from engineering and commissioning fault diagnosis.


Block diagram UR20-FBC-PB-DP
PROFIBUS

- 2 x 10 A current paths
- Address can be set using rotary switch
- Web server
- System supply of 64 I/O modules
- Temperature range -20...+60 °C
- PROFIBUS DP-V1 up to 12 MBaud

### Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th>Field bus coupler, PROFIBUS DP-V1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>9-pin SUB-D connector</td>
</tr>
<tr>
<td>Field bus protocol</td>
<td>PROFIBUS DP-V1</td>
</tr>
<tr>
<td>Process data</td>
<td>488 Bytes</td>
</tr>
<tr>
<td>Parameter data</td>
<td>244 Bytes</td>
</tr>
<tr>
<td>Diagnostic data</td>
<td>244 Bytes</td>
</tr>
<tr>
<td>Max. number of I/O modules</td>
<td>64</td>
</tr>
<tr>
<td>Configuration interface</td>
<td>USB 2.0</td>
</tr>
<tr>
<td>Transmission rate of field bus</td>
<td>12 MHz/s</td>
</tr>
<tr>
<td>Transmission speed of u-remote system bus</td>
<td>48 MHz/s</td>
</tr>
<tr>
<td>Supply voltage for system and inputs</td>
<td>24 V DC +20 % / -15 %</td>
</tr>
<tr>
<td>Supply voltage for outputs</td>
<td>24 V DC +20 % / -15 %</td>
</tr>
<tr>
<td>Feed current for input modules, max.</td>
<td>10 A</td>
</tr>
<tr>
<td>Feed current for output modules, max.</td>
<td>10 A</td>
</tr>
<tr>
<td>Current consumption (IIN in power segment of field bus coupler), typ.</td>
<td>100 mA</td>
</tr>
<tr>
<td>Weight</td>
<td>220 g</td>
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<tr>
<td>Dimensions (H/W/D)</td>
<td>120 mm (with catch lever 128 mm) x 52 mm x 76 mm</td>
</tr>
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</table>

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Field bus coupler, PROFIBUS DP-V1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>A termination kit (UR20-EBK-ACC) is included in the coupler package</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Coding elements</th>
<th>KOSM 8x25.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination kit</td>
<td>UR20-EBK-ACC</td>
</tr>
<tr>
<td>Swivel marker</td>
<td>UR20-MA-ACC</td>
</tr>
<tr>
<td>Connection marker for pusher custom printing</td>
<td>PM 2.7/2.6 MC SDR/NS</td>
</tr>
<tr>
<td>Connection marker for pusher neutral</td>
<td>192</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td>960</td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td>1327100000</td>
</tr>
<tr>
<td>Thermitransfer version (Material: Polyester)</td>
<td>1341610000</td>
</tr>
<tr>
<td>Thermitransfer version (Material: Polyester)</td>
<td>1429410000</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
<td>1429420000</td>
</tr>
</tbody>
</table>

### Replacement parts

<table>
<thead>
<tr>
<th>Plug-in connector unit</th>
<th>UR20-PK-1334870000-SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>1361520000</td>
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### Ordering information

<table>
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<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-FBC-PB-DP</td>
<td>1</td>
<td>1334870000</td>
</tr>
</tbody>
</table>

Download of GSD-file on www.weidmueller.com

### Notes

1 roll = 1000 label = 1 Qty.
1 sheet = 60 label = 1 Qty.

**Product standard**

- IEC 61131-2
- EMC: EN 61000
- ATEX: EN 60079
- UL: UL 508
- MSIP: MSIP REM/VWG 1334870000

Let’s connect.
PROFINET is gaining in importance as a rapidly growing Industrial Ethernet Standard. By supporting real-time functionality (RT) and isochronous real-time functionality (IRT), the technology complies with modern system and application requirements to a large extent. The UR20-FBC-PN-IRT field bus coupler is a PROFINET-IRT participant certified by the PROFIBUS user organisation. It is able to connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the field bus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the PROFIBUS products from Weidmüller make full use of all the latest technological possibilities, such as GSD files and diagnosis messages, they actively support your application in the most important tasks – from engineering and commissioning to faults.


Block diagram UR20-FBC-PN-IRT
PROFINET

• 2 x 10 A current paths
• Web server
• System supply of 64 I/O modules
• Temperature range -20...+60 °C
• PROFINET IRT/RT capable
• PROFINET diagnosis
• LLDP - Neighborhood detection

Technical data

System data

<table>
<thead>
<tr>
<th>Connection</th>
<th>Field bus protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFINET IO (RT/IRT)</td>
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<tr>
<td>1.024 Bytes</td>
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<tr>
<td>1.485 Bytes</td>
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<tr>
<td>1.485 Bytes</td>
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</tr>
<tr>
<td>PROFINET IRT/RT capable</td>
<td></td>
</tr>
<tr>
<td>PROFINET diagnosis</td>
<td></td>
</tr>
<tr>
<td>LLDP - Neighborhood detection</td>
<td></td>
</tr>
</tbody>
</table>

Supply

| Supply voltage for system and inputs |
| 24 V DC -20 % / +15 % |
| 24 x DC > 20 V % / -15 % |
| 10 A |
| 10 A |
| 116 mA |
| 240 g |

Feed current for input modules, max.
Feed current for output modules, max.
Current consumption (I_in in power segment of field bus coupler), typ.

General data

| Dimensions (H/W/D) |
| 120 mm (with catch lever 128 mm) x 52 mm x 76 mm |
| Download of GSD-file on www.weidmüller.com |

Ordering data

| Module variants |
| Field bus coupler, PROFINET IRT |

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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</thead>
<tbody>
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<td>UR20-FBC-PN-IRT</td>
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<tr>
<td>A termination kit (UR20-EBK-ACC) is included in the coupler package</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accessories

| Coding elements |
| Termination kit |
| Swivel marker |
| Connection marker for pusher custom printing |
| Connection marker for pusher neutral |
| Module marker for custom printing |
| Module marker for neutral |
| Thermotransfer version (Material: Polyester) |
| Thermotransfer version (Material: Polyester) |
| Paper version for Laserprinter |
| USB cable (USB A to Micro USB) |
| Plug in connector unit |

<table>
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<tr>
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<td>1323700000</td>
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<tr>
<td>PM 2.7/2.5 MC NE WS</td>
<td>960</td>
<td>1323710000</td>
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<tr>
<td>DEX 5/6 MC SDR</td>
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<td>1341610000</td>
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<tr>
<td>DEX 5/6 MC NE WS</td>
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<td>THM UR20 G6</td>
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<td>THM UR20 WS</td>
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<td>ESO UR20 DIN A4 WS</td>
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<td>UR20-PK-1334880000-SP</td>
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<td>1484120000</td>
</tr>
</tbody>
</table>

Note

| Ordering data |
| Note |
| A termination kit (UR20-EBK-ACC) is included in the coupler package |

Product standard

| IEC 61131-2 |
| EMERSON 61000 |
| ATEX EN 60079 |
| UL UL 508 |
| MSIP |
| MSIP REL/WING 1334880000 |

Replacement parts

1 roll = 1000 label = 1 Qty.
1 sheet = 60 label = 1 Qty.

Let’s connect.
EtherCAT field bus coupler
Web server tool; two RJ45 ports; 10/100 Mbit/s

EtherCAT is a popular field bus standard for systems with stringent time requirements. The UR20-FBC-EC field bus coupler is an EtherCAT participant certified by the EtherCAT Technology Group. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The EtherCAT coupler has two Ethernet ports with integrated switch for implementing a line network structure.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the field bus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the EtherCAT products from Weidmüller make full use of all the latest technological possibilities, such as use of XML files, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.


Block diagram UR20-FBC-EC
EtherCAT

- 2 × 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range –20...+60 °C
- Various EtherCAT services

**Technical data**

**System data**
- Connection
- Field bus protocol
- Process data
- Parameter data
- Diagnostic data
- Max. number of modules
- Configuration interface
- Transmission rate of field bus

**Supply**
- Supply voltage for system and inputs
- Supply voltage for outputs
- Feed current for input modules, max.
- Feed current for output modules, max.
- Current consumption (I_{IN} in power segment of field bus coupler), typ.

**General data**
- Weight
- Dimensions (H/W/D)

**Ordering data**

**Module variants**
- Field bus coupler, EtherCAT

**Accessories**

**Coding elements**

- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**USB cable** (USB A to Micro USB)

**Replacement parts**

- Plug-in connector unit

**Ordering data**

**Type**
- Qty.
- Order No.

**UR20-FBC-EC**
- 1
- 1334910000

A termination kit (UR20-EBK-ACC) is included in the coupler package.

**Type**
- Qty.
- Order No.

**K0SM MK25.00**
- 100
- 1483050000

**UR20-EBK-ACC**
- 5
- 1346110000

**UR20-SM-ACC**
- 20
- 1339920000

**PM 2.7/2.8 MC SDR**
- 192
- 1327700000

**PM 2.7/2.8 MC NE WS**
- 960
- 1327110000

**DEK 5/8 11.5 MC SDR**
- 192
- 1341610000

**DEK 5/8 11.5 MC NE WS**
- 500
- 1341630000

**THM UR20 GE**
- 1
- 1429910000

**THM UR20 WS**
- 1
- 1429420000

**ESO UR20 DIN A4 WS**
- 10
- 1429430000

**IE-C0FPLEDO15M40MANHE**
- 1
- 1487880000

**UR20-PK-1334910000-SP**
- 5
- 1484440000

**Product standard**
- IEC 61131-2
- EMC
- ATEX
- UL
- MSP

**Ordering data**

**Type**
- Qty.
- Order No.

**UR20-FBC-EC**
- 1
- 1334910000

**UR20-EBK-ACC**
- 5
- 1346110000

**UR20-SM-ACC**
- 20
- 1339920000

**PM 2.7/2.8 MC SDR**
- 192
- 1327700000

**PM 2.7/2.8 MC NE WS**
- 960
- 1327110000

**DEK 5/8 11.5 MC SDR**
- 192
- 1341610000

**DEK 5/8 11.5 MC NE WS**
- 500
- 1341630000

**THM UR20 GE**
- 1
- 1429910000

**THM UR20 WS**
- 1
- 1429420000

**ESO UR20 DIN A4 WS**
- 10
- 1429430000

**IE-C0FPLEDO15M40MANHE**
- 1
- 1487880000

**UR20-PK-1334910000-SP**
- 5
- 1484440000
Modbus-TCP field bus coupler
Web server tool; two RJ45 ports; 10/100 Mbit/s

System safety around the globe is provided by the Modbus-TCP version, which is stated in IEC 61158 as an Industrial Ethernet Standard. The UR20-FBC-MOD-TCP from Weidmüller is a field bus coupler designed in accordance with IEC 61158. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the field bus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the Modbus-TCP products from Weidmüller make full use of all the latest technological possibilities, such as diagnosis options, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.


Block diagram UR20-FBC-MOD-TCP
Modbus-TCP

- 2 x 10 A current paths
- Various Modbus services
- Web server
- System supply of 64 I/O modules
- Temperature range –20... +60 °C

Technical data

System data
- Connection
- Field bus protocol
- Process data
- Parameter data
- Diagnostic data
- Max. number of modules
- Configuration interface
- Transmission rate of field bus

Supply
- Supply voltage for system and inputs
- Supply voltage for outputs
- Feed current for input modules, max.
- Feed current for output modules, max.
- Current consumption (IIN in power segment of field bus coupler), typ.

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Field bus coupler, Modbus TCP

Note

Accessories

Coding elements
- Termination kit
- Switch marker
- Connection marker for pusher custom printing
- Module marker for pusher neutral
- Module marker for neutral
- Thermodruck version (Material: Polyester)
- Thermodruck version (Material: Polyester)
- Paper version for Laserprinter
- USB cable (USB A to Micro USB)

Replacement parts
- Plug-in connector unit

Note

UR20-FBC-MOD-TCP

2 x RJ-45
Modbus TCP
- 8 Mbytes
- 1,024 Bytes
- 1,024 Bytes
- 100 Mbit/s
- 48 MHz/s

24 V DC +20% / -15%
24 V DC +20% / -15%
10 A
112 mA
230 g
120 mm (with catch lever 128 mm) x 52 mm x 76 mm

Type Qty. Order No.
UR20-FBC-MOD-TCP 1 1334930000

A termination kit (UR20-EBK-ACC) is included in the coupler package.

Type Qty. Order No.
KB5M 8425.00 100 1483050000
UR20-EBK-ACC 5 1346610000
UR20-EM-ACC 20 1339920000
PM 2.7/2.8 MC SDR 192 1327700000
PM 2.7/2.8 MC NE WS 960 1327710000
DEK 5/B 11.5 MC SDR 100 1341610000
DEK 5/B 11.5 MC NE WS 500 1341630000
THM UR20 GS (***) 1 1429910000
THM UR20 WS (***) 1 1429240000
ESO UR20 DIN A4 WS (*) 10 1429430000
IE-C6FP8LE0015M40M40-E 1 1487880000
UR20-PK-1334930000-SP 5 1484130000

(*) 1 roll = 1000 label = 1 Dty.
(**) 1 sheet = 80 label = 1 Dty.

Product standard
- IEC 61131-2
- EN 61000
- ATEX
- EN 60079
- UL
- UL 508
- MSP
- MSPELM/WING 1334930000

Let's connect.
EtherNet/IP™ is a widespread, real-time capable Industrial Ethernet fieldbus system. It is based on standard Ethernet technology such as TCP and UDP so it provides in addition to the transmission of unicast messages between two participants, the possibility of sending I/O data via multicast cyclically to multiple recipients. The UR20-FBC-EIP from Weidmüller is a field bus coupler designed in accordance with IEC 61158 and is an EtherNet/IP participant. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information such as diagnoses, status values and parameters can therefore be read out. All connected inputs can also be simulated or outputs set. The system’s initial power supply is already integrated in the field bus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the EtherNet/IP products from Weidmüller make full use of all the latest technological possibilities, such as diagnosis options, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

Ethernet/IP

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range: -20...+60 °C

**Technical data**

**System data**
- Connection
- Field bus protocol
- Process data
- Parameter data
- Diagnostic data
- Max. number of I/O modules
- Configuration interface
- Transmission rate of field bus

**Supply**
- Supply voltage for the system and inputs
- Supply voltage for outputs
- Feed current for input modules, max.
- Feed current for output modules, max.
- Current consumption (IIN in power segment of field bus coupler), typ.

**General data**
- Weight
- Dimensions (H/W/D)

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-FBC-EIP</td>
<td>1</td>
<td>1334920000</td>
</tr>
</tbody>
</table>

A termination kit (UR20-EBK-ACC) is included in the coupler package.

**Accessories**

**Coding elements**
- Termination kit
- Swivel marker

**Replacement parts**
- Plug-in connector unit

**Download of EDS file on [www.weidmueller.com](http://www.weidmueller.com)**

**Let’s connect.**
Digital input modules from Weidmüller are available in different versions and are used primarily to receive binary control signals from sensors, transmitters, switches or proximity switches. Thanks to their flexible design, they will satisfy your need for well co-ordinated project planning with reserve potential.

All modules are available with 4, 8 or 16 inputs and comply fully with IEC 61131-2. The digital inputs are for Type 1 and Type 3 sensors in accordance with the standard. With a maximum input frequency of up to 1 kHz, they are used in many different applications. The variant for PLC interface units enables rapid cabling to the proven Weidmüller interface sub-assemblies using system cables. This ensures rapid incorporation into your overall system. Two modules with a timestamp function are able to capture binary signals and to provide a timestamp in 1 μs resolution.

The module electronics supply the connected sensors from the input current path (Uin).

**UR20-4DI-P block diagram example**
Digital input modules

4DI-P

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire, 3-wire, 3-wire+FE connection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IIN in the respective power segment)

Digital inputs
- Number
- Input Type
- Input filter
- Input voltage, low
- Sensor supply
- Sensor connection
- Reverse polarity protection
- Module diagnosis

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Digital input module, 4 channels

Accessories

Coding elements
Termination kit
Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter
Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note

Let's connect.

UR20-4DI-P
Digital input modules

8DI-P-2W

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire connection
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmission rate of system bus</td>
<td>48 Mbit/s</td>
<td></td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td>yes, DC 500 V between current paths</td>
<td></td>
</tr>
</tbody>
</table>

| Supply             |                       |          |
| Voltage supply     | Current consumption (Ia1 in power segment of field bus coupler), typ. | 8 mA      |
| Current consumption (Ia1 in the respective power segment) | < 22 mA    |          |

| Digital inputs     |                       |          |
| Number             |                       | 8        |
| Input Type         | Types 1 and 3, IEC 61131-2 |          |
| Input filter       | adjustable, up to 40 ms   |          |
| Input voltage, low | < 5 V                  |          |
| Input voltage, high| > 11 V                 |          |
| Sensor supply      | yes                    |          |
| Sensor connection  | 2-wire                 |          |
| Reverse polarity protection | yes           |          |
| Module diagnosis   | no                     |          |

| General data       |                       |          |
| Weight             | 83 g                  |          |
| Dimensions (H/W/D) | 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm |          |

Ordering data

| Module variants    |                       |          |
| Digital input module, 8 channels, 2-wire |          |          |

Accessories

| Coding elements    |                       |          |
| Swivel marker      |                       |          |
| Connection marker for pusher custom printing |          |          |
| Connection marker for pusher neutral |          |          |
| Module marker for custom printing |          |          |
| Module marker for neutral |          |          |
| Thermostatransfer version (Material: Polyester) |          |          |
| Thermostatransfer version (Material: Polyester) |          |          |
| Paper version for Laserprinter |          |          |

| Replacement parts  |                       |          |
| Electronics module |                       |          |
| Basic module       |                       |          |
| Plug-in connector unit |                       |          |

Note

8DI·P-2W

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire connection
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

Technical data

| System data        |                       |          |
| Interface          |                       |          |
| Transmission rate of system bus | 48 Mbit/s         |          |
| Galvanic isolation | yes, DC 500 V between current paths |          |

| Supply             |                       |          |
| Voltage supply     | 24 V DC ±20 % / -15 % via the system bus |          |
| Current consumption (IIN in power segment of field bus coupler), typ. | 8 mA      |
| Current consumption (IIN in the respective power segment) | < 22 mA    |          |

| Digital inputs     |                       |          |
| Number             | 8                      |          |
| Input Type         | Types 1 and 3, IEC 61131-2 |          |
| Input filter       | adjustable, up to 40 ms   |          |
| Input voltage, low | < 5 V                  |          |
| Input voltage, high| > 11 V                 |          |
| Sensor supply      | yes                    |          |
| Sensor connection  | 2-wire                 |          |
| Reverse polarity protection | yes           |          |
| Module diagnosis   | no                     |          |

| General data       |                       |          |
| Weight             | 83 g                  |          |
| Dimensions (H/W/D) | 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm |          |

Ordering data

| Module variants    |                       |          |
| Digital input module, 8 channels, 2-wire |          |          |

Accessories

| Coding elements    |                       |          |
| Swivel marker      |                       |          |
| Connection marker for pusher custom printing |          |          |
| Connection marker for pusher neutral |          |          |
| Module marker for custom printing |          |          |
| Module marker for neutral |          |          |
| Thermostatransfer version (Material: Polyester) |          |          |
| Thermostatransfer version (Material: Polyester) |          |          |
| Paper version for Laserprinter |          |          |

| Replacement parts  |                       |          |
| Electronics module |                       |          |
| Basic module       |                       |          |
| Plug-in connector unit |                       |          |

Note

8DI-P-2W

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire connection
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2
**8DI-P-3W**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire and 3-wire connection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

### Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td></td>
</tr>
<tr>
<td>Transmission rate of system bus</td>
<td></td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Supply</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage supply</td>
<td></td>
</tr>
<tr>
<td>Current consumption (Ia in power segment of field bus coupler), typ.</td>
<td></td>
</tr>
<tr>
<td>Current consumption (Ia in the respective power segment)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Digital inputs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>Input Type</td>
<td></td>
</tr>
<tr>
<td>Input filter</td>
<td></td>
</tr>
<tr>
<td>Input voltage, low</td>
<td></td>
</tr>
<tr>
<td>Input voltage, high</td>
<td></td>
</tr>
<tr>
<td>Sensor supply</td>
<td></td>
</tr>
<tr>
<td>Sensor connection</td>
<td></td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td></td>
</tr>
<tr>
<td>Module diagnosis</td>
<td></td>
</tr>
<tr>
<td>Individual channel diagnosis</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H/W/D)</td>
<td></td>
</tr>
</tbody>
</table>

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital input module, 8 channels, 3-wire</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Coding elements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination kit</td>
<td></td>
</tr>
<tr>
<td>Swivel marker</td>
<td></td>
</tr>
<tr>
<td>Connection marker for pusher custom printing</td>
<td></td>
</tr>
<tr>
<td>Connection marker for pusher neutral</td>
<td></td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td></td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td></td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td></td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td></td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Replacement parts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics module</td>
<td></td>
</tr>
<tr>
<td>Basic module</td>
<td></td>
</tr>
<tr>
<td>Plug in connector unit</td>
<td></td>
</tr>
</tbody>
</table>

### UR20-8DI-P-3W

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-8DI-P-3W</td>
<td>1</td>
<td>1394400000</td>
</tr>
</tbody>
</table>

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**Product standard**
- IEC 61131-2
- EN 61000
- EN 60079
- UL 508
- MSIP

**EMC**
- EN 61000

**ATEX**
- EN 60079

**UL**
- UL 508

**MSIP**
- MSIP-REM-WMS-1394400000

**Let’s connect.**
Digital input modules

8DI-P-3W-HD

- 8 plugs with 4 connections per module
- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- Reverse polarity protection
- 2-wire and 3-wire connection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IIN in the respective power segment)

Digital inputs
- Number
- Input Type
- Input filter
- Input voltage, low
- Sensor supply
- Sensor connection
- Reverse polarity protection
- Module diagnosis

Individual channel diagnosis

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Digital input module, 8 channels, 3-wire, HD plug

Accessories

Coding elements
- Termination kit
- Swivel marker
- "HD-Plug"
- "Stripping tool"
- "Pressing tool"
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug in connector unit

Note: Please order connector separately

UR20-8DI-P-3W-HD

- u-remote system bus
- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % / –15 % via the system bus
- 8 mA
- < 30 mA + sensor feed

<table>
<thead>
<tr>
<th>Types</th>
<th>Qty.</th>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>1, 3</td>
<td>1</td>
<td>1315190000</td>
</tr>
<tr>
<td>adjustable, up to 40 ms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 11 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maximum 150 mA per channel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-wire, 3-wire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120 mm (with catch lever 128 mm) x 11,5 mm x 76 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>K0SM 0425.00</td>
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<td>UR20-PGDJ.35</td>
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<td>multi-connector 6-10</td>
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<td>8202100000</td>
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<td>PKV UR20-HD</td>
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<tr>
<td>DEK 5/8 11.5 MC NE WS</td>
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<tr>
<td>THM UR20 GE **</td>
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<tr>
<td>THM UR20 WS **</td>
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<tr>
<td>ESO UR20 DIN A4 WS **</td>
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<td>1429430000</td>
</tr>
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</table>

Product standard
- IEC 61131-2
- EMC EN 61000
- ATEX EN 60079
- UL UL 508

1555100000 - 2015

Let’s connect.
Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption ($I_{IN}$ in power segment of field bus coupler), typ.
- Current consumption ($I_{IN}$ in the respective power segment)

Digital inputs
- Number
- Input Type
- Input filter
- Input voltage, low
- Input voltage, high
- Sensor supply
- Sensor connection
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Digital input module, 16 channels

Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note

16DI-P
- 16 digital inputs
- Positive switching
- Reverse polarity protection
- 1-wire connection
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

UR20-16DI-P

Technical data
- u-remote system bus
  - 48 MHz
  - yes, DC 500 V between current paths
  - 24 V DC +20 % / -15 % via the system bus
- 8 mA
- < 42 mA

Digital inputs
- Number
- Types 1 and 3, IEC 61131-2
- 3 ms
- < 5 V
- > 11 V
- no
- 1-wire
- yes
- yes
- no

General data
- Weight
- 87 g
- Dimensions (H/W/D)
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Ordering data

Type Qty. Order No.
UR20-16DI-P 1 1315200000

Accessories

Type Qty. Order No.
KOSM BHD 5.00 100 1483050000
UR20-EM-ACC 5 1346100000
UR20-EM-ACC 5 1346100000
PM 2.7/2.6 MC SOH 192 1323700000
PM 2.7/2.6 MC NL WS 960 1333710000
DEK 5/S11.5 MC SDR 500 1341610000
DEK 5/S11.5 MC NE WS 500 1341830000
THM UR20 GE ** 1 1429810000
THM UR20 WS ** 1 1429820000
ESO UR20 DIN A4 WS ** 10 1429430000
UR20-EM-1315200000-SP 1 1346880000
UR20-BM-SP 5 1360030000
UR20-PK-1315200000-SP 5 1344600000

Product standard
- IEC 61131-2
- EN 61000
- EN 60079
- UL 508
- MSIP
- MSIP REM/WMS 1315200000

Note
- 1 roll = 1000 label = 1 Qty.*
- 1 sheet = 60 label = 1 Qty.*
Digital input modules

16DI-P-PLC-INT

- 16 digital inputs
- Positive switching
- Reverse polarity protection
- For connecting a PLC interface element
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (I\text{IN} in power segment of field bus coupler), typ.
- Current consumption (I\text{IN} external)

Digital inputs
- Number
- Input Type
- Input filter
- Input voltage, low
- Input voltage, high
- Sensor supply
- Sensor connection
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Digital input module, 16 channels, PLC interface

Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit
- PLC interface element
- Pre-assembled cable, 1m

Note

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-16DI-P-PLC-INT</td>
<td>1</td>
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</tbody>
</table>

Cleaning data

System bus
- u-remote system bus
- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- < 42 mA

Digital inputs
- 16
- Type 1 and 3, IEC 61131-2
- 3 ms
- < 5 V
- > 11 V
- external
- yes
- no

Weight
- 73 g
- 120 mm (with catch lever 128 mm) x 11,5 mm x 76 mm

Product standard

IEC 61131-2
EMC EN 61000
ATEX EN 60079
UL UL 508
MSIP MSIP-REM-WMS 1315210000

Let’s connect.
2DI-PTS

• 2 digital inputs for sensors such as transmitters, switches and proximity sensors
• Positive switching
• 2-wire, 3-wire, 3-wire+FE connection
• Input filter can be set channel by channel
• Types 1 and 3 acc. to IEC 61131-2
• 1 µs Timestamp resolution

Technical data

System data
Interface
Transmission rate of system bus
Galvanic isolation
Supply
Voltage supply
Current consumption (IIN in power segment of field bus coupler), typ.
Current consumption (IIN in the respective power segment)
Digital Inputs
Number
Input Type
Input filter
Input voltage, low
Input voltage, high
Sensor supply
Sensor connection
Reverse polarity protection
Module diagnosis
Individual channel diagnosis
Data width Timestamp
Resolution Timestamp

General data
Weight
Dimensions (H/W/D)

Ordering data
Module variants
Digital input module, 2 channels, Timestamp

Accessories
Coding elements
Termination kit
Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter
Replacement parts
Electronics module
Basic module
Plug-in connector unit

Note
u-remote system bus
48 Mbit/s
yes, DC 500 V between current paths
24 V DC +20 % / –15 % via the system bus
8 mA
< 10 mA + sensor feed
2
Type 1 und 3, IEC 61131-2
adjustable, up to 40 ms
< 5 V
> 11 V
yes
2-wire, 3-wire, 3-wire+FE
yes
yes
no
16 Bit
1 µs
time stamp resolution
120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Type
2DI-PTS

Qty.
1

Order No.
1460140000

Type
KOSM IM075.00
UR20-EBK-ACC
UR20-MA-ACC
PM 2.7/2.9 MC SGR
PM 2.7/2.9 MC NE SGR
DEK 5/8/11.5 MC SGR
DEK 5/8/11.5 MC NE WS
THM UR20 GE (**) +1
THM UR20 WS (**)
ESG UR20 DIN A4 WS (**)
UR20-EM-1460140000-SP
UR20-BM-SP
UR20-PK-1460140000-SP

Qty.
100
5
20
192
960
100
500
1
1
10
1

Order No.
1483050000
1348610000
1339920000
1323700000
1323710000
1341610000
1341630000
1429910000
1429920000
1429420000
1429430000
1463690000
1386930000
1484110000

(**) 1 roll = 1000 label = 1 Qty.
(**) 1 sheet = 60 label = 1 Qty.

Product standard
IEC 61131-2
EMC
EN 61000
ATEX
EN 60079
UL
UL 508

Let’s connect.
Digital input modules

4DI-P-TS

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2
- 1 µs Timestamp resolution

Technical data

System data

- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply

- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IIN in the respective power segment)

Digital Inputs

- Number
- Input Type
- Input filter
- Input voltage, low
- Input voltage, high
- Sensor supply
- Sensor connection
- Reverse polarity protection
- Module diagnostics
- Individual channel diagnosis
- Data width Timestamp
- Resolution Timestamp

General data

- Weight
- Dimensions (H/W/D)

Ordering data

Module variants

- Digital input module, 4 channels, Timestamp

Accessories

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermo-transfer version (Material: Polyester)
- Thermodruckversion (Material: Polyester)
- Paper version for Laserprinter

Replacement parts

- Electronics module
- Basic module
- Plug-in connector unit

Note

u-remote system bus

- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % / –15 % via the system bus
- 8 mA
- < 10 mA + sensor feed
- 4
- Types 1 and 3, IEC 61131-2
- adjustable, up to 40 ms
- < 5 V
- > 11 V
- yes
- 2-wire, 3-wire, 3-wire+FE
- yes
- yes
- no
- 16 Bit
- 1 µs Time stamp resolution
- 87 g
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-4DI-P-TS | 1 | 1460150000

UR20-4DI-P-TS

*1 roll = 1000 label = 1 Qty.
*1 sheet = 60 label = 1 Qty.

Let's connect.
Digital output modules

Digital output modules are available in the following variants: 4DO, 8DO with 2-wire technology, 16DO with or without PLC interface connection. They are used primarily for incorporating decentralised actuators.

All outputs are designed for DC-13 actuators acc. to DIN EN 60947-5-1 and IEC 61131-2 specifications. Just like the digital input modules, frequencies of up to 1 kHz are possible. Maximum system safety is ensured by protecting the outputs. This consists of an automatic restart following a short-circuit. Clearly recognisable LEDs also signal the status of the entire module as well as individual channels.

In addition to the standard applications of the digital output modules, the portfolio also includes special variants, such as the 4RO-SSR module for rapidly switching applications. Fitted with solid state technology, 0.5 A is available for each output. Furthermore, there is also the 4RO-CO relay module for power-intensive applications. This is equipped with four change-over contacts, optimised for a switching voltage of 277 V AC and designed for a switching current of 6 A. To serve negative switching requirements there is a parameterisable version of the 4DO Module.

The module electronics supply the connected actuators from the output current path ($U_{OUT}$).

**UR20-4DO-P block diagram example**
**Digital output modules**

### 4DO-P

- 4 digital outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- 2-wire, 3-wire, 3-wire+FE connection
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

### Technical data

#### System data

- Interface
- Transmission rate of system bus
- Galvanic isolation

#### Supply

- Voltage supply
- Current consumption (I\textsubscript{IN} in power segment of field bus coupler), typ.
- Current consumption (I\textsubscript{OUT} in the respective power segment)

#### Digital outputs

- Number
- Type of load
- Response time, high
- Response time, low
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
- Resistive load (min. 47 Ω)
- Inductive load (DC 13)
- Lamp load (12 W)
- Actuator connection
- Short-circuit-proof
- Non reactive
- Module diagnosis
- Individual channel diagnosis
- Shut-down energy (inductive)
- Response time of protective circuit (current limitation)

#### General data

- Weight
- Dimensions (H/W/D)

### Ordering data

#### Module variants

- Digital output module, 4 channels

#### Accessories

- Coding elements
- Termination kit
- Swing anchor
- Connection marker for busbar custom printing
- Connection marker for busbar neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

#### Replacement parts

- Electronics module
- Basic module
- Plug in connector unit

### Let’s connect.

#### Product standard

<table>
<thead>
<tr>
<th>Standard</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC 61131-2</td>
<td>EN 61000</td>
</tr>
<tr>
<td>ATEX</td>
<td>EN 60079</td>
</tr>
<tr>
<td>UL</td>
<td>UL 508</td>
</tr>
<tr>
<td>MSP</td>
<td>MSPREM/VMG 1315220000</td>
</tr>
</tbody>
</table>

**UR20-4DO-P**

- u-remote system bus
- 48 MHz
- yes, DC 500 V between current paths
- 24 V DC 0% / -15 % via the system bus
- 8 mA 10 mA + load
- 4 digital outputs
- 0.5 A
- 1 kHz
- 2 kHz
- 1 kHz
- 2-wire, 3-wire, 3-wire+FE
- Thermal
- Yes
- No
- 150 mJ / channel
- < 100 µs (ambient temperature dependent)
- 86 g
- 120 mm (with catch lever) x 11.5 mm x 76 mm

**Type** | **Qty.** | **Order No.**
---|---|---
UR20-4DO-P | 1 | 1315220000

*) For this and additional technical data, please refer to the manual available at www.weidmüller.de or scan the QR code below.

**Type** | **Qty.** | **Order No.**
---|---|---
KOSM 8425.00 | 100 | 1483050000
UR20-EM-ACL | 5 | 1346810000
UR20-SM-4DC | 20 | 1339820000
PM 2.7/2.8 MC SDR | 192 | 1323770000
PM 2.7/2.8 MC NE WS | 960 | 1323710000
DEK 5/0 11.5 MC SDR | 100 | 1341610000
DEK 5/0 11.5 MC NE WS | 500 | 1341630000
THM UR20 GE **| 1 | 1429810000
THM UR20 WS **| 1 | 1429820000
ESO UR20 DIN A4 WS **| 10 | 1429340000
UR20-EM 1315220000-SP | 1 | 1346700000
UR20-EMSP | 5 | 1360930000
UR20-EM 1315220000-SP | 5 | 1483960000

***) 1 roll = 1000 label = 1 Qty.
** 1 sheet = 60 label = 1 Qty.
Digital output modules

4DO-P-2A

- 4 digital outputs
- Module can be loaded up to 8 A
- Can be loaded up to 2 A per channel
- Short-circuit-proof
- 2-wire, 3-wire, 3-wire+FE connection
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanization

Supply
- Voltage supply
- Current consumption (I_{IN} in power segment of field bus coupler), typ.
- Current consumption (I_{OUT} in the respective power segment)

Digital outputs
- Number
- Type of load
- Response time, high
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
- Resitive load (min. 47 Ω)
- Inductive load (DC 13)
- Lamp load (12 W)
- Actuator connection
- Short-circuit-proof
- Non reactive
- Module diagnosis
- Individual channel diagnosis
- Shut-down energy (inductive)
- Response time of protective circuit (current limitation)

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Digital output module, 4 channels, 2 A

Accessories

Coding elements
- Termination kit
- Swoosh marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note

Let’s connect.

4DO-P-2A

- remote system bus
- 4B MHz
- yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- 10 mA + load
- 4 ohmic, inductive, lamp load
- 100 µs
- 250 µs
- 2 A
- 8 A
- 1 kHz
- 2 kHz
- 1 kHz
- 2-wire, 3-wire, 3-wire+FE
- thermal
- yes
- yes
- no
- 150 mJ / channel
- < 100 µs (ambient temperature dependent)
- 86 g
- 120 mm (with catch lever) x 11,5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-4DO-P-2A | 1 | 1315230000

*) For this and additional technical data, please refer to the manual available at www.weidmueller.de or scan the QR code below.

Type | Qty. | Order No.
--- | --- | ---
KISM 8070.00 | 100 | 1483050000
UR20-EBK-XLC | 5 | 1348610000
UR20-SM-ACC | 20 | 1339920000
PM 2.7/2.6 MC SDR | 192 | 1323700000
PM 2.7/2.6 MC NE WS | 960 | 1323710000
DEK 5/6 11.5 MC SDR | 100 | 1341610000
DEK 5/6 11.5 MC NE WS | 500 | 1341630000
THM UR20-GS | 1 | 1429910000
THM UR20 WS | 1 | 1429920000
ESO UR20 DIN A4 WS | 10 | 1429430000
UR20-EM-1315230000-SP | 1 | 1346710000
UR20-BM-SP | 5 | 1350930000
UR20-PK-1315230000-SP | 5 | 1483970000

*) 1 roll = 1000 label = 1 Qty.

*) 1 sheet = 80 label = 1 Qty.

Product standard
- IEC 61131-2

EMC
- EN 61000

ATEX
- EN 60079

UL
- UL 508

MSP
- MSP REM/WING 1315230000

A.30 1555100000 - 2015
# Digital output modules

## 4DO-PN-2A
- 4 digital outputs
- Module can be loaded up to 8 A
- Can be loaded up to 2 A per channel
- Short-circuit-proof
- Positive or negative switching
- 2-wire, 3-wire, 3-wire+FE connection
- IEC 61131-2 compliant

## Technical data

### System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

### Supply
- Voltage supply
- Current consumption (I_in power segment of field bus coupler), typ.
- Current consumption (I_out in the respective power segment)

### Digital outputs
- Number
- Positive or negative switching
- Type of load
- Response time, high
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
- Load (ohmic, inductive, lamp load)
- Actuator connection
- Short-circuit-proof
- Non reactive
- Module diagnosis
- Individual channel diagnosis
- Shut-down energy (inductive)
- Response time of protective circuit (current limitation)

### General data
- Weight
- Dimensions (H/W/D)

## Ordering data

### Module variants
- Digital output module, 4 channels, positively or negatively switching

### Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

### Replacement parts
- Electronics module
- Basic module
- Plug in connector unit

---

### UR20-4DO-PN-2A

```markdown
<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>UR20-4DO-PN-2A</td>
<td>1</td>
<td>1394420000</td>
</tr>
</tbody>
</table>
```

*For this and additional technical data, please refer to the manual available at www.weidmueller.de or scan the QR code below.*

---

### Accessory variants

#### Coding elements
- KOSM BHZ5.00
- KOSM BHZ5.00

#### Terminations
- UR20-1SK-ACC
- UR20-SM-ACC

#### Swivel markers
- PM 2.7/2.6 MC SDR
- PM 2.7/2.6 MC NL WS

#### Connection markers
- DEK 5/8 11.5 MC SDR
- DEK 5/8 11.5 MC NL WS

#### Module markers
- THM UR20 SE **1**
- THM UR20 WS **1**

#### Thermotransfer versions
- PM 2.7/2.6 MC SDR
- PM 2.7/2.6 MC NL WS

#### Paper versions
- ESD UR20 DIN A4 WS **2)**

### Other parts
- UR20-1SK-1394420000-SP
- UR20-BM-SP
- UR20-PK-1394420000-SP

**1) 1 roll = 1000 label = 1 Qty.
2) 1 sheet = 60 label = 1 Qty.**
### Digital output modules

**8DO-P**

- 8 digital outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- 2-wire connection
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

### Technical data

**System data**
- Interface
- Transmission rate of system bus
- Galvanic isolation

**Supply**
- Voltage supply
- Current consumption (I\text{IN}) in power segment of field bus coupler, typ.
- Current consumption (I\text{OUT}) in the respective power segment

**Digital outputs**
- Number
- Type of load
- Response time, high
- Response time, low
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
  - Resistive load (min. 47 Ω)
  - Inductive load (DC 13)
  - Lamp load (12 W)
- Actuator connection
- Short-circuit-proof
- Non reactive
- Module diagnosis
- Individual channel diagnosis
- Shut-down energy (inductive)
- Response time of protective circuit (current limitation)

**General data**
- Weight
- Dimensions (H/W/D)

### Ordering data

**Module variants**
- Digital output module, 8 channels

**Accessories**
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug-in connector unit

**Note**

*For this and additional technical data, please refer to the manual available at www.weidmüller.de or scan the QR code below.

### UR20-8DO-P

- Remote system bus
  - 48 MHz
  - yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- 15 mA + load
- 8
- Resistive, inductive, lamp load
- 100 μs
- 250 μs
- 0.5 A
- 4 A
- 1 kHz
- 0.1 Hz without snubber diode / 1 kHz with suitable snubber diode
- 1 kHz
- 2-wire
  - thermal
  - yes
  - yes
- 150 mJ / channel
- < 100 μs (ambient temperature dependent)
- 87 g
- 120 mm (with catch lever) x 11.5 mm x 76 mm

**Type** | **Qty.** | **Order No.**
---|---|---
UR20-8DO-P | 1 | 1315240000

*Product standard IEC 61131-2
EMC EN 61000
ATEX EN 60079
UL UL 508
MSP MSP/REM/WING 1315240000

**Type** | **Qty.** | **Order No.**
---|---|---
KOSM BKZ5.00 | 100 | 1483050000
UR20-8MK-ACL | 5 | 1346810000
UR20-8MK-AC2 | 20 | 1339820000
PM 2.7/2.6 M AC | 192 | 1323700000
PM 2.7/2.6 M BC | 960 | 1323710000
DO 5-B-11.5 M DC | 100 | 1341610000
DO 5/5-11.5 M DC | 500 | 1341630000
THM UR20 GE | 1 | 1429310000
THM UR20 WS | 1 | 1429210000
ESO UR20 DIN A4 WS | 10 | 1429430000
UR20-EM-1315240000-SP | 1 | 1346720000
UR20-BMK-SP | 5 | 1346730000
UR20-PK-1315240000-SP | 5 | 1346410000

\*1 roll = 1000 label = 1 Qty.
\*2 1 sheet = 60 label = 1 Qty.

**Let’s connect.**
Digital output modules

8DO-P-2W-HD

- 8 digital outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- 2-wire connection
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

### Technical data

#### System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

#### Supply
- Voltage supply
- Current consumption \(I_{\text{IN}}\) in power segment of field bus coupler, typ.
- Current consumption \(I_{\text{OUT}}\) in the respective power segment

#### Digital outputs
- Number
- Type of load
- Response time, high
- Response time, low
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
  - Resistive load (min. 47 Ω)
  - Inductive load (DC 13)
  - Lamp load (12 W)

#### Actuator connection
- Short-circuit-proof
- Non reactive
- Module diagnosis
- Individual channel diagnosis
- Shut-down energy (inductive)
- Response time of protective circuit (current limitation)

#### General data
- Weight
- Dimensions (H/W/D)

### Ordering data

#### Module variants
- Digital output module, 8 channels, HD-plug

#### Accessories
- Coding elements
- Termination kit
- Swivel marker
- * HD-Plug
- * Stripping tool
- * Pressing tool
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

#### Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

### Note
- Please order connector separately

Note: Please order connector separately

**UR20-8DO-P-2W-HD**

#### u-remote system bus
- 48 MHz/s
- 500 V DC between current paths
- 24 V DC ±20 % / -15 % via the system bus
- 8 mA
- 40 mA + load
- 8
- ohmic, inductive, lamp load
  - max. 50 µs
  - max. 100 µs
- 0.5 A
- 1 kHz
- 1 kHz without snubber diode / 1 kHz with suitable snubber diode
- 2-wire
- thermal
  - yes
  - no
- 150 mJ / channel
- < 100 µs (ambient temperature dependent)
- 88 g
- 120 mm (with catch lever) x 11.5 mm x 76 mm

**Product standard**
- IEC 61131-2
- EN 61000
- ATEX
- UL

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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<tbody>
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**Type**

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<tr>
<td>K0SM 80/25.00</td>
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<td>UR20-SM-4/5</td>
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<td>1339820000</td>
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<tr>
<td>UR20-PG0.35</td>
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<td>1453340000</td>
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<td>multi-stripax 6/16</td>
<td>1</td>
<td>3202120000</td>
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<tr>
<td>PW2/UR20-HD</td>
<td>1</td>
<td>1556220000</td>
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<tr>
<td>DEK S/B/11.5 MC 50A</td>
<td>100</td>
<td>1341610000</td>
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<tr>
<td>DEK S/B/11.5 MC 4/8</td>
<td>500</td>
<td>1341630000</td>
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<tr>
<td>THM UR20 SE **</td>
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<td>THM UR20 WS **</td>
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<td>ESO UR20 DIN A4 WS **</td>
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<tr>
<td>UR20-PK-1509830000-SP</td>
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</table>

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- HD-Plug
- Stripping tool
- Pressing tool
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Note**

- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.
Digital output modules

16DO-P

- 16 digital outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- 1-wire connection
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th>Interface</th>
<th>48 MHz/4k</th>
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<tbody>
<tr>
<td>Transmission rate of system bus</td>
<td>yes, DC 500 V between current paths</td>
<td></td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply</th>
<th>Voltage supply</th>
<th>24 V DC ±20 % / -15 % via the system bus</th>
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</thead>
<tbody>
<tr>
<td>Current consumption (IIN in power segment of field bus coupler), typ.</td>
<td>8 mA</td>
<td></td>
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<tr>
<td>Current consumption (IOUT in the respective power segment)</td>
<td>20 mA × load</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Digital outputs</th>
<th>16</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1</td>
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</tr>
<tr>
<td>Type of load</td>
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</tr>
<tr>
<td>Response time, high</td>
<td>100 µs</td>
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<tr>
<td>Response time, low</td>
<td>250 µs</td>
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<tr>
<td>Output current per channel, max.</td>
<td>0.5 A</td>
<td></td>
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<tr>
<td>Output current per module, max.</td>
<td>8 A</td>
<td></td>
</tr>
<tr>
<td>Switching frequency max.</td>
<td>1 kHz</td>
<td></td>
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<tr>
<td>Actuator connection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-circuit-proof</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistor load (min. 47 Ω)</td>
<td>5 kHz</td>
<td></td>
</tr>
<tr>
<td>Inductive load (DC 13)</td>
<td>1 kHz</td>
<td></td>
</tr>
<tr>
<td>Lamp load (12 W)</td>
<td></td>
<td></td>
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<tr>
<td>Resistive load (min. 47 Ω)</td>
<td>150 mJ / channel</td>
<td></td>
</tr>
<tr>
<td>Inductive load (DC 13)</td>
<td>&lt; 100 µs (ambient temperature dependent)</td>
<td></td>
</tr>
<tr>
<td>Lamp load (12 W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance time of protective circuit (current limitation)</td>
<td>83 g</td>
<td></td>
</tr>
<tr>
<td>General data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>120 mm (with catch lever128 mm) x 11.5 mm x 76 mm</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H/W/D)</td>
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Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>Digital output module, 16 channels</td>
<td>UR20-16DO-P</td>
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Accessories

<table>
<thead>
<tr>
<th>Coding elements</th>
<th>Type</th>
<th>Qty.</th>
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<tr>
<td>Termination kit</td>
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<td>Swivel marker</td>
<td>PM 2.7/2.6 MC SDR</td>
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<td>1339920000</td>
</tr>
<tr>
<td>Connection marker for pusher custom printing</td>
<td>DEK 5/B 11.5 MC SDR</td>
<td>100</td>
<td>1341610000</td>
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<tr>
<td>Connection marker for pusher neutral</td>
<td>DEK 5/B 11.5 MC NE WS</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td>THM UR20 GE **</td>
<td>1</td>
<td>1429810000</td>
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<tr>
<td>Module marker for neutral</td>
<td>THM UR20 WS ***</td>
<td>1</td>
<td>1429420000</td>
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<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td>ESO UR20 DIN A4 WS ****</td>
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<tr>
<td>Paper version for Laserprinter</td>
<td>UR20 EM-1315250000-SP</td>
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<tr>
<td>User module</td>
<td>UR20-EMSP</td>
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<td>1350930000</td>
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<tr>
<td>Basic module</td>
<td>UR20-PK-1315250000-SP</td>
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</tr>
</tbody>
</table>

Note

1) For this and additional technical data, please refer to the manual available at www.weidmueller.de or scan the QR code below.
16DO-P-PLC-INT

- 16 digital outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- For connecting a PLC interface element
- Positive switching
- DC-13 load
- IEC 61131-2 compliant

Technical data

**System data**

Interface
Transmission rate of system bus
Galvanic isolation

**Supply**

Voltage supply
Current consumption (IIN in power segment of field bus coupler), typ.
Current consumption (IOUT external)

**Digital outputs**

Number
Type of load
Response time, high
Response time, low
Output current per channel, max.
Output current per module, max.
Switching frequency max.
- Resistive load (min. 47 Ω)
- Inductive load (DC 13)
- Lamp load (12 W)

**Actuator connection**

Short-circuit-proof
Non reactive
Module diagnosis
Individual channel diagnosis
Shutdown energy (inductive)
Response time of protective circuit (current limitation)

**General data**

Weight
Dimensions (H/W/D)

Ordering data

**Module variants**

Digital output module, 16 channels, PLC interface

**Accessories**

Coding elements
Termination kit
Gain switch marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter

**Replacement parts**

Electronics module
Basic module
Plug on connector unit
PLC interface element
Pre-assembled cable, 1 m

**Note**

For this and additional technical data, please refer to the manual available at [www.weidmuller.de](http://www.weidmuller.de) or scan the QR code below.
Digital output modules

4RO-SSR-255

- 4 digital outputs
- Can be loaded up to 0.5 A per channel
- Solid-state relay

Technical data

System data

Interface
Remote system bus
- 48 Mbit/s
- YES, DC 500 V between current paths

Transmission rate of system bus
- 48 Mbit/s
- YES, DC 500 V between current paths

Galvanic isolation
- yes

Supply

Voltage supply
- 24 V DC +20 % / -15 % via the system bus

Current consumption (IIN
- 8 mA
- < 15 mA

In power segment of field bus coupler), typ.

Current consumption (IOUT
- 4
- SSR/Triac
- max. 20 ms, zero-crossing-detection

in the respective power segment)

Output current per channel, max.
- 0.5 A
- 2 A

Response time, high
- max. 20 ms, zero-crossing-detection

Response time, low
- max. 20 ms, zero-crossing-detection

Output current per module, max.
- 2 A

Switching frequency max.
- 40 Hz

Switching voltage max.
- yes
- 277 V AC

Switching voltage max.
- yes

Module diagnosis
- Individual channel diagnosis
- General data

Weight
- 83 g

Dimensions (H/W/D)
- 120 mm (with catch lever) x 11.5 mm x 76 mm

Ordering data

Module variants
- Digital output module, 4 channels, SSR

UR20-4RO-SSR-255

Type
- Order No.
- Qty.
- KOSM BHZ5.00
- 1483050000
- 100

UR20-EBK-ACC
- 1346810000
- 5

UR20-MA-ACC
- 1339820000
- 20

PM 2.7/2.6 MC SSR
- 1332710000
- 100

PM 2.7/2.6 MC NE WS
- 1332710000
- 960

DEK 5/8 11.5 MC SSR
- 1341610000
- 100

DEK 5/8 11.5 MC NE WS
- 1341630000
- 500

THM UR20 GE
- 1439810000
- 1

THM UR20 WS
- 1429420000
- 1

ESO UR20 DIN A4 WS
- 1429430000
- 10

UR20-EM-1315540000-SP
- 1484000000
- 1

UR20-BM-SP
- 1350930000
- 5

UR20-PK-1315540000-SP
- 1484000000
- 5

Product standard
- IEC 61131-2
- EN 61000
- ATEX
- EN 60079
- UL
- UL 508

Accessories

Coding elements
- Termination kit
- Switch marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note

For this and additional technical data, please refer to the manual available at www.weidmuller.de or scan the QR code below.

For this and additional technical data, please refer to the manual available at www.weidmuller.de or scan the QR code below.
Digital output modules

**4RO-CO-255**

- 4 digital outputs
- Can be loaded up to 6 A per channel
- Relay output, change-over contact
- Switching voltage 277 V AC/DC

**Technical data**

**System data**
- Interface: MAC 0
- Transmission rate of system bus: 48 MHz
- Galvanic isolation: yes, DC 500 V between current paths

**Supply**
- Voltage supply: 24 V DC / ± 20 % / ± 15 % via the system bus
- Current consumption (I\text{IN} in power segment of field bus coupler), typ.: 8 mA
- Current consumption (I\text{OUT} in the respective power segment) < 15 mA

**Digital outputs**
- Number: 4
- Type: Change-over contact
- Response time, high: 20 ms
- Response time, low: 20 ms
- Output current per channel, max.: 5 A at 60 °C / 6 A at 55 °C
- Output current per module, max.: 20 A at 60 °C / 24 A at 55 °C
- Switching frequency max.: 5 Hz
- Short-circuit-proof: no
- Non reactive: yes
- Switching voltage max.: 277 V AC/DC
- Module diagnosis
- Individual channel diagnosis

**General data**
- Weight: 83 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11,5 mm x 76 mm

**Ordering data**

**Module variants**
- Digital output module, 4 channels, relay

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermosticker version (Material: Polyester)
- Thermosticker version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Note**

- For this and additional technical data, please refer to the manual available at www.weidmueller.de or scan the QR code below.

**UR20-4RO-CO-255**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4RO-CO-255</td>
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</tbody>
</table>

**Product standard**

- IEC 61131-2
- EN 61000
- ATEX
- EN 60079
- UL
- UL 508
- MSP

**MSIP**

MSIP REM/VMG 1315550000

**1 roll = 1000 label = 1 Qty.**

**Let's connect.**

---

**Digital output modules**

**4RO-CO-255**

- 4 digital outputs
- Can be loaded up to 6 A per channel
- Relay output, change-over contact
- Switching voltage 277 V AC/DC
Digital counter modules

100 kHz; 32-Bit Counter data width;
Single channel diagnosis

In automated systems, it is impossible to imagine industry without the collection of incremental values. Developed specifically for these applications Weidmüller now offers two counter modules that can take values with an input frequency of up to 100 kHz. The 2CNT-100 module has two independent counter inputs and is supplemented by the module 1CNT-100-1DO with only one counter, but additional options. A Latch-, Gate- and Reset input allows external control of the counter. In addition, a digital output can trigger an immediate event, when there are compared values set.

The module electronics supply the connected sensors from the input current path (U_in).

UR20-1CNT-100-1DO block diagram example
### Technical data

#### System data
- Interface: Current data bus
- Transmission rate of system bus: 48 MHz
- Galvanic isolation: yes, DC 500 V between current paths
- Supply: DC 24 V via the system bus
- Voltage supply: 24 V DC, +20 % / –15 %
- Current consumption (IIN): 8 mA
- Current consumption (IIN in power segment): 35 mA

#### Interface
- u-remote system bus
- 48 MHz
- yes, DC 500 V between current paths

#### Transmission rate of system bus
- 48 MHz
- yes, DC 500 V between current paths

#### Supply
- Voltage supply: DC 24 V
- Current consumption (IIN): 8 mA
- Current consumption (IIN in power segment): 35 mA

#### Digital Inputs
- Number of counter inputs: 1
- Type: incremental encoder
- Input filter: adjustable up to 1 ms
- Input voltage, low: < 5 V
- Input voltage, high: > 11 V
- Sensor feed: yes
- Reverse polarity protection: yes
- Single channel diagnosis: yes
- Input current per channel, max.: 3.5 mA
- Counter data width: 32 Bit
- Maximum input frequency: 100 kHz
- Operation mode: impulse, direction, 1-, 2-, 4-times

#### Sensor feed
- Incremental encoder
- Adjustable up to 1 ms
- < 5 V
- > 11 V
- Yes
- 2- and 3-wire

#### Module diagnosis
- Single channel diagnosis: yes
- Input current per channel, max.: 3.5 mA
- Count data width: 32 Bit
- Maximum input frequency: 100 kHz
- Operation mode: impulse / direction / 1-, 2-, 4-times

#### General data
- Weight: 87 g
- Dimensions (H/W/D): 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

### Ordering data

#### Module variants
- Digital counter module, 1 channel, 100 kHz

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-1CNT-100-1DO</td>
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<td>1315570000</td>
</tr>
</tbody>
</table>

### Accessories

#### Coding elements
- Code elements
- Termination kit
- Swivel marker

#### Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

#### Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

#### Note
- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.
Digital counter modules

**2CNT-100**

- Counter data width 32 Bit
- Maximum input frequency 100 kHz
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

### Technical data

#### System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

#### Supply
- Voltage supply
- Current consumption \((I_{IN})\) in power segment of field bus coupler, typ.
- Current consumption \((I_{IN})\) in the respective power segment

#### Digital Inputs
- Number of counter inputs
- Type
- Input filter
- Input voltage, low
- Input voltage, high
- Sensor feed
- Sensor connection
- Reverse polarity protection
- Module diagnosis
- Single channel diagnosis
- Input current per channel, max.
- Counter data width
- Input frequency, max.
- Counter frequency, max.
- Operation mode

#### General data
- Weight
- Dimensions (H/W/D)

### Ordering data

#### Module variants
- Digital counter module, 2 channel, 100 kHz

#### Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

### Replacement parts
- Electronics module
- Basic module
- Plug in connector unit

### Note

- Remote system bus
- 48 MHz/s
- DC 500 V between current paths
- 24 V DC ± 20 % / - 15 % via the system bus
- 8 mA
- 35 mA

#### UR20-2CNT-100

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<td>UR20-SM-A2C</td>
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<td>PM 2.7/2.6 MC SM</td>
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<td>PM 2.7/2.6 MC NL WS</td>
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</tr>
<tr>
<td>DEK 5/5-11.5 MC NE WS</td>
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<td>THM UR20 GE</td>
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<td>THM UR20 WS</td>
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</table>

Product standard IEC 61131-2
EMC EN 61000
ATEX EN 60079
UL UL 508

Let’s connect.
2FCNT-100

- Counter data width 32 Bit
- Maximum input frequency 100 kHz
- Operation mode impulse
- Sensor feed
- Input filter adjustable up to 1 ms

Technical data

**System data**
- Interface
- Transmission rate of system bus
- Galvanic isolation

**Supply**
- Voltage supply
- Current consumption (I_in in power segment of field bus coupler), typ.
- Current consumption (I_in in the respective power segment)

**Digital Inputs**
- Number of counter inputs
- Type
- Input voltage, low
- Input voltage, high
- Sensor feed
- Sensor connection
- Reverse polarity protection
- Module diagnosis
- Single channel diagnosis
- Input current per channel, max.
- Counter data width
- Input frequency, max.
- Operation mode

**General data**
- Weight
- Dimensions (H/W/D)

Ordering data

**Module variants**
- Digital frequency counter module, 2 channel, 100 kHz

Accessories

**Coding elements**
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug-in connector unit

**Note**
- Product standard IEC 61131-3
- EMC EN 61000
- ATEX EN 60079
- UL UL 508

UR20-2FCNT-100

- u-remote system bus
  - 48 Mbit/s
  - yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- 35 mA
- 2 digital input
- adjustable up to 1 ms
- < 5 V
- > 11 V
- yes
- 2- and 3-wire
- yes
- no
- 3.5 mA
- 32 Bit
- 100 kHz
- Impulse
- 87 g
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
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<table>
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<td>UR20-SM-ACC</td>
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<td>1338920000</td>
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<tr>
<td>PM 2.7/2.6 MC SDR</td>
<td>192</td>
<td>1323700000</td>
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<tr>
<td>PM 2.7/2.6 MC NE WS</td>
<td>960</td>
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<td>DEK 5/8-11.5 MC SDR</td>
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<tr>
<td>DEK 5/8-11.5 MC NE WS</td>
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<tr>
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<tr>
<td>THM UR20 WS **</td>
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<td>ESO UR20 DIN A4 WS **</td>
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<td>UR20-BM-SP</td>
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<td>UR20-PK-1580880000-SP</td>
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</table>

**Accessories**

**Coding elements**
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug-in connector unit

**Note**
- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.
Pulse width modulation modules

Frequency can be adjusted up to 40 kHz; short-circuit-proof; two PWM outputs

As part of the new u-remote system, Weidmüller provides a specialised solution for controlling small motors with current requirements of 0.5 A to 2 A which can also be used to control valve flaps. Here, not only can the switching frequencies be set up to 40 kHz, the push/pull output levels can also be used for motor activation, for example, to change direction of rotation. As with all modules in the u-remote system, the characteristics are outstanding – from the modular design and interchangeable electronics to the removable and plug-in terminal strip.

The module electronics supply the connected actuators from the output current path \(U_{\text{out}}\).

---

**UR20-2PWM-PN-0.5A block diagram example**
2PWM PN-0.5A

- 2 pulse width modulation module outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- Push/pull output
- Maximum 40 kHz output frequency (adjustable)

**Technical data**

**System data**
- Interface
- Transmission rate of system bus
- Galvanic isolation

**Supply**
- Voltage supply
- Current consumption (I_{IN} in power segment of field bus coupler), typ.
- Current consumption (I_{OUT} in the respective power segment)

**Digital outputs**
- Number
- Type
- Resolution
- Accuracy
- Response time, high
- Response time, low
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
- Inductive load (DC 13)
- Lamp load (12 W)

**Actuator connection**
- Short-circuit-proof
- Module diagnosis
- Individual channel diagnosis
- Non reactive
- Pulse duty factor

**Product standard**
- IEC 61131-2
- EMC
- ATEX
- UL

**Ordering data**

**Module variants**
- Digital output module, PWM, 2 channels, 0.5 A

**Accessories**

**Coding elements**
- Connection marker for pusher custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug in connector unit

**General data**
- Weight
- Dimensions (H/W/D)

**General data**
- Weight
- Dimensions (H/W/D)

**Ordering data**

**UR20-2PWM-PN-0.5A**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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**Accessories**

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*1) 1 roll = 1000 label = 1 Qty.
*2) 1 sheet = 60 label = 1 Qty.

**Let’s connect.**
Pulse width modulation modules

2PWM-PN-2A

- 2 pulse width modulation module outputs
- Can be loaded up to 2 A per channel
- Short-circuit-proof
- Push/pull output
- Maximum 40 kHz output frequency (adjustable)

Technical data

**System data**
- Interface
- Transmission rate of system bus
- Galvanic isolation

**Supply**
- Voltage supply
- Current consumption (I\textsubscript{IN} in power segment of field bus coupler), typ.
- Current consumption (I\textsubscript{OUT} in the respective power segment)

**Digital outputs**
- Number
- Type
- Resolution
- Accuracy
- Response time, high
- Response time, low
- Output current per channel, max.
- Output current per module, max.
- Switching frequency max.
- Resistive load (\textit{min. 47 \Omega})
- Inductive load (DC 13)
- Lamp load (12 W)

**Actuator connection**
- Short-circuit-proof
- Module diagnosis
- Individual channel diagnosis
- Non reactive
- Pulse duty factor

**General data**
- Weight
- Dimensions (H/W/D)

**Ordering data**
- Module variants
- Digital output module, PWM, 2 channels, 2 A

**Accessories**
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug-in connector unit

**Note**
- u-remote system bus
  - 48 MHz
- yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- 40 mA + Load
- 2
- DO PWM push/pull output stage
- 32 Bit
- 1 Bit
- < 100 ns
- < 100 ns
- 2 A
- 4 A
- static, 6 Hz to 40 kHz
- static, 6 Hz to 40 kHz
- static, 6 Hz to 40 kHz
- yes
- yes
- yes
- no
- yes
- 0 - 100 % push/pull or push parameterizable
- 82 g
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

**Type**

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*1 roll = 1000 label = 1 Qty.
*2 1 sheet = 60 label = 1 Qty.

Product standard
- IEC 61131-2
- EMC
- ATEX
- UL
- UL 508

Let's connect.
Analogue input modules

Input parameters can be set for current or voltage; up to 3-wire+FE; Accuracy 0.1% FSR

Analogue input modules of the u-remote system are available in many variants with different resolutions and wiring solutions. Variants are available in a 12- and 16-bit resolution, which record up to 4 analogue sensors with +/-10 V, +/-5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA with maximum accuracy. Each plug-in connector has options for connecting sensors with 2-wire, 3-wire and 3-wire+FE technology. The parameters for the measurement range can be individually set for each channel. A separate status LED is also assigned to each channel. A special variant for Weidmüller interface units enables current measurements with a 16-bit resolution at maximum accuracy for 8 sensors at a time (0...20 mA or 4...20 mA).

The module electronics supply the connected sensors from the input current path ($U_{in}$).

UR20-4AI-UI-16 block diagram example
Analogue input modules

4AI-UI-16

- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IIN in the respective power segment)

Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance U
- Internal resistance I
- Reverse polarity protection

Module diagnosis
- Individual channel diagnosis
- Short-circuit-proof

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Analogue input module, 4 channels, 16 bits

Accessories

Coding elements
Termination kit
Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter
Replacement parts
- Electronics module
- Basic module
- Plug in connector unit

UR20-4AI-UI-16

- u-remote system bus
- 48 MHz
- yes, DC 500 V between current paths
- 24 V DC ±20 % / -15 % via the system bus
- 8 mA
- 25 mA + sensor feed
- 4
- 1. Voltage (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V)
- 2. Current (0...20 mA, 4...20 mA)
- 16 Bit
- 0.1 % FSR
- yes
- 2-wire, 3-wire, 3-wire+FE
- 1 ms
- 100 kΩ
- 41.2 Ω
- yes
- yes
- no
- yes

Weight
89 g

Dimensions (H/W/D)
120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Type
UR20-4AI-UI-16

Qty.
1

Order No.
1315620000

Product standard
- IEC 61131-2
- EMC
- EN 61000
- ATEX
- EN 60079
- UL
- UL 508
- MSP
- MSIP-REM-WMG-1315620000

4AI-UI

1

2

3

4

Product standard

Let’s connect.
### Technical data

#### System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

#### Supply
- Voltage supply
- Current consumption ($I_{IN}$ in power segment of field bus coupler), typ.
- Current consumption ($I_{IN}$ in the respective power segment)

#### Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance $U_{IN}$
- Internal resistance $I_{IN}$
- Reverse polarity protection
- Module diagnosis
  - Individual channel diagnosis
  - Short-circuit-proof

#### General data
- Weight
- Dimensions (H/W/D)

#### Ordering data

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#### Accessories

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### 4AI-UI-16-DIAG

- Advanced diagnosis functions
- 4 analogue inputs
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR

### UR20-4AI-UI-16-DIAG

- Advanced diagnosis functions
- 4 analogue inputs
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR

#### Technical data

- System data
  - Interface
  - Transmission rate of system bus
  - Galvanic isolation

- Supply
  - Voltage supply
  - Current consumption ($I_{IN}$ in power segment of field bus coupler), typ.
  - Current consumption ($I_{IN}$ in the respective power segment)

- Analogue inputs
  - Number
  - Input
  - Resolution
  - Accuracy
  - Sensor supply
  - Sensor connection
  - Conversion time
  - Internal resistance $U_{IN}$
  - Internal resistance $I_{IN}$
  - Reverse polarity protection
  - Module diagnosis
    - Individual channel diagnosis
    - Short-circuit-proof

- General data
  - Weight
  - Dimensions (H/W/D)

#### Ordering data

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<td>Plug in connector unit</td>
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#### Notes

**u-remote system bus**
- Yes, DC 500 V between current paths
- 24 V DC ± 10% / –15% via the system bus
- 8 mA
- 25 mA + sensor feed

**Analogue Inputs**
- **Number**: 4
- **Input**: 1. Voltage (0…5 V, ±5 V, 0…10 V, ±10 V, 1…5 V, 2…10 V)
- **2. Current** (0…20 mA, 4…20 mA)
- **Resolution**: 16 Bit
- **Accuracy**: 0.1 % FSR

**Sensor Supply**
- **2-wire, 3-wire, 3-wire+FE connection**
- **Conversion time**: 1 ms
- **Internal resistance $U_{IN}$**: approx. 45 Ω
- **Internal resistance $I_{IN}$**: approx. 1 Ω
- **Reverse polarity protection**: Yes
- **Module diagnosis**: Yes
- **Individual channel diagnosis**: Yes
- **Short-circuit-proof**: Yes

**General Data**
- **Weight**: 89 g
- **Dimensions (H/W/D)**: 120 mm (with catch lever) x 11.5 mm x 76 mm

**Product standard**
- IEC 61131-2
- EMC
- ATEX EN 60079
- UL
- UL 508
- UL 508

**Ordering data**

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| **Replacement parts**
| **Electronics module**
| **Basic module**
| **Plug in connector unit**

**Replace parts**

**Notes**

**Ordering data**

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| **Replacement parts**
| **Electronics module**
| **Basic module**
| **Plug in connector unit**

**Notes**
Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN
- in power segment of field bus coupler), typ.
- Current consumption (IIN
- in the respective power segment)

Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance U
- Internal resistance I
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis
- Short-circuit-proof

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Analogue input module, 4 channels, 16 bits, HD plug

Accessories
- Coding elements
- Termination kit
- Swivel marker
- ** HD-Plug
- * Stripping tool
- ** Pressing tool
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug in connector unit

Note: Please order connector separately

UR20-4AI-UI-16-HD

- u-remote system bus
- 48 MHz
- yes, DC 500 V between current paths
- 24 V DC +20 % / –15 % via the system bus
- 8 mA
- 25 mA + sensor feed

Analogue input modules

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<td>DEK 5/8-11.5 MC NE WS</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>THM UR20 GE **</td>
<td>1</td>
<td>1429910000</td>
</tr>
<tr>
<td>THM UR20 WS ***</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>ESO UR20 DIN AA WS **</td>
<td>10</td>
<td>1429430000</td>
</tr>
<tr>
<td>UR20-EM-1506920000-SP</td>
<td>1</td>
<td>1515420000</td>
</tr>
<tr>
<td>UR20-BM-SP</td>
<td>5</td>
<td>1350030000</td>
</tr>
<tr>
<td>UR20-FK-1506930000-SP</td>
<td>5</td>
<td>1518830000</td>
</tr>
</tbody>
</table>

Ordering data

*1 roll = 1000 label = 1 Qty.
*2 sheet = 60 label = 1 Qty.

Let’s connect.
## Analogue input modules

### 4AI-UI-16-DIAG-HD

- 4 plugs with 4 connections per module
- Advanced diagnosis functions
- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR

### Technical data

#### System data
- Interface: u-remote system bus
- Transmission rate of system bus: 48 Mbit/s
- Galvanic isolation: yes, DC 500 V between current paths

#### Supply
- Voltage supply: 24 V DC ±20 % / ±15 % via the system bus
- Current consumption (IIN): 8 mA
- Current consumption (IIN in the respective power segment): 25 mA + sensor feed

#### Analogue inputs
- Number of inputs: 4
- Resolution: 16 bit
- Accuracy: 0.1 % FSR
- Sensor supply: yes
- Sensor connection: 2-wire, 3-wire, 3-wire+FE
- Conversion time: approx. 1 ms
- Internal resistance U: approx. 45 Ω
- Internal resistance I: yes
- Reverse polarity protection: yes
- Module diagnosis: yes
- Short-circuit-proof: yes

#### General data
- Weight: 89 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11,5 mm x 76 mm

### Ordering data

#### Module variants
- Analogue input module, 4 channels, 16 bits, diagnosis functions, HD plug

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-4AI-UI-16-DIAG-HD</td>
<td>1</td>
<td>1506910000</td>
</tr>
</tbody>
</table>

#### Accessories

- Coding elements
- Termination kit
- Swivel marker
  - *HD Plug*
  - **Stripping tool**
  - ***Pressing tool***
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

#### Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

### Note
- Please order connector separately
- IEC 61131-2
- EMC EN 61000
- ATEX EN 60079
- UL UL 508

### Let’s connect.

---

#### Module marker for custom printing

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEK 5/8-11.5 MC SOR</td>
<td>100</td>
<td>1341810000</td>
</tr>
<tr>
<td>DEK 5/8-11.5 MC NE WS</td>
<td>500</td>
<td>1341830000</td>
</tr>
<tr>
<td>THM UR20 GE **</td>
<td>1</td>
<td>1429810000</td>
</tr>
<tr>
<td>THM UR20 WS **</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>ESO UR20 DIN A4 WS **</td>
<td>10</td>
<td>1429430000</td>
</tr>
</tbody>
</table>

#### Replacement parts

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-EM-1500x10000-SP</td>
<td>1</td>
<td>1515430000</td>
</tr>
<tr>
<td>UR20-8A-SP</td>
<td>5</td>
<td>1350930000</td>
</tr>
<tr>
<td>UR20-PK-1500x10000-SP</td>
<td>5</td>
<td>1518820000</td>
</tr>
</tbody>
</table>

---

## Let’s connect.
Analogue input modules

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IIN in the respective power segment)

Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance U
- Internal resistance I
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis
- Short-circuit-proof

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Analogue input module, 4 channels, 12 bits

Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pushbar custom printing
- Connection marker for pushbar neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note
- Remote system bus
  - 48 MHz
  - yes, DC 500 V between current paths
- 24 V DC / +20 % / -15 % via the system bus
- 8 mA
- 25 mA / sensor feed
- 4
  - 1. Voltage (0…5 V, ±5 V, 0…10 V, ±10 V, 1…5 V, 2…10 V)
  - 2. Current (0…20 mA, 4…20 mA)
- 12 bit
- 0.25 % FSR
- yes
- 2-wire, 3-wire, 3-wire+FE
- 1 ms
- 100 kΩ
- 41.2 Ω
- yes
- yes
- no
- yes
- 87 g
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-4AI-UI-12 | 1 | 1394390000

Type | Qty. | Order No.
--- | --- | ---
KDSM BH25.00 | 100 | 1483950000
UR20-6B-ACC | 5 | 1346610000
UR20-SM-ACC | 20 | 1339920000
PM 2,7/2,0/0,5/0,0/0,0 | 192 | 1323700000
PM 2,7/2,0/0,5/0,0/0,0 | 960 | 1323710000
DEK 5/9/11,5/5/0/0 | 100 | 1331610000
DEK 5/9/11,5/5/1/0 | 500 | 1331630000
THM UR20 GE ** | 1 | 1429110000
THM UR20 GE ** | 1 | 1429420000
EOG UR20 DIN A4/WS (**) | 10 | 1429430000
UR20-EM-1394390000-SP | 1 | 1434230000
UR20-BM-SP | 5 | 1350930000
UR20-PK-1394390000-SP | 5 | 1484030000

Product standard
- IEC 61131-2
- EN 61000
- ATEX EN 60079
- UL
- UL 508

Let’s connect.
**Technical data**

### System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

### Supply
- Voltage supply
- Current consumption (I\text{IN}) in power segment of field bus coupler, typ.
- Current consumption (I\text{IN}) in the respective power segment

### Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance I
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis
- Short-circuit-proof

### General data
- Weight
- Dimensions (H/W/D)

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue output module, 8 channels, 16 Bits, HD-plug</td>
<td>UR20-8AI-I-16-HD</td>
<td>1</td>
<td>1315650000</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Coding elements</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminating kit</td>
<td>KOSM B 025.00</td>
<td>100</td>
<td>1483050000</td>
</tr>
<tr>
<td>Screw marker</td>
<td>UR20-EK-KCC</td>
<td>5</td>
<td>1346810000</td>
</tr>
<tr>
<td>&quot;HD-Plug</td>
<td>UR20-MA-ACC</td>
<td>20</td>
<td>1339920000</td>
</tr>
<tr>
<td>*3) Stripping tool</td>
<td>UR20-PG0.35</td>
<td>8</td>
<td>1469340000</td>
</tr>
<tr>
<td>*4) Pressing tool</td>
<td>multi-strap 6-16</td>
<td>1</td>
<td>9202210000</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td>PNZ-UR20-HD</td>
<td>1</td>
<td>1525820000</td>
</tr>
<tr>
<td>Module marker for standard printing</td>
<td>DEK S/B 11,5 MC 3SM</td>
<td>100</td>
<td>1341610000</td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td>DEK S/B 11,5 MC N/NE</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>Thermo-transfer version (Material: Polyester)</td>
<td>THM UR20 SE **</td>
<td>1</td>
<td>1429910000</td>
</tr>
<tr>
<td>Thermo-transfer version (Material: Polyester)</td>
<td>THM UR20 WS **</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
<td>ESO UR20 DIN A4 WS **</td>
<td>10</td>
<td>1429430000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Replacement parts</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics module</td>
<td>UR20-EM-1315650000-S</td>
<td>1</td>
<td>1347240000</td>
</tr>
<tr>
<td>Basic module</td>
<td>UR20-BM-SP</td>
<td>5</td>
<td>1350930000</td>
</tr>
<tr>
<td>Plug-in connector unit</td>
<td>UR20-PK-1315650000-SP</td>
<td>5</td>
<td>1559740000</td>
</tr>
</tbody>
</table>

Note: Please order connector separately

---

**Analogue input modules**

**8AI-I-16-HD**
- 8 plugs with 4 connections per module
- 8 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR
- HD plug

**UR20-8AI-I-16-HD**

**Technical data**

- **u-remote system bus**
- **48 Mbit/s**
- **500 V DC between current paths**
- **24 V DC +20 % / –15 % via the system bus**
- **8 mA**
- **20 mA + sensor feed**

**Analogue inputs**

- **Number**: 8
- **Input**: 8
- **Resolution**: 16 Bit
- **Accuracy**: 0.1 % FSR

**General data**

- **Weight**: 73 g
- **Dimensions (H/W/D)**: 120 mm (with catch lever) x 11.5 mm x 76 mm

---

**Ordering data**

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue output module, 8 channels, 16 Bits, HD-plug</td>
<td>UR20-8AI-I-16-HD</td>
<td>1</td>
<td>1315650000</td>
</tr>
</tbody>
</table>

---

**Accessories**

<table>
<thead>
<tr>
<th>Coding elements</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminating kit</td>
<td>KOSM B 025.00</td>
<td>100</td>
<td>1483050000</td>
</tr>
<tr>
<td>Screw marker</td>
<td>UR20-EK-KCC</td>
<td>5</td>
<td>1346810000</td>
</tr>
<tr>
<td>“HD-Plug</td>
<td>UR20-MA-ACC</td>
<td>20</td>
<td>1339920000</td>
</tr>
<tr>
<td>*3) Stripping tool</td>
<td>UR20-PG0.35</td>
<td>8</td>
<td>1469340000</td>
</tr>
<tr>
<td>*4) Pressing tool</td>
<td>multi-strap 6-16</td>
<td>1</td>
<td>9202210000</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td>PNZ-UR20-HD</td>
<td>1</td>
<td>1525820000</td>
</tr>
<tr>
<td>Module marker for standard printing</td>
<td>DEK S/B 11,5 MC 3SM</td>
<td>100</td>
<td>1341610000</td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td>DEK S/B 11,5 MC N/NE</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>Thermo-transfer version (Material: Polyester)</td>
<td>THM UR20 SE **</td>
<td>1</td>
<td>1429910000</td>
</tr>
<tr>
<td>Thermo-transfer version (Material: Polyester)</td>
<td>THM UR20 WS **</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
<td>ESO UR20 DIN A4 WS **</td>
<td>10</td>
<td>1429430000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Replacement parts</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics module</td>
<td>UR20-EM-1315650000-S</td>
<td>1</td>
<td>1347240000</td>
</tr>
<tr>
<td>Basic module</td>
<td>UR20-BM-SP</td>
<td>5</td>
<td>1350930000</td>
</tr>
<tr>
<td>Plug-in connector unit</td>
<td>UR20-PK-1315650000-SP</td>
<td>5</td>
<td>1559740000</td>
</tr>
</tbody>
</table>
**Technical data**

**System data**
- Interface: u-remote system bus
- Transmission rate of system bus: 48 Mbit/s
- Galvanic isolation: yes, DC 500 V between current paths

**Supply**
- Voltage supply: 24 V DC +20 % / –15 % via the system bus
- Current consumption (IIN in power segment of field bus coupler), typ.: 8 mA
- Current consumption (IIN in the respective power segment) + sensor feed: 20 mA

**Analogue inputs**
- Number: 8
- Input: 0…20 mA, 4…20 mA
- Resolution: 16 Bit
- Accuracy: 0.1 % FSR
- Sensor supply: 2-wire, 3-wire, 3-wire+FE
- Conversion time: approx. 1 ms
- Internal resistance I: approx. 45 Ω
- Reverse polarity protection: yes
- Module diagnosis: yes
- Individual channel diagnosis: yes

**General data**
- Weight: 73 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11.5 mm x 76 mm

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-8AI-I-16-DIAG-HD</td>
<td>1</td>
<td>1315720000</td>
</tr>
</tbody>
</table>

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- ***) HD-Plug
- **** Stripping tool
- *** Pressing tool
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Note:** Please order connector separately

---

**Analogue input modules**

**UR20-8AI-I-16-DIAG-HD**

- 8 plugs with 4 connections per module
- Advanced diagnosis functions
- 8 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Accuracy 0.1 % FSR

**Technical data**

**System data**
- Interface: u-remote system bus
- Transmission rate of system bus: 48 Mbit/s
- Galvanic isolation: yes, DC 500 V between current paths

**Supply**
- Voltage supply: 24 V DC +20 % / –15 % via the system bus
- Current consumption (IIN in power segment of field bus coupler), typ.: 8 mA
- Current consumption (IIN in the respective power segment) + sensor feed: 20 mA

**Analogue inputs**
- Number: 8
- Input: 0…20 mA, 4…20 mA
- Resolution: 16 Bit
- Accuracy: 0.1 % FSR
- Sensor supply: 2-wire, 3-wire, 3-wire+FE
- Conversion time: approx. 1 ms
- Internal resistance I: approx. 45 Ω
- Reverse polarity protection: yes
- Module diagnosis: yes
- Individual channel diagnosis: yes

**General data**
- Weight: 73 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11.5 mm x 76 mm

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-8AI-I-16-DIAG-HD</td>
<td>1</td>
<td>1315720000</td>
</tr>
</tbody>
</table>

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- ***) HD-Plug
- **** Stripping tool
- *** Pressing tool
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Note:** Please order connector separately
Analogue input modules

8AI-I-PLC-INT

- 8 analogue inputs
- Rapid cabling with flat ribbon cable
- 0/4 to 20 mA with 0.1 % accuracy with a 16-bit resolution
- Inputs can be parameterised (passive or active operating mode)

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (I_{IN} in power segment of field bus coupler), typ.
- Current consumption (I_{IN} external)

Analogue inputs
- Number
- Input
- Resolution
- Accuracy
- Sensor supply
- Sensor connection
- Conversion time
- Internal resistance I
- Reverse polarity protection
- Module diagnosis
- Individual channel diagnosis
- Short-circuit-proof

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Analogue input module, 8 channels, PLC interface

Accessories

Coding elements
- Termination kit
- Swivel marker
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit
- PLC interface element
- Pre-assembled cable, 1 m

Note
- u-remote system bus
- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % / -15 % via the system bus
- 8 mA
- 20 mA
- 8
- Current input
- 16 Bit
- 0.1 % FSR
- external
- PLC interface
- 1 ms
- approx. 50 Ω
- yes
- yes
- no
- yes

3 g

120 mm (with catch lever) x 11.5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-8AI-I-PLC-INT | 1 | 1315670000
KOSM B807.00 | 100 | 1483050000
UR20-EBK-CC | 5 | 1348610000
UR20-EM-ACC | 20 | 1339920000
PM 2.7/2.5 MC SDR | 192 | 1327700000
PM 2.7/2.5 MC NE WS | 960 | 1327710000
DK 5/8-11.5 MC SDR | 400 | 1341610000
DK 5/8-11.5 MC NE WS | 500 | 1341630000
THM UR20 GE **(1) | 1 | 1429810000
THM UR20 WS **(1) | 1 | 1429420000
ESD UR20 DIN A4 WS **(2) | 10 | 1429430000
UR20 EM-1315670000-SP | 1 | 1347250000
UR20 EM-SP | 5 | 1360930000
UR20 PK-1315670000-SP | 5 | 1483950000
RS 1601 TV H S | 1 | 9445700000
PAC UMH-HE2510CH-1M | 1 | 7789306010

**(1) 1 roll = 1000 label = 1 Qty.
**(2) 1 sheet = 60 label = 1 Qty.

Product standard
- IEC 61131-2
- EMC
- ATEX
- UL
- MSP
- MSIP\-REM\-VWG\-1315670000

Let’s connect.
Temperature modules
Available for TC and RTD; 16-bit resolution; 50/60 Hz suppression

The recording of resistance temperature and thermocoupler sensors is indispensable for many applications. The 4-channel input modules from Weidmüller are designed for all common thermal elements and resistance temperature sensors. With an accuracy of 0.2 % of the measurement range end value and a resolution of 16 bits, cable breaks and instances of the limit value being exceeded or falling below are detected by means of individual channel diagnosis. Additional features such as an automatic 50-Hz to 60-Hz suppression or external as well as internal cold-junction compensation, as are available with the TC module, round off the scope of function.

UR20-4AI-TC-DIAG block diagram example
4AI-TC-DIAG

- 4 analogue inputs
- Various TC sensors
- High accuracy of 0.2 % FSR
- 16-bit resolution
- Individual channel diagnosis
- Internal or external cold-junction compensation possible
- Automatic 50 and 60 Hz suppression

**Technical data**

**System data**
- Interface: technical data
- Transmission rate of system bus: 48 Mbit/s
- Galvanic isolation: yes, DC 500 V between current paths

**Supply**
- Voltage supply: 24 V DC +20 % / –15 % via the system bus
- Current consumption (IIN in power segment of field bus coupler), typ.: 8 mA
- Current consumption (IIN in the respective power segment): 20 mA

**Analogue inputs**
- Number: 4
- Sensor type: J, K, T, R, N, S, B, E, C, mV
- Resolution: 16 Bit
- Accuracy: 0.1 % FSR + 10 μV
- Cold-junction compensation: internal and external (int. accuracy ≤ 3 K)
- Temperature coefficient: 50 ppm/K
- Temperature range: –200...+2315 °C
- Conversion time: 36...240 ms, adjustable
- Internal resistance: > 1 MΩ
- Cold junction compensation: yes
- Reverse polarity protection: yes
- Weight: 86 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11.5 mm x 76 mm

**General data**
- Weight: 86 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11.5 mm x 76 mm

**Ordering data**

**Module variants**
- Analogue input module, 4 channels, thermocouple

**Accessories**
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug in connector unit

**Note**
- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.
Temperature modules

4AI·RTD-DIAG

- 16-bit resolution
- Individual channel diagnosis
- Automatic 50 and 60 Hz suppression
- For 2-, 3- and 4-wire RTDs
- High accuracy
- For virtually all common sensors
- Temperature measurement via resistor

Technical data

System data

Interface
Transmission rate of system bus
Galvanic isolation
Supply
Voltage supply
Current consumption (IIN in power segment of field bus coupler), typ.
Current consumption (IIN in the respective power segment)
Analogue inputs
Number
Sensor type
Resolution
Sensor current
Accuracy
Sensor connection
Temperature coefficient
Temperature range
Conversion time
Internal resistance
Reverse polarity protection
Module diagnosis
Individual channel diagnosis

General data

Weight
Dimensions (H/W/D)

Ordering data

Module variants
Analogue input module, 4 channels, RTD

Accessories

Coding elements
Termination kit
Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter

Replacement parts

Electronics module
Basic module
Plug-in connector unit

Note

u-remote system bus
48 MHz
yes, DC 500 V between current paths
24 V DC +20 % / –15 % via the system bus
8 mA
20 mA
4
Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni200, Ni500, Ni1000, Cu10, resistors with 40 Ω, 80 Ω, 150 Ω, 300 Ω, 500 Ω, 1 kΩ, 2 kΩ, 4 kΩ
16 Bit
depending on the input type 0,75 mA (Pt100, Ni100, Ni120, Cu10, 40 Ω, 80 Ω, 150 Ω, 300 Ω) or 0,25 mA (Pt200, Pt500, Pt1000, Ni200, Ni500, Ni1000, 500 Ω, 1 kΩ, 2 kΩ, 4 kΩ)
0.2 % FSR, 0.3 % FSR for Ni sensors, 0.6 % FSR for Cu10
2-wire, 3-wire, 4-wire
50 ppm/K
-200...+850 °C
36…240 ms adjustable
> 1 MΩ
yes
yes
yes
91 g
120 mm (with catch lever) x 11.5 mm x 76 mm

Type
Qty.
Order No.

UR20-4AI-RTD-DIAG
1
1315700000

Type
Qty.
Order No.

KOSM 80/25.00
100
1483050000

UR20-EM-ACL
5
1346810000

UR20-EM-ACZ
20
1339820000

PM 2.7/2.8 6C SDR
192
1323700000

PM 2.7/2.8 MC NE WS
960
1323710000

DEK 5/8 11.5 MC SDR
100
1341610000

DEK 5/8 11.5 MC NE WS
500
1341630000

THM UR20 GE **
1
1429810000

THM UR20 WS **
1
1429820000

ESO UR20 DIN A4 WS ***
10
1429430000

UR20 EM-1315700000-SP
1
1347290000

UR20-BM-SP
5
1350920000

UR20-4AI-RTD-DIAG
1
1315700000

** 1 roll = 1000 label = 1 Qty.
*** 1 sheet = 60 label = 1 Qty.

Product standard
IEC 61131-2
EN 61000
ATEX
EN 60079
UL
UL 508
MSP
MSP REM/VWG 1315700000

Let’s connect.
Analogue output module

2- or 4-wire connection; 16-bit resolution; 4 outputs

The analogue output module controls up to 4 analogue actuators with +/-10 V, +/-5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA with an accuracy of 0.05 % of the measurement range end value. An actuator with 2- or 4-wire technology can be connected to each plug-in connector. The outputs are defined channel by channel using parameterisation. A separate status LED is assigned to each channel.

The outputs are supplied from the output current path (U_{out}).
Analogue output module

4AO-UI-16

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05 % FSR
- Replacement values can be set per channel
- Non reactive
- Short-circuit-proof

Technical data

System data
- Interface
- Transmission rate of system bus
- Galvanic isolation

Supply
- Voltage supply
- Current consumption (IIN in power segment of field bus coupler), typ.
- Current consumption (IOUT in the respective power segment)

Analogue outputs
- Number
- Output
- Response time
- Resolution
- Accuracy
- Load resistance, voltage output
- Load resistance, current output
- Actuator connection
- Temperature coefficient
- Max. error between T min. and T max.
- Monotonicity
- Crosstalk between the channels
- Repeat accuracy
- Output waviness
- Module diagnosis
- Replacement values

General data
- Weight
- Dimensions (H/W/D)

Ordering data

Module variants
- Analogue output module, 4 channels, 16 Bit

Accessories
- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Connection marker for pusher neutral
- Module marker for custom printing
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

Replacement parts
- Electronics module
- Basic module
- Plug-in connector unit

Note
- General information on the u-remote system bus
- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % /–15 % via the system bus
- 8 mA
- 85 mA
- 8
- Voltage (0…5 V, 0…10 V, 1…5 V, 2…10 V, ±5 V)
- Current (0…20 mA or 4…20 mA)
- 1 ms for 4 channels
- 16 Bit
- ±0.1 % FSR max., 0.05 % FSR typ.
- > 1 kΩ (at > 50 °C, ambient temperature
- max. sum of sensor current = 25 mA
- < 600 Ω
- 2-wire (current and voltage, automatic detection),
- 4-wire (voltage)
- 20 ppm Voltage / 31 ppm current measurement / °K
- 220 ppm FSR
- yes
- ±0.001 % FSR
- < 1 mV effectively
- max. 0.001 %
- yes
- yes
- ±0.001 % FSR
- 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-4AO-UI-16 | 1 | 1315680000

Type | Qty. | Order No.
--- | --- | ---
KOSM BKH25.00 | 100 | 1483960000
UR20-EBK-ACC | 5 | 1346610000
UR20-SM-ACC | 20 | 1339920000
PM 2.7/2.6 MC NSR | 192 | 1323700000
PM 2.7/2.6 MC NE WS | 960 | 1323710000
DEK 5/8/11.5 MC NSR | 100 | 1341610000
DEK 5/8/11.5 MC NE WS | 500 | 1341630000
THM UR20 GE ** | 1 | 1429910000
THM UR20 WS ** | 1 | 1424920000
E3O UR2O DIN A4 WS ** | 10 | 1429430000
UR20-4M-1315680000-SP | 1 | 1347270000
UR20-6M-SP | 5 | 1350930000
UR20-PK-1315680000-SP | 5 | 1484070000

** 1 roll = 1000 label = 1 Qty.

** 1 sheet = 60 label = 1 Qty.

Let’s connect.

Product standard
- IEC 61131-2
- EMC
- EN 61000
- ATEX
- EN 60079
- UL
- UL 508
- MSP
- MSIP/REM/WMG-1315680000
**Analogue output module**

### 4AO-UI-16-DIAG

- Advanced diagnosis functions
- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05 % FSR
- Replacement values can be set per channel
- Non reactive
- Short-circuit-proof

#### Technical data

**System data**
- Interface
- Transmission rate of system bus
- Galvanic isolation

**Supply**
- Voltage supply
- Current consumption (I\text{IN} in power segment of field bus coupler), typ.
- Current consumption (I\text{OUT} in the respective power segment)

**Analogue outputs**
- Number
- Output
- Response time
- Resolution
- Accuracy
- Load resistance, voltage output
- Load resistance, current output
- Actuator connection
- Temperature coefficient
- Max. error between T min. and T max.
- Monotonicity
- Crosstalk between the channels
- Repeat accuracy
- Output waviness
- Module diagnosis
- Individual channel diagnosis
- Replacement values

#### General data

- Weight
- Dimensions (H/W/D)

#### Ordering data

- Module variants
  - Analogue output module, 4 channels, 16 Bits, diagnosis functions

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-4AO-UI-16-DIAG</td>
<td>1</td>
<td>1315730000</td>
</tr>
</tbody>
</table>

#### Accessories

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Module marker for pusher neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**
- Electronics module
- Basic module
- Plug-in connector unit

### UR20-4AO-UI-16-DIAG

- u-remote system bus
- 48 Mbit/s
- yes, DC 500 V between current paths
- 24 V DC +20 % / –15 % via the system bus
- 8 mA
- 85 mA
- 4
- 1. Voltage (0…5 V, 0…10 V, 1…5 V, 2…10 V, ±5 V)
- 2. Current (0…20 mA or 4…20 mA)
- 1 ms for 4 channels
- 16 Bit
- ±0.1 % FSR max., 0.05 % FSR typ.
- > 1 kΩ (at > 50 °C ambient temperature max. sum of sensor current = 25 mA)
- < 600 Ω
- 2-wire (current and voltage, automatic detection), 4-wire (voltage)
- 20 ppm Voltage / 31 ppm current measurement / °K
- 220 ppm FSR
- yes
- ±0.001 % FSR
- < 1 mV effectively
- max. 0.001 %
- yes
- yes
- yes
- 98 g
- 120 mm (with catch lever) x 11.5 mm x 76 mm

**Product standard**

- IEC 61131-2
- EMC  EN 61000
- ATEX  EN 60079
- UL (in preparation)  UL 508
- MSP

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>KOSM 8-25,00</td>
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<td>1483050000</td>
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<tr>
<td>UR20-69K-ACC</td>
<td>5</td>
<td>1346610000</td>
</tr>
<tr>
<td>UR20-9M-ACC</td>
<td>20</td>
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<tr>
<td>PM 2.7/2.5 MC SDR</td>
<td>192</td>
<td>1323700000</td>
</tr>
<tr>
<td>PM 2.7/2.5 MC AE</td>
<td>960</td>
<td>1332110000</td>
</tr>
<tr>
<td>DEK 5/8 11.5 MC SDR</td>
<td>100</td>
<td>1341610000</td>
</tr>
<tr>
<td>DEK 5/8 11.5 MC AE</td>
<td>560</td>
<td>1341630000</td>
</tr>
<tr>
<td>THM UR20 GE **</td>
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<tr>
<td>THM UR20 WS **</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>ESO UR20 5N 24 WS **</td>
<td>10</td>
<td>1429430000</td>
</tr>
<tr>
<td>UR20-EM-1315730000-SP</td>
<td>1</td>
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</tr>
<tr>
<td>UR20-IM-SP</td>
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<td>UR20-EM-1315730000-SP</td>
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</table>

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Module marker for pusher neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Ordering data**

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</table>

**Accessories**

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Module marker for pusher neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter

**Replacement parts**

- Electronics module
- Basic module
- Plug-in connector unit

**Ordering data**

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<td>UR20-EM-1315730000-SP</td>
<td>5</td>
<td>1518880000</td>
</tr>
</tbody>
</table>
Analogue output module

4AO-UI-16-HD

- 4 analogue outputs
- 4 plugs with 4 connections per module
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05 % FSR
- Replacement values can be set per channel
- Non reactive
- Short-circuit-proof

Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>u-remote system bus</td>
</tr>
<tr>
<td>Transmission rate of system bus</td>
<td>48 MHz/s</td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td>yes, DC 500 V between current paths</td>
</tr>
<tr>
<td>Voltage supply</td>
<td>24 V DC ±20 % / -15 % via the system bus</td>
</tr>
<tr>
<td>Current consumption (IIN in power segment of field bus coupler), typ.</td>
<td>8 mA</td>
</tr>
<tr>
<td>Current consumption (IOUT in the respective power segment)</td>
<td>85 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analogue outputs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>4</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>1 ms for 4 channels</td>
</tr>
<tr>
<td>Resolution</td>
<td>16 Bit</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.1 % FSR max., 0.05 % FSR typ.</td>
</tr>
<tr>
<td>Load resistance, voltage output</td>
<td>&gt; 1 kΩ (at &gt; 50 °C ambient temperature max. sum of sensor current = 25 mA)</td>
</tr>
<tr>
<td>Load resistance, current output</td>
<td>&lt; 600 Ω</td>
</tr>
<tr>
<td>Actuator connection</td>
<td></td>
</tr>
<tr>
<td>Temperature coefficient</td>
<td>20 ppm Voltage / 31 ppm current measurement / °K</td>
</tr>
<tr>
<td>Max. error between T min. and T max.</td>
<td>220 ppm FSR</td>
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<tr>
<td>Monotonicity</td>
<td></td>
</tr>
<tr>
<td>Crosstalk between the channels</td>
<td>yes</td>
</tr>
<tr>
<td>Repeat accuracy</td>
<td></td>
</tr>
<tr>
<td>Output waviness</td>
<td></td>
</tr>
<tr>
<td>Module diagnosis</td>
<td></td>
</tr>
<tr>
<td>Individual channel diagnosis</td>
<td>yes</td>
</tr>
<tr>
<td>Replacement values</td>
<td></td>
</tr>
</tbody>
</table>

General data

| Weight | 98 g |
|        |      |
| Dimensions (H/W/D) | 120 mm (with catch lever128 mm) x 11.5 mm x 76 mm |

Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue output module</td>
<td>UR20-4AO-UI-16-HD</td>
</tr>
<tr>
<td>4 channels, 16 Bits</td>
<td></td>
</tr>
<tr>
<td>HD-plug</td>
<td></td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Coding elements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination kit</td>
<td></td>
</tr>
<tr>
<td>Swivel marker</td>
<td></td>
</tr>
<tr>
<td>&quot;HD-Plug&quot;</td>
<td></td>
</tr>
<tr>
<td>&quot;Striping tool&quot;</td>
<td></td>
</tr>
<tr>
<td>&quot;Pressing tool&quot;</td>
<td></td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td></td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td></td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td></td>
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<tr>
<td>Thermotransfer version (Material: Polyester)</td>
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<tr>
<td>Paper version for Lasergroove</td>
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</table>

Replacement parts

<table>
<thead>
<tr>
<th>Electronics module</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Basic module</td>
<td></td>
</tr>
<tr>
<td>Plug-in connector unit</td>
<td></td>
</tr>
</tbody>
</table>

Note: Please order connector separately

Product standard

<table>
<thead>
<tr>
<th>IEC 61131-2</th>
<th>EMC</th>
<th>ATEX</th>
<th>UL (in preparation)</th>
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<tbody>
<tr>
<td>EN 61000</td>
<td></td>
<td></td>
<td>UL 508</td>
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</table>

Let’s connect.
Analogue output module

**4AO-UI-16 DIAG-HD**

- 4 analogue outputs
- Advanced diagnosis functions
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05 % FSR
- Replacement values can be set per channel
- Non reactive
- Short-circuit-proof

### Technical data

<table>
<thead>
<tr>
<th><strong>System data</strong></th>
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<tbody>
<tr>
<td>Interface</td>
</tr>
<tr>
<td>Transmission rate of system bus</td>
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<td><strong>Supply</strong></td>
</tr>
<tr>
<td>Voltage supply</td>
</tr>
<tr>
<td>Current consumption ($I_{\text{in}}$ in power segment of field bus coupler), typ.</td>
</tr>
<tr>
<td>Current consumption ($I_{\text{out}}$ in the respective power segment)</td>
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<table>
<thead>
<tr>
<th><strong>Analogue outputs</strong></th>
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<tbody>
<tr>
<td>Number</td>
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<tr>
<td>Output</td>
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<tr>
<td>Response time</td>
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<td>Actuator connection</td>
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<td>Max. error between T min. and T max.</td>
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<tr>
<td>Output waviness</td>
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<tr>
<td>Module diagnosis</td>
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<tr>
<td>Individual channel diagnosis</td>
</tr>
<tr>
<td>Replacement values</td>
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</table>

<table>
<thead>
<tr>
<th><strong>General data</strong></th>
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<tbody>
<tr>
<td>Weight</td>
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<tr>
<td>Dimensions (H/W/D)</td>
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### Ordering data

<table>
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<tr>
<th><strong>Module variants</strong></th>
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<tbody>
<tr>
<td>Analogue output module, 4 channels, 16 Bits, diagnosis functions, HD-plug</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-4AO-UI-16-DIAG-HD</td>
<td>1</td>
<td>1506930000</td>
</tr>
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</table>

### Accessories

<table>
<thead>
<tr>
<th><strong>Coding elements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination kit</td>
</tr>
<tr>
<td>Swivel marker</td>
</tr>
<tr>
<td>*3) HD-Plug</td>
</tr>
<tr>
<td>*4) Stripping tool</td>
</tr>
<tr>
<td>*5) Pressing tool</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Module marker for custom printing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Module marker for neutral</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester) Paper version for Laserprinter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Replacement parts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics module</td>
</tr>
<tr>
<td>Basic module</td>
</tr>
<tr>
<td>Plug in connector unit</td>
</tr>
</tbody>
</table>

### Note

- Please order connector separately
- **IP 20**
- **EN 61131-2**
- **EMC EN 61000**
- **ATEX EN 60079**
- **UL (in preparation)**
- **UL 508**
Power-feed modules
10 A feeding; input or output current path; diagnosis visualisation

Weidmüller power-feed modules are available to refresh the power of the input and output current path. These feed 10 A, monitored by the voltage diagnosis display, in the corresponding input or output path. The time-saving commissioning is guaranteed by the standard u-remote plug with proven and tested “PUSH IN” technology for reliable contacting. The power supply is monitored by a diagnosis display.

Block diagram UR20-PF-I and UR20-PF-O
**PF-I**
- Power supply in input current path
- Power supply current 10 A
- Integrated diagnosis display

### Technical data

**Supply**
- Voltage supply for inputs
- Maximum feed current for input modules
- Current consumption ($I_{IN}$ in the respective power segment)

**General data**
- Weight
- Dimensions (H/W/D)

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply module</td>
<td>UR20-PF-I</td>
<td>1</td>
<td>1334710000</td>
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</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding elements</td>
<td>KOSM BH475.00</td>
<td>100</td>
<td>1489060000</td>
</tr>
<tr>
<td>Termination kit</td>
<td>UR20-EBK-ACC</td>
<td>5</td>
<td>1346610000</td>
</tr>
<tr>
<td>Swivel marker</td>
<td>UR20-EBK-ACC</td>
<td>20</td>
<td>1339220000</td>
</tr>
<tr>
<td>Connection marker for pusher custom printing</td>
<td>PM 2.7/2.6 MC SDR</td>
<td>192</td>
<td>1323700000</td>
</tr>
<tr>
<td>Connection marker for pusher neutral</td>
<td>PM 2.7/2.6 MC NE WS</td>
<td>960</td>
<td>1323710000</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
<td>DEK 5/8 11.5 MC SDR</td>
<td>100</td>
<td>1341610000</td>
</tr>
<tr>
<td>Module marker for neutral</td>
<td>DEK 5/8 11.5 MC NE WS</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td>THM UR20 GE * *</td>
<td>1</td>
<td>1429510000</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
<td>THM UR20 WS * *</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
<td>ESO UR20 DIN A4 WS * *</td>
<td>10</td>
<td>1429430000</td>
</tr>
<tr>
<td>Electronics module</td>
<td>UR20 EM-1334710000 SP</td>
<td>1</td>
<td>1347380000</td>
</tr>
<tr>
<td>Basic module</td>
<td>UR20 BM-PP-1SP</td>
<td>5</td>
<td>1350940000</td>
</tr>
<tr>
<td>Plug-in connector unit</td>
<td>UR20 PK-1334710000 SP</td>
<td>5</td>
<td>1346460000</td>
</tr>
</tbody>
</table>

### Note
- 24 V DC +20 % / -15 %
- 10 A
- 10 mA
- 76 g
- 120 mm (with catch lever128 mm) x 11.5 mm x 76 mm

**Let’s connect.**

---

**UR20-PF-I**

- Power supply in input current path
- Power supply current 10 A
- Integrated diagnosis display

**Technical data**
- Voltage supply for inputs: 24 V DC +20 % / -15 %
- Maximum feed current for input modules: 10 A
- Current consumption ($I_{IN}$ in the respective power segment): 10 mA
- Weight: 76 g
- Dimensions (H/W/D): 120 mm (with catch lever128 mm) x 11.5 mm x 76 mm

**Ordering data**
- Type: UR20-PF-I
- Qty.: 1
- Order No.: 1334710000

**Accessories**
- Type: KOSM BH475.00
- Qty.: 100
- Order No.: 1489060000
- Type: UR20-EBK-ACC
- Qty.: 5
- Order No.: 1346610000
- Type: UR20-EBK-ACC
- Qty.: 20
- Order No.: 1339220000
- Type: PM 2.7/2.6 MC SDR
- Qty.: 192
- Order No.: 1323700000
- Type: PM 2.7/2.6 MC NE WS
- Qty.: 960
- Order No.: 1323710000
- Type: DEK 5/8 11.5 MC SDR
- Qty.: 100
- Order No.: 1341610000
- Type: DEK 5/8 11.5 MC NE WS
- Qty.: 500
- Order No.: 1341630000
- Type: THM UR20 GE \* \*
- Qty.: 1
- Order No.: 1429510000
- Type: THM UR20 WS \* \*
- Qty.: 1
- Order No.: 1429420000
- Type: ESO UR20 DIN A4 WS \* \*
- Qty.: 10
- Order No.: 1429430000
- Type: UR20 EM-1334710000 SP
- Qty.: 1
- Order No.: 1347380000
- Type: UR20 BM-PP-1SP
- Qty.: 5
- Order No.: 1350940000
- Type: UR20 PK-1334710000 SP
- Qty.: 5
- Order No.: 1346460000

**Note**
- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.

---

**Let’s connect.**

---

**Product standard**
- IEC 61131-2
- EMK: EN 61000

**Certification**
- ATEX: EN 60079
- UL: UL 508
- MSIP: MSIP REM/WING 1334710000
Power-feed modules

PF-O

• Power supply in output current path
• Power supply current 10 A
• Integrated diagnosis display

Technical data

Supply
Voltage supply for outputs
Maximum feed current for output modules
Current consumption (IOUT in the respective power segment)

General data
Weight
Dimensions (H/W/D)

Ordering data

Module variants
Power supply module

Accessories

Coding elements
Termination kit
Swivel marker
Connection marker for pusher custom printing
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (Material: Polyester)
Thermotransfer version (Material: Polyester)
Paper version for Laserprinter

Replacement parts

Electronics module
Basic module
Plug-in connector unit

Note

24 V DC +20 % / -15 %
10 A
10 mA
76 g
120 mm (with catch lever) 128 mm x 11.5 mm x 76 mm

Type | Qty. | Order No.
--- | --- | ---
UR20-PF-O | 1 | 1334740000

Type | Qty. | Order No.
--- | --- | ---
KDSM BH075.00 | 100 | 1483950000
UR20-EBK-ACC | 5 | 1346610000
UR20-SM-ACC | 20 | 1339320000
PM 2.7/2.6 MC SDR | 192 | 1322700000
PM 2.7/2.6 MC NE WS | 960 | 1322710000
DEK 5/8 11.5 MC SDR | 100 | 1341630000
DEK 5/8 11.5 MC NE WS | 500 | 1341640000
THM UR20 GE ** | 1 | 1428910000
THM UR20 WS ** | 1 | 1429420000
ESO UR20 DIN A4 WS *** | 10 | 1429430000
UR20-EM-1334740000-SP | 1 | 1347420000
UR20-EM-1334740000-SP | 5 | 1350950000
UR20-PK-1334740000-SP | 5 | 1346480000

Note

* | 1 roll = 1000 label = 1 Qty.
** | 1 sheet = 60 label = 1 Qty.

Let's connect.

Product standard
IEC 81131-2
EN 61000
ATEX EN 60079
UL UL 508
MSIP MSIP-REM-WMG 1334740000

A.68 155100000 - 2015
Modules for functional safety

SIL 3; OSSD output; wire breakage and short-circuit detection

Safety technology is of central importance in the automation industry and machine construction. When attempting to reduce risks and avoid putting people and the environment in danger, you need solutions which satisfy stringent requirements and statutory specifications. The safety modules of the u-remote system have key features such as emergency stop circuits and wire breakage/short-circuit detection. They satisfy all SIL 3 requirements according to IEC 62061 and EN ISO 13849-1, Category 4, PL e and support the safe operation of your system.

By safely shutting down the downstream output modules, the safety modules attain maximum safety with optimum control. All input sensors are independently supplied via separate voltage paths and report the current machine status to the control unit. The restart is either performed in manual mode or using the autostart function.

Safety modules from Weidmüller also cut maintenance and service times and improve your response times in an emergency – thanks to a concept of maximum transparency, e.g. using OSSD output.

The module electronics supply the connected actuators from the output current path ($U_{OUT}$).

**UR20-PF-O-1DI-SIL block diagram example**

```
System bus
U_{sys}

U_{in}

Safety

24 V DC OSSD

GND

µC

µC

µC

Type 3

Start1
Start2
Autostart1
Autostart2

24 V DC OSSD
24 V DC Input
GND

Safety 0.0
Safety 0.1
Safety 0.2
Safety 0.3

2

Emergency stop 1

Start
or
Autostart

A.70

1555100000 - 2015
```
**PF-O-1DI-SIL**

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart

**Technical data**

**System data**
- Interface
- Transmission rate of system bus

**Safety-related data**
- Achievable safety standard
- Level of diagnostic coverage
- MTTFd
- SFF
- HFT

**Supply**
- Supply voltage for system and inputs
- Supply voltage for outputs
- Maximum feed current for input modules
- Current consumption (internal)

**Digital inputs**
- Wire breakage detection
- Short-circuit detection

**General data**
- Weight
- Dimensions (H/W/D)

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-PF-O-1DI-SIL</td>
<td>1</td>
<td>1335030000</td>
</tr>
</tbody>
</table>

For this and additional technical data, please refer to the manual available at www.weidmuller.de or scan the QR code below.

**Replacement parts**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KGSM 84025.00</td>
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<td>1483050000</td>
</tr>
<tr>
<td>UR20-EC-ACC</td>
<td>5</td>
<td>1346610000</td>
</tr>
<tr>
<td>UR20-SM-ACC</td>
<td>20</td>
<td>1339920000</td>
</tr>
<tr>
<td>PM 2.7/2.6 MC SDR</td>
<td>192</td>
<td>1323700000</td>
</tr>
<tr>
<td>PM 2.7/2.6 MC NE WS</td>
<td>960</td>
<td>1323710000</td>
</tr>
<tr>
<td>DEK 5/6/11.5 MC SDR</td>
<td>100</td>
<td>1341610000</td>
</tr>
<tr>
<td>DEK 5/9/11.5 MC NE WS</td>
<td>500</td>
<td>1341630000</td>
</tr>
<tr>
<td>THM UR20 GE *</td>
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<td>1429910000</td>
</tr>
<tr>
<td>THM UR20 WS *</td>
<td>1</td>
<td>1429420000</td>
</tr>
<tr>
<td>ESD UR20 DIN A4 WS *</td>
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</tr>
<tr>
<td>UR20-EM-1335030000-SP</td>
<td>1</td>
<td>1347620000</td>
</tr>
<tr>
<td>UR20-BM-1335030000-SP</td>
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<td>1350970000</td>
</tr>
<tr>
<td>UR20-PK-1335030000-SP</td>
<td>5</td>
<td>1346560000</td>
</tr>
</tbody>
</table>

*1 roll = 1000 label = 1 Qty.
*2 1 sheet = 60 label = 1 Qty.

**Let’s connect.**
Modules for functional safety

Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission rate of system bus</td>
<td>48 MHz/s</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety-related data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievable safety standard</td>
</tr>
<tr>
<td>Level of diagnostic coverage</td>
</tr>
<tr>
<td>MTTFd</td>
</tr>
<tr>
<td>SFF</td>
</tr>
<tr>
<td>HFT</td>
</tr>
</tbody>
</table>

| Supply | 24 V DC +20% / –15% via the system bus |
|        | 24 V DC +20% / –15% |
|        | 8 A |
|        | 30 mA |
|        | yes |
|        | yes |
|        | 82 g |
|        | 120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm |

<table>
<thead>
<tr>
<th>General data</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (H/W/D)</td>
<td>120 mm (with catch lever 128 mm) x 11.5 mm x 76 mm</td>
</tr>
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<table>
<thead>
<tr>
<th>Ordering data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module variants</td>
</tr>
<tr>
<td>Safety module, 2 digital inputs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding elements</td>
</tr>
<tr>
<td>Termination kit</td>
</tr>
<tr>
<td>Sound marker</td>
</tr>
<tr>
<td>Connection marker for pushbutton printing</td>
</tr>
<tr>
<td>Connection marker for pushbutton neutral</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
</tr>
<tr>
<td>Module marker for neutral</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
</tr>
<tr>
<td>Thermotransfer version (Material: Polyester)</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Replacement parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics module</td>
</tr>
<tr>
<td>Basic module</td>
</tr>
<tr>
<td>Plug-in connector unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) For this and additional technical data, please refer to the manual available at <a href="http://www.weidm%C3%BCller.de">www.weidmüller.de</a> or scan the QR code below.</td>
</tr>
</tbody>
</table>

**UR20-PF-O-2DI-SIL**

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart
PF-O-2DI-DELAY-SIL

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Switch-off after adjustable delay
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart

Technical data

<table>
<thead>
<tr>
<th>System data</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission rate of system bus</td>
<td>48 Mbit/s</td>
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<table>
<thead>
<tr>
<th>Safety-related data</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC 61508 SIL 3 and DIN EN ISO 13849-1:2008 PL e</td>
</tr>
<tr>
<td>96.64 %</td>
</tr>
<tr>
<td>&gt; 100 years (PFH = 6.27 * 10^9 h)</td>
</tr>
<tr>
<td>98.58 %</td>
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</table>

<table>
<thead>
<tr>
<th>Level of diagnostic coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTFi</td>
</tr>
<tr>
<td>SFF</td>
</tr>
<tr>
<td>HFT</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage for system and inputs</td>
</tr>
<tr>
<td>Maximum feed current for input modules</td>
</tr>
<tr>
<td>Current consumption (internal)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Digital inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire breakage detection</td>
</tr>
<tr>
<td>Short-circuit detection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Dimensions (H/W/D)</td>
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</tbody>
</table>

Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety module, 2 digital inputs, delayed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding elements</td>
</tr>
<tr>
<td>Termination kit</td>
</tr>
<tr>
<td>Terminal marker for pusher custom printing</td>
</tr>
<tr>
<td>Connection marker for pusher neutral</td>
</tr>
<tr>
<td>Module marker for custom printing</td>
</tr>
<tr>
<td>Module marker for neutral</td>
</tr>
<tr>
<td>Thermodrive version (Material: Polyester)</td>
</tr>
<tr>
<td>Thermodrive version (Material: Polyester)</td>
</tr>
<tr>
<td>Paper version for Laserprinter</td>
</tr>
</tbody>
</table>

<table>
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<tbody>
<tr>
<td>Electronics module</td>
</tr>
<tr>
<td>Basic module</td>
</tr>
<tr>
<td>Plug-in connector unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>For this and additional technical data, please refer to the manual available at <a href="http://www.weidmuller.de">www.weidmuller.de</a> or scan the QR code below.</td>
</tr>
</tbody>
</table>

UR20-PF-O-2DI-DELAY-SIL

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-PF-O-2DI-DELAY-SIL</td>
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</table>

UT20-EBK-ACC 5

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20-BM-SIL-SP 5</td>
<td>1350970000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1347630000</td>
</tr>
<tr>
<td>UR20-EM-1335040000-SP</td>
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<td>1350970000</td>
</tr>
<tr>
<td>UR20-PK-1335040000-SP</td>
<td>5</td>
<td>1484100000</td>
</tr>
</tbody>
</table>

*) 1 roll = 1000 label = 1 Qty.
*) 1 sheet = 60 label = 1 Qty.

For further information, please refer to the manual available at www.weidmuller.de or scan the QR code below.
A wide range of accessory modules is provided for the individual requirements of machine and plant construction. Various potential distribution modules are available for directly supplying sensors with 2-wire, 3-wire or 3-wire+FE connection technology from the remote I/O system. These provide 16 “PUSH IN” potential points and supply your application with each auxiliary potential available. An empty module, where the system bus and voltage supply are looped through, allows you to plan expansion slots in a system and to start these up without any interruptions if required.

**UR20-16AUX-O block diagram example**
**AUX**

- Distribution of the various potentials
- Actuator and sensor supply
- 16 “PUSH IN” potential contacts

### Technical data

**Supply**

Voltage supply

**General data**

Weight

Dimensions (H/W/D)

### Ordering data

**Module variants**

Potential distribution module

### Accessories

- Coding elements
- Termination kit
- Swivel marker
- Connection marker for pusher custom printing
- Module marker for pusher neutral
- Module marker for neutral
- Thermotransfer version (Material: Polyester)
- Thermotransfer version (Material: Polyester)
- Paper version for Laserprinter
- USB cable (USB A to Micro USB)

### Replacement parts

- Electronics module
- Basic module
- Plug-in connector unit

### Note

- Product standard: IEC 61131-2
- EMC: EN 61000
- ATEX: EN 60079
- UL: UL 508
- MSP: MSP REM WAG-1334770000
- MSP: MSP REM WAG-1334790000
- MSP: MSP REM WAG-1334800000
- MSP: MSP REM WAG-1334810000

### UR20-16AUX

- 24 V DC ±20 % / -15 % via Input- or output path / FE
- 84 g
- 120 mm (with catch lever) x 115 mm x 76 mm

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**Note**

- 1 roll = 1000 label = 1 Qty.
- 1 sheet = 60 label = 1 Qty.

---

**Let’s connect.**

- Let’s connect.
- Let’s connect.
- Let’s connect.
- Let’s connect.
- Let’s connect.
Accessories

Empty module

- Forwarding of system bus and voltage paths
- Space for subsequent expansion
- Basis for all I/O modules

Technical data

General data
- Weight: 70 g
- Dimensions (H/W/D): 120 mm (with catch lever) x 11.5 mm x 76 mm

Ordering data

Module variants
- Empty module

Accessories

Coding elements
- KOSM BK75.00
- UR20-EBK-ACC
- UR20-SM-ACC
- PM 2.7/2.6 MC SDR
- PM 2.7/2.6 MC NE WS
- DEK 5/8-11.5 MC SDR
- DEK 5/8-11.5 MC NE WS
- THM UR20 GE *
- THM UR20 WS *
- ESO UR20 DIN A4 WS **

Termination kit

- Includes an end plate and two end brackets

Ordering data

Module variants
- Termination kit

UR20 ES

Let's connect.

Product standard
- IEC 61131-2
- EMC
- ATEX
- UL
- MSIP

EMC
- EN 61000
- EN 60079
- UL 508

ATEX
- EN 60079

UL
- UL 508

MSIP
- MSIP/REM/WMS-131570000

UL
- UL 508

Note

(1) 1 roll = 1000 label = 1 Qty.

(2) 1 sheet = 60 label = 1 Qty.
**Individual components**

It goes without saying that Weidmüller also allows you to swap defective parts. The three-part modules can therefore be ordered as individual components.

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**System overview**

Below you will find assistance for putting together your system. Please note the maximum number of 64 active modules and the packaging units for the accessories! More detailed technical data and product descriptions can be found here in the catalogue in the corresponding chapter.

At the bottom right-hand side of this page, you will find assistance for supplying the current paths.

1. **What field bus are you using?**

<table>
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2. **What signals do you want to process?**

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The additional supply calculation is different for each application. Simultaneity factors and current requirement must be known. To assist you, we have produced the example shown here in a simplified form.

Our example uses a row of 8-DO modules, i.e. units which can hold four actuator connections each. The actual current needed and therefore the position for a power-feed module to supply the current path can be determined from the mathematical combination of current requirement and simultaneity factor. Please note that u-remote provides an input and an output current path. Both must be included in the additional supply calculation. The system voltage doesn’t have to be taken into account.

### Sample calculation

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<th>Simultaneity factor</th>
<th>Current requirement calculation of simultaneity factor per module</th>
<th>Current requirement of system - cumulative</th>
<th>Current requirement of system - cumulative with UR20-PF-O</th>
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</table>

**Current requirement exceeds 10 A!**
The output current path therefore needs an additional supply before the 11th module.

10 A supplied by the UR20-PF-O module.
The 1.5 A calculated as remaining after the 10th module must not be added to the 10 A after the UR20-PF-O module!
When constructing machines and plants, sensors and actuators have to be connected to the control unit such that all these signals can be collected locally using fieldbuses. The SAI Active product family solves this problem by means of IP 67 protected encapsulation at the very point where the sensors and actuators are located. In the variants with a sub-bus system, this is done very flexibly and in a wide range of applications.
<table>
<thead>
<tr>
<th>Contents</th>
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<tr>
<td>IP 67</td>
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**IP 67**

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<th>Contents</th>
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<tbody>
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<td>Quick select – SAI Active</td>
<td>B.6</td>
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<tr>
<td>SAI Active Universal - Overview</td>
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Introduction

Remote I/O system in class of protection IP 67 for SAI Active family
Flexible sensor/actuator coupling to control systems in IP 67 area in industrial environment

In both machine and plant construction, sensors and actuators from the entire machine have to be connected to the control unit. Depending on the machine, the reach, but also the volume of these signals may be very large so that fieldbuses and IO systems can be used to collect the signals locally. The SAI Active product family solves this problem by means of IP 67 protected encapsulation at the very point where the sensors and actuators are located. In the variants with a sub-bus system, this is done very flexibly and in a wide range of applications. Direct incorporation in the SYS programming environment, rapid definition of causes in the event of faults and a very narrow and lightweight design are the characteristics which make this system unique on the market.

Rapid fault rectification
Rapid definition of causes in the event of faults by providing extended diagnostic data to the control unit and on the device itself.

Efficient engineering
Direct incorporation and configuration in the standard PLC engineering systems (such as Step 7, RS-Logix, CX-Configurator, MELSEC, ...)

Remote I/O system in class of protection IP 67
Flexible sensor/actuator coupling to control systems in IP 67 area in industrial environment
Universal adaptation
The analogue inputs and outputs are freely configurable in the different analogue value ranges.

Introduction
Freedom of choice
Support for all common field bus systems such as PROFINET, DeviceNet™, CANopen, RS232.

50 % reduced costs through flexible sub-bus concept
Sub-bus length of up to 50 m with up to 15 slaves per sub-bus enables an extremely flexible setup.

Remote I/O system as complete system on the panel
An extremely wide range of sensor and actuator cables, fieldbus cables and customisable plug-in connectors round off the range.
Challenging production tasks present you with motion and distribution
We present SAI for a secure processing of your sensor and actuator signals
Let’s connect.

Complex production processes mean that you have to co-ordinate lots of individual processing stages. Numerous sensors and actuators throughout the production facility are connected with the central control system. And in many cases, you have to bridge huge distances and process a large number of different signals.

Weidmüller’s SAI Active product range equips you for this production process chain in a practical way. Thanks to IP 67-rated encapsulation, the remote I/O systems can be positioned directly where sensors and actuators are active. The SAI-PRO variants with sub-bus system also greatly increase your flexibility: the sub-bus system SAI-PRO can be extended to a length of up to 50 m with up to 15 modules. Up to 120 inputs or outputs are therefore possible on one fieldbus node.

Various versions of encapsulated SAI cables make the sensors and actuators accessible. You can also route fieldbus cables straight from the switch cabinet with the energy supply lines using modular, heavy-duty plug-in connectors of the RockStar® concept. This allows you to integrate several stages of production into your production facility with just one single module.

Other benefits of the SAI family include a direct interface to your PLC programming environment and precise error analyses with visual status display. Let’s connect.
**Remote I/O IP 67 SAI Active**

- Efficient engineering by direct integration into standard PLC system engineering
- Rapid identification of failure causes by providing enhanced diagnostic data
- 50% cost reduction by flexible sub-bus concept
- Analogue inputs and outputs have freely configurable analog value

**Sensor Actuator Cabling**

- Broad range of leadership qualities
- Free attachable connectors with screw connection up to crimp versions
- Customised versions and lengths from 1 piece
- 360 degree shielding
- Many types from stock
## Selection table

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<th>Communication</th>
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SAI Active Universal

Compact, basic versions of the Remote I/O system with IP 67 protection

The SAI Active Universal consists of basic, compact designed variants that include a variety of modules for digital and analogue inputs and outputs. The housing has a sturdy construction in compliance with strict industrial requirements. It is resistant against aggressive materials, vibration, shock, temperature, water and dust.

The high quality connection system uses conventional, standardised M8 and M12 connectors with standards-compliant coding. They ensure a reliable wiring process with less risk of errors. Two M12 connections for the fieldbus allow for a continuous bus installation without any additional T-distributor. The functional earth connection is automatically created when installing on a metallic earthed base.
**4 independent voltage circuits**

The modules can be supplied with up to four different voltage potentials. The module voltage can be simultaneously used for the inputs. In addition, up to three feed points are available for outputs; these can be switched off individually depending on the application requirements. Plug in cross connectors can be used to merge voltage potentials on the module.

**Efficient diagnostics and status alerts**

The status of the I/Os is shown directly on the module using arrow icons. The arrows point to the label and the plug in position. Up to seven status LEDs are available for displaying additional information about the power supply, fieldbus status and group diagnostics. The information is simultaneously transmitted to the controller unit via the bus system.

**Freedom of choice**

Total compliance with many industrial fieldbus standards: this permits integration with all conventional controllers so that the modules can be used in practically all applications. SAI Active Universal supports PROFIBUS-DP, CANopen, DeviceNet™ communication protocols.

**A wide variety of variants**

All SAI Active modules with digital inputs or digital outputs are optionally available with standard M8 or M12 connection systems. For modules in the 16DI/8DO series, the configuration can be customised to fit the application so that anywhere between 16DI to 8DI/8DO can be used. Output cables with up to 2 A per channel are used to connect almost any load. Analogue modules can be configured flexibly for the current of voltage outputs.
### Ordering data

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<thead>
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**Note**

### Technical data

#### Connections
- Fieldbus (BUS-IN)
- Fieldbus (BUS-OUT)
- Supply voltage (AUX-IN)
- Supply voltage (AUX-OUT)
- I/O connections

#### Voltage supply
- Operating voltage
- Contact load
- Max. total current module

#### Digital inputs
- Permitted input voltage
- Input current, low
- Input current, high
- Input current, high
- Input filter

#### Digital outputs
- Max. current-carrying capacity per output signal
- Switching frequency load (resistive / inductive / inrush)
- Short-circuit-proof
- Output voltage, low
- Output voltage, high
- Max. total current of outputs

#### Fieldbus
- Bus system
- Transmission rate
- Addressing
- System integration

#### General data
- L x W x H
- Earth
- Protection degree
- Operating temperature
- Storage temperature
- Housing main material / UL 94 flammability rating
- Certificate

---

#### Note

- SAI Active Universal – PROFIBUS-DP
- SAI AU
- SAI AU

### SAI AU

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### SAI AU

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**SAI Active Universal – PROFIBUS-DP**

### Ordering data

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**Note**

**Technical data**

#### Connections

- Fieldbus (BUS-IN)
- Fieldbus (BUS-OUT)
- Supply voltage (AUX-IN)
- Supply voltage (AUX-OUT)
- I/O connections

#### Voltage supply

- Operating voltage
- Contact load
- Max. total current module

#### Digital inputs

- Permitted input voltage
- Input current, high
- Input current, low
- Input current, high
- Input current, low
- Input filter

#### Analogue inputs

- Measurement range
- Maximum input voltage in relation to GND
- Input resistance (load)
- Max. input current (differential)
- Short-circuit-proof
- Resolution / Accuracy

#### Analogue outputs

- Measurement range
- Output interval
- Short-circuit-proof
- Resolution / Accuracy

#### Fieldbus

- Bus system
- Transmission rate
- Addressing
- System integration

#### General data

- L x W x H
- Earth
- Protection degree
- Operating temperature
- Storage temperature
- Housing main material / UL 94 flammability rating
- Certificate

#### Note

**SAI-AU**

**Type**

- 1x M12 plug 5-pole, B-coded
- 1x M12 female 5-pole, B-coded
- 1x M12 plug 5-pole, A-coded
- 1x M12 female 5-pole, A-coded
- 8 x M12 socket 5-pole, A-coded

**Ordering data**

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- 24 V (18 V DC ... 30 V DC)
- Per PIN max. 4 A
- 10 A
- -30 V to +30 V (protected against polarity reversal)
- < 15 mA in accordance with EN 61131-2 Type 1
- 2 mA to 15 mA in accordance with EN 61131-2 Type 1
- < 15 mA in accordance with EN 61131-2 Type 1
- 2 mA to 15 mA in accordance with EN 61131-2 Type 1

**3 ms**

- -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4 ... 20 mA
- 35 V
- <125 Ohm
- -50 mA to +50 mA (protected against polarity reversal)
- Yes
- 12 bit / < 0.2 %
- -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4 ... 20 mA
- 5 ms to 250 ms (can be configured)
- Yes
- 12 bit / < 0.2 %

- PROFIBUS DP
- Max. 12 Mbit/s (automatic detection)
- Via rotary coding switch (1 – 126)
- GSD file (Device-specific for each module)

- 210 mm / 54 mm / 32 mm
- 0 °C ... +60 °C
- 0 °C ... +60 °C
- -25 °C ... +85 °C
- Yes, IP 67
When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

### PROFIBUS modules

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### PROFIBUS accessories

- PROFIBUS cables with female plug and male plug
- PROFIBUS cables with female plug and other side open
- PROFIBUS cables with male plug and other side open

### Sensor/actuator accessories

- Sensor-actuator cables
- Sensor-actuator plugs

### Markers

- Semi-transparent markers for PrintJet printing

### Protective caps

- M8 Dust cap (Sensor connections)
- M12 Dust cap (Bus-out and power-out)
- M12 Dust cap (Bus-in and power-in)

### Ordering data

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<td>SAI-AU M8 PB 16DI</td>
<td>1</td>
<td>1968220000</td>
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<tr>
<td>PROFIBUS modules</td>
<td>SAI-AU M8 PB 8DI/8DO 2A</td>
<td>1</td>
<td>1975450000</td>
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<tr>
<td>PROFIBUS terminating resistor</td>
<td>SAIEND P6 M12 4P B-ODD</td>
<td>1</td>
<td>1784770000</td>
</tr>
</tbody>
</table>

**Note:** *) Can be found in our latest catalogue B, signal and power transmission, order no. 1366750000

**IP 67**

**B.12**

1555100000 - 2015
SAI Active Universal – CANopen

**SAI-AU**

**Remote I/O for digital signal processing**

**Ordering data**

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Digital In; 16 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1906660000</td>
</tr>
<tr>
<td>16 Digital In; 16 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1906660000</td>
</tr>
</tbody>
</table>

**Technical data**

**Connections**
- Fieldbus (BUS-IN)
- Fieldbus (BUS-OUT)
- Supply voltage (AUX-IN)
- Supply voltage (AUX-OUT)
- I/O connections

**Voltage supply**
- Operating voltage
- Contact load
- Max. total current module

**Digital inputs**
- Permitted input voltage
- Input current, low
- Input current, high
- Input current, low
- Input current, high
- Input current, high
- Input current, low
- Input current, high
- Input filter

**Digital outputs**
- Max. current-carrying capacity per output signal
- Switching frequency load (resistive / inductive / inrush)
- Short-circuit-proof
- Output voltage, low
- Output voltage, high
- Max. total current of outputs

**Fieldbus**
- Bus system
- Transmission rate
- Addressing
- System integration

**General data**
- L x W x H
- Earth
- Protection degree
- Operating temperature
- Storage temperature
- Housing main material / UL 94 flammability rating
- Certificate

**CANopen**
- Max. 1 Mbit/s (automatic detection)
- Via rotary coding switch (1 – 127)
- EDS file (Device-specific for each module)
- 210 mm / 54 mm / 32 mm
- <400 g
- IP 67
- 0 °C...+60 °C
- 25 °C...+85 °C
- Pocan, PBT / V-0
- CE, cULus

**Note**

- Type Qty. Order No.
  - SAI-AU M8 CAN 16DOI 1 1906690000
  - SAI-AU M12 CAN 16DOI 1 1906690000
  - SAI-AU M8 CAN 16DO/8DO 1 1906690000
  - SAI-AU M12 CAN 16DO/8DO 1 1906690000

- Type Qty. Order No.
  - SAI-AU M8 CAN 16DOI 1 1906650000
  - SAI-AU M12 CAN 16DOI 1 1906650000
  - SAI-AU M8 CAN 16DO/8DO 1 1906660000
  - SAI-AU M12 CAN 16DO/8DO 1 1906660000
## Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Analogue In / 2 Analogue Out / 4 Digital In</td>
<td>1</td>
<td>1906670000</td>
</tr>
</tbody>
</table>

### Note

*SAI Active Universal – CANopen*

## Technical data

### Connections

- **Fieldbus (BUS-IN)**
- **Fieldbus (BUS-OUT)**
- **Supply voltage (AUX-IN)**
- **Supply voltage (AUX-OUT)**
- **I/O connections**

### Voltage supply

- **Operating voltage**
- **Contact load**
- **Max. total current module**

### Digital inputs

- **Permitted input voltage**
- **Input current, low**
- **Input current, high**
- **Input current, low**
- **Input current, high**
- **Input filter**

### Digital outputs

- **max. current-carrying capacity per output signal**
- **Switching frequency load (resistive / inductive / inrush)**
- **Short-circuit-proof**
- **Output voltage, low**
- **Output voltage, high**
- **Max. total current of outputs**

### Fieldbus

- **Bus system**
- **Transmission rate**
- **Addressing**
- **System integration**

### General data

- **L x W x H**
- **Earth**
- **Protection degree**
- **Operating temperature**
- **Storage temperature**
- **Housing main material / UL 94 flammability rating**
- **Certificate**

### CANopen

- **Max. 1 Mbit/s (automatic detection)**
- **Via rotary coding switch (1 – 127)**
- **EDS file (Device-specific for each module)**

### Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage supply</td>
<td>24 V (18 V DC ... 30 V DC)</td>
</tr>
<tr>
<td>Per PIN max.</td>
<td>4 A</td>
</tr>
<tr>
<td>Current</td>
<td>8 A</td>
</tr>
<tr>
<td>Voltage</td>
<td>±30 V to ±30 V (protected against polarity reversal)</td>
</tr>
<tr>
<td>Current</td>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>Voltage</td>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>Current</td>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>Voltage</td>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>Frequency</td>
<td>3 ms</td>
</tr>
</tbody>
</table>

### Dimensions

**210 mm / 54 mm / 32 mm**

### Weight

**< 480 g**

### Temperature range

- **0 °C...+60 °C**
- **-25 °C...+85 °C**

### Housing material

- **Pocan, PBT / V-0**

### Certifications

- **CE, cULus**

### Note

*SAI-AU M12 CAN AI/AB/DI*
When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANopen modules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 Digital In</td>
<td>SAI-AU M12 CAN 16DI</td>
<td>1</td>
<td>1906650000</td>
</tr>
<tr>
<td>16 Digital In / 8 Digital Out</td>
<td>SAI-AU M12 CAN 16DI/8DO</td>
<td>1</td>
<td>1906660000</td>
</tr>
<tr>
<td>4 Analogue In / 2 Analogue Out / 4 Digital In</td>
<td>SAI-AU M12 CAN AI/AO/DI</td>
<td>1</td>
<td>1906670000</td>
</tr>
<tr>
<td>16 Digital In</td>
<td>SAI-AU M8 CAN 16DI</td>
<td>1</td>
<td>1906680000</td>
</tr>
<tr>
<td>16 Digital In / 8 Digital Out</td>
<td>SAI-AU M8 CAN 16DI/8DO</td>
<td>1</td>
<td>1906690000</td>
</tr>
<tr>
<td>CANopen accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANopen cables with female plug and male plug *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANopen cables with female plug and other side open *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANopen cables with male plug and other side open *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANopen plug-in connector *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANopen terminating resistor</td>
<td>SAIEND CAN M12 SP A-COD</td>
<td>1</td>
<td>1784760000</td>
</tr>
<tr>
<td>Sensor/actuator accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor-actuator cables *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor-actuator plugs *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-transparent markers for PrintJet printing</td>
<td>ESG B/13,5/43,3 SAI AU</td>
<td>5</td>
<td>1912130000</td>
</tr>
<tr>
<td>Protective caps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M8 Dust cap [Sensor connections]</td>
<td>SAI-SK M8</td>
<td>50</td>
<td>1802760000</td>
</tr>
<tr>
<td>M12 Dust cap [Sensor connections]</td>
<td>SAI-SK</td>
<td>30</td>
<td>9456050000</td>
</tr>
<tr>
<td>M12 Dust cap [Bus-out and power-out]</td>
<td>SAI-SK M12 UNI</td>
<td>20</td>
<td>2330260000</td>
</tr>
<tr>
<td>M12 Dust cap [Bus-in and power-in]</td>
<td>SAI-SK plug M12</td>
<td>50</td>
<td>1781520000</td>
</tr>
</tbody>
</table>

Note: *) Can be found in our latest catalogue II, signal and power transmission, order no. 1366750000.
**Ordering data**

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Digital In; 16 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1906730000</td>
</tr>
<tr>
<td>16 Digital In; 16 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1906700000</td>
</tr>
</tbody>
</table>

**Note**

**Technical data**

- **Connections**
  - Fieldbus (BUS-IN)
  - Fieldbus (BUS-OUT)
  - Supply voltage (AUX-IN)
  - Supply voltage (AUX-OUT)
- **Voltage supply**
  - Operating voltage
  - Contact load
  - Max. total current module
- **Digital inputs**
  - Permitted input voltage
  - Input current, low
  - Input current, high
  - Input current, low
  - Input current, high
  - Input filter
- **Digital outputs**
  - max. current-carrying capacity per output signal
  - Switching frequency load (resistive / inductive / inrush)
  - Short-circuit-proof
  - Output voltage, low
  - Output voltage, high
  - Max. total current outputs
- **Fieldbus**
  - Bus system
  - Transmission rate
  - Addressing
  - System integration
- **General data**
  - L x W x H
  - Earth
  - Protection degree
  - Operating temperature
  - Storage temperature
  - Housing main material / UL 94 flammability rating
  - Certificate

**DeviceNet™**

**SAI-AU**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAI-AU M8 DN 16DI</td>
<td>1</td>
<td>1906730000</td>
</tr>
<tr>
<td>SAI-AU M12 DN 16DI</td>
<td>1</td>
<td>1906700000</td>
</tr>
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</table>

**SAI-AU**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAI-AU M8 DN 16DI/8DO</td>
<td>1</td>
<td>1906740000</td>
</tr>
<tr>
<td>SAI-AU M12 DN 16DI/8DO</td>
<td>1</td>
<td>1906710000</td>
</tr>
</tbody>
</table>

**DeviceNet™ Remote I/O for digital signal processing**

**SAI Active Universal – DeviceNet™**
### DeviceNet™
Remote I/O for digital and analogue signal processing

---

**SAI-AU**

![SAI-AU Image]

**Ordering data**

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Analogue In / 2 Analogue Out / 4 Digital In</td>
<td>1</td>
<td>1906720000</td>
</tr>
</tbody>
</table>

**Technical data**

**Connections**
- Fieldbus (BUS-IN)
- Fieldbus (BUS-OUT)
- Supply voltage (AUX-IN)
- Supply voltage (AUX-OUT)
- I/O connections

**Voltage supply**
- Operating voltage
- Contact load
- Max. total current module

**Digital inputs**
- Permitted input voltage
- Input current, high
- Input current, low
- Input current, high
- Input filter

**Analogue inputs**
- Measurement range
- Maximum input voltage in relation to GND
- Input resistance (load)
- Max. input current (differential)
- Input filter

**Analogue outputs**
- Measurement range
- Output interval
- Short-circuit-proof
- Resolution / Accuracy

**Fieldbus**
- Bus system
- Transmission rate
- Addressing
- System integration

**General data**
- L x W x H
- Earth
- Protection degree
- Operating temperature
- Storage temperature
- Housing main material / UL 94 flammability rating
- Certificate

**Technical data**

- 1x M12 plug 5-pole, A-coded
- 1x M12 female 5-pole, A-coded
- 1x M12 plug 5-pole, A-coded
- 1x M12 female 5-pole, A-coded
- 8 x M12 socket 5-pole, A-coded

- 24 V (18 V DC ... 30 V DC)
- Per PIN max. 4 A
- 8 A

- -30 V to +30 V (protected against polarity reversal)
- < 15 mA in accordance with EN 61131-2 Type 1
- 2 mA to 15 mA in accordance with EN 61131-2 Type 1
- < 15 mA in accordance with EN 61131-2 Type 1
- 2 mA to 15 mA in accordance with EN 61131-2 Type 1
- 3 ms

- -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4...20 mA
- 35 V
- < 0.5 mV / 125 Ohm
- -50 mA to +50 mA (protected against polarity reversal)
- Yes
- 12 bit / < 0.2 %

- -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4...20 mA
- 5 ms to 250 ms (can be configured)
- Yes
- 12 bit / < 0.2 %

- DeviceNet™
- Max. 500 kBit/s (automatic detection)
- Via rotary coding switch (0 – 63)
- EDS file (Device-specific for each module)

- 210 mm / 54 mm / 32 mm
- ≤ 480 g
- IP 67
- 0 °C ... +60 °C
- -25 °C ... +85 °C
- P2on, PBT / V-0
- UL 94 V-0
When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

### DeviceNet™ modules

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Digital In</td>
<td>SAI-AU M12 DN 16DI</td>
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<tr>
<td>16 Digital In / 8 Digital Out</td>
<td>SAI-AU M12 DN 16DI/8DO</td>
<td>1</td>
<td>1906710000</td>
</tr>
<tr>
<td>4 Analogue In / 2 Analogue Out / 4 Digital In</td>
<td>SAI-AU M12 DN AI/AO/DI</td>
<td>1</td>
<td>1906720000</td>
</tr>
<tr>
<td>16 Digital In</td>
<td>SAI-AU M8 DN 16DI</td>
<td>1</td>
<td>1906730000</td>
</tr>
<tr>
<td>16 Digital In / 8 Digital Out</td>
<td>SAI-AU M8 DN 16DI/8DO</td>
<td>1</td>
<td>1906740000</td>
</tr>
</tbody>
</table>

### DeviceNet™ accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™ cables with female plug and male plug</td>
<td>*)</td>
</tr>
<tr>
<td>DeviceNet™ cables with female plug and other side open</td>
<td>*)</td>
</tr>
<tr>
<td>DeviceNet™ cables with male plug and other side open</td>
<td>*)</td>
</tr>
</tbody>
</table>

### Sensor/actuator accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor-actuator cables</td>
<td>*)</td>
</tr>
</tbody>
</table>

### Markers

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-transparent markers for PrintJet printing</td>
<td>ESG B/13,5/43,3 SAI AU</td>
</tr>
</tbody>
</table>

### Protective caps

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8 Dust cap (Sensor connections)</td>
<td>SAI-SK M8</td>
</tr>
<tr>
<td>M12 Dust cap (Sensor connections)</td>
<td>SAI-SK</td>
</tr>
<tr>
<td>M12 Dust cap (Bus-out and power-out)</td>
<td>SAI-SK-M12-UNI</td>
</tr>
<tr>
<td>M12 Dust cap (Bus-in and power-in)</td>
<td>SAI-SK plug M12</td>
</tr>
</tbody>
</table>

**Note:** *) Can be found in our latest catalogue II, signal and power transmission, order no. 1366750000.
SAI Active Universal Pro

Professional versions of the Remote I/O System featuring IP 67 protection

The modules in the SAI Active Universal Pro systems provide additional I/O and functional modules for more versatile topologies. The extension modules come in a compact, space-saving design. They can also be mounted on the side because of the additional drilled holes in the side of the housing. Up to 15 extension modules can be connected over a distance of 50 metres using a shielded, standard M8 sensor cable and the SAI fieldbus module.

In addition to the digital input and output modules, we also offer counter unit modules, thermal modules, RTD modules and analogue modules. The digital input and output modules are also available in M8 and M12 variants. The analogue modules and functional modules are available with M12 connections. Markers are included with every SAI Active module for labelling the I/O channels and the entire device. These markers can be printed on using the PrintJet system from Weidmüller.
Cost-effective Subbus system

Subbus modules are wired up using conventional, shielded, standard M8 sensor cables. Thus there is no need for expensive custom cables. The extension modules enable versatile expansion and minimise the costs associated with the fieldbus interface. The modules do not, however, detract from the performance of the fieldbus system.

Simplified installation

The modules have a compact, space-saving design with additional holes drilled on the side of the housing: this allows them to be installed in a quick and versatile manner. All SAI Active modules with digital inputs or digital outputs are optionally available with standard M8 or M12 connection systems. The outputs are short-circuit-proof and protected against polarity reversal.

Efficient engineering

All Pro-System modules are described in the standardised fieldbus specific device description files. They can be integrated into any controller unit and corresponding engineering system regardless of the particular manufacturer. The configuration (whether for the input, DESINA input, or output) is carried out without any additional software. Any user can configure directly from the engineering system.
## Gateway modules with digital inputs

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Digital In</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Technical data

<table>
<thead>
<tr>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fieldbus (BUS-IN)</td>
</tr>
<tr>
<td>Fieldbus (BUS-OUT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply voltage (AUX-IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection to Subbus (SUB-OUT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltage supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
</tr>
<tr>
<td>Contact load</td>
</tr>
<tr>
<td>Max. total current module</td>
</tr>
</tbody>
</table>

### Digital inputs

<table>
<thead>
<tr>
<th>Permitted input voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input current, high</td>
</tr>
<tr>
<td>Input current, low</td>
</tr>
<tr>
<td>Input current, high</td>
</tr>
<tr>
<td>Input current, low</td>
</tr>
</tbody>
</table>

### Fieldbus

<table>
<thead>
<tr>
<th>Bus system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission rate</td>
</tr>
<tr>
<td>Addressing</td>
</tr>
<tr>
<td>System integration</td>
</tr>
</tbody>
</table>

### General data

<table>
<thead>
<tr>
<th>L x W x H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth</td>
</tr>
<tr>
<td>Protection degree</td>
</tr>
<tr>
<td>Operating temperature</td>
</tr>
<tr>
<td>Storage temperature</td>
</tr>
<tr>
<td>Housing material / UL 94 flammability rating</td>
</tr>
<tr>
<td>Certificate</td>
</tr>
</tbody>
</table>

### Note

<table>
<thead>
<tr>
<th>SAI-AU GW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x M12 plug 5-pole, B-coded</td>
</tr>
<tr>
<td>1x M12 female 5-pole, B-coded</td>
</tr>
<tr>
<td>1x M12 plug 5-pole, A-coded</td>
</tr>
<tr>
<td>1 x M8 female 4-pole, A-coded</td>
</tr>
<tr>
<td>8 x M12 socket 5-pole, A-coded</td>
</tr>
<tr>
<td>24 V (18 V DC ... 30 V DC)</td>
</tr>
<tr>
<td>Per PIN max. 4 A</td>
</tr>
<tr>
<td>8 A</td>
</tr>
<tr>
<td>&lt; 30 V or ≥ 30 V (protected against polarity reversal)</td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>1 ms, 3 ms, 5 ms, 10 ms, Configurable</td>
</tr>
<tr>
<td>PROFIBUS DP</td>
</tr>
<tr>
<td>Max. 12 Mbit/s (automatic detection)</td>
</tr>
<tr>
<td>Via rotary coding switch (1 - 126)</td>
</tr>
<tr>
<td>GSD file</td>
</tr>
<tr>
<td>210 mm / 54 mm / 32 mm</td>
</tr>
<tr>
<td>&lt; 350 g</td>
</tr>
<tr>
<td>IP 67</td>
</tr>
<tr>
<td>-25 °C...+65 °C</td>
</tr>
<tr>
<td>UL 94 V-0</td>
</tr>
</tbody>
</table>

| Certificate |

---

### Note

<table>
<thead>
<tr>
<th>SAI-AU GW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x M12 plug 5-pole, B-coded</td>
</tr>
<tr>
<td>1x M12 female 5-pole, B-coded</td>
</tr>
<tr>
<td>1x M12 plug 5-pole, A-coded</td>
</tr>
<tr>
<td>1 x M8 female 4-pole, A-coded</td>
</tr>
<tr>
<td>10 x M8 female 3-pole</td>
</tr>
<tr>
<td>24 V (18 V DC ... 30 V DC)</td>
</tr>
<tr>
<td>Per PIN max. 4 A</td>
</tr>
<tr>
<td>8 A</td>
</tr>
<tr>
<td>&lt; 30 V or ≥ 30 V (protected against polarity reversal)</td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
</tr>
<tr>
<td>1 ms, 3 ms, 5 ms, 10 ms, Configurable</td>
</tr>
<tr>
<td>PROFIBUS DP</td>
</tr>
<tr>
<td>Max. 12 Mbit/s (automatic detection)</td>
</tr>
<tr>
<td>Via rotary coding switch (1 - 126)</td>
</tr>
<tr>
<td>GSD file</td>
</tr>
<tr>
<td>210 mm / 54 mm / 32 mm</td>
</tr>
<tr>
<td>&lt; 350 g</td>
</tr>
<tr>
<td>IP 67</td>
</tr>
<tr>
<td>-25 °C...+65 °C</td>
</tr>
<tr>
<td>UL 94 V-0</td>
</tr>
</tbody>
</table>

| Certificate |
When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

### PROFIBUS modules

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIBUS Gateway M12</td>
<td>SAI-AU M12 PB 6G 16DI</td>
<td>1</td>
<td>1938550000</td>
</tr>
<tr>
<td>PROFIBUS Gateway M8</td>
<td>SAI-AU M8 PB 6G 16DI</td>
<td>1</td>
<td>1024310000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB 8DI/8DO</td>
<td>1</td>
<td>1938640000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB 8DI/8DO</td>
<td>1</td>
<td>1938650000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB AI</td>
<td>1</td>
<td>1938660000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB AO</td>
<td>1</td>
<td>1938700000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB PT100</td>
<td>1</td>
<td>1938710000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB Thermo</td>
<td>1</td>
<td>1938720000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB Zähler</td>
<td>1</td>
<td>1938730000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M8 SB 8DO 2A</td>
<td>1</td>
<td>1938660000</td>
</tr>
</tbody>
</table>

### PROFIBUS accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIBUS cables with female plug and male plug</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIBUS cables with female plug and other side open</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIBUS cables with male plug and other side open</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIBUS plug-in connector</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIBUS terminating resistor</td>
<td>SAIEND PB M12 4P B-COD</td>
<td>1</td>
<td>1784770000</td>
</tr>
</tbody>
</table>

### Subbus cables / terminating resistor

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subbus cables</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subbus terminating resistor</td>
<td>SAIEND CAN M8 4P</td>
<td>1</td>
<td>1955340000</td>
</tr>
</tbody>
</table>

### Sensor/actuator accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor-actuator cables</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor-actuator plugs</td>
<td>* )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Markers

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-transparent markers for PrintJet printing</td>
<td>ESG B/13.5/43.3 SAI AU</td>
<td>5</td>
<td>1912130000</td>
</tr>
</tbody>
</table>

### Protective caps

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8 Dust cap</td>
<td>SAI-SK M8</td>
<td>50</td>
<td>1802760000</td>
</tr>
<tr>
<td>M12 Dust cap (Sensor connections)</td>
<td>SAI-SK M12</td>
<td>30</td>
<td>9463050000</td>
</tr>
<tr>
<td>M12 Dust cap (Bus-out and power-out)</td>
<td>SAI-SK-M12-UNI</td>
<td>20</td>
<td>2330260000</td>
</tr>
<tr>
<td>M12 Dust cap (Bus-in and power-in)</td>
<td>SAI-SK plug M12</td>
<td>50</td>
<td>1781520000</td>
</tr>
</tbody>
</table>

**Note:** *Can be found in our latest catalogue II, signal and power transmission, order no. 1366750000*
## Gateway modules with digital inputs

### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Digital In</td>
<td>1</td>
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</tr>
</tbody>
</table>

### Technical data

<table>
<thead>
<tr>
<th>Connections</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fieldbus (BUS-IN)</td>
<td>SAI-AU M12 EN GW 16DI</td>
<td>1</td>
<td>1938570000</td>
</tr>
</tbody>
</table>

| Fieldbus (BUS-OUT) | 1x M12 plug 5-pole, A-coded |
| Fieldbus (AUX-IN) | 1x M12 female 5-pole, A-coded |
| Connection to Subbus (SUB-OUT) | 1 x M8 female 4-pole, A-coded |
| I/O connections | 8 x M12 socket 5-pole, A-coded |

<table>
<thead>
<tr>
<th>Voltage supply</th>
<th>Per PIN max. 4 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (18 V DC ... 30 V DC)</td>
<td>0 A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply voltage (AUX-IN)</th>
<th>20 V to +30 V (protected against polarity reversal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
<tr>
<td>&lt; 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating voltage</th>
<th>2 mA to 15 mA in accordance with EN 61131-2 Type 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltage supply</th>
<th>&lt; 15 mA in accordance with EN 61131-2 Type 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
<tr>
<td>2 mA to 15 mA in accordance with EN 61131-2 Type 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating voltage</th>
<th>1 ms, 3 ms, 5 ms, 10 ms, Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ms, 3 ms, 5 ms, 10 ms, Configurable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bus system</th>
<th>DeviceNet™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fieldbus</td>
<td>Max. 500 kBit/s (automatic detection)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmission rate</th>
<th>Via rotary coding switch (0 – 63)</th>
</tr>
</thead>
<tbody>
<tr>
<td>210 mm / 54 mm / 32 mm</td>
<td>EZS file</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Earth</th>
<th>&lt; 350 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP 67</td>
<td>-25 °C ... +65 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protection degree</th>
<th>Pocan, PBT / V-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>Certificate</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>CE, cULus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing main material / UL 94 flammability rating</th>
<th>Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>DeviceNet™</td>
</tr>
</tbody>
</table>

### Note

- SAI Active Universal Pro
Engineering table for DeviceNet™

When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

### DeviceNet™ modules

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™ Gateway</td>
<td>SAI-AU M12 ON GYV 16DI</td>
<td>1</td>
<td>1938670000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB 8DI</td>
<td>1</td>
<td>1938610000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB 8DO/8DO</td>
<td>1</td>
<td>1938660000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M8 SB 8DI</td>
<td>1</td>
<td>1938690000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M8 SB 8DO/8DO</td>
<td>1</td>
<td>1938630000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB AI</td>
<td>1</td>
<td>1938690000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB AO</td>
<td>1</td>
<td>1938700000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB PT100</td>
<td>1</td>
<td>1938710000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB Thermo</td>
<td>1</td>
<td>1938720000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB Zähler</td>
<td>1</td>
<td>1938730000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M8 SB 8DO 2A</td>
<td>1</td>
<td>1938660000</td>
</tr>
<tr>
<td>Subbus module</td>
<td>SAI-AU M12 SB 8DO 2A</td>
<td>1</td>
<td>1938680000</td>
</tr>
</tbody>
</table>

### DeviceNet™ accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™ cables with female plug and male plug</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeviceNet™ cables with female plug and other side open</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeviceNet™ cables with male plug and other side open</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeviceNet™ plug-in connector</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeviceNet™ terminating resistor</td>
<td>SAIEND CAN-M12 5P A-COD</td>
<td>1</td>
<td>1784760000</td>
</tr>
</tbody>
</table>

### Subbus cables / terminating resistor

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subbus cables</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subbus terminating resistor</td>
<td>SAIEND CAN M8 4P</td>
<td>1</td>
<td>1955340000</td>
</tr>
</tbody>
</table>

### Sensor/actuator accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor-actuator cables</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor-actuator plugs</td>
<td>*)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Markers

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-transparent markers for PrintJet printing</td>
<td>ESG B/13.5/43.3 SAI AU</td>
<td>5</td>
<td>1912130000</td>
</tr>
</tbody>
</table>

### Protective caps

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8 Dust cap</td>
<td>SAI-SC M8</td>
<td>50</td>
<td>1802760000</td>
</tr>
<tr>
<td>M12 Dust cap</td>
<td>SAI-SC M12-UNI</td>
<td>20</td>
<td>2330260000</td>
</tr>
<tr>
<td>M12 Dust cap (Bus-in and power-in)</td>
<td>SAI-SC plug M12</td>
<td>50</td>
<td>1781620000</td>
</tr>
</tbody>
</table>

Note: *) Can be found in our latest catalogue II, signal and power transmission, order no. 1366750000

Note: ***) Can be found in our latest catalogue II, signal and power transmission, order no. 1366750000

Note: IP 67
**Ordering data**

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Digital In; 8 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1938600000</td>
</tr>
<tr>
<td>8 Digital In; 8 Digital In / 8 Digital Out</td>
<td>1</td>
<td>1938610000</td>
</tr>
<tr>
<td>8 Digital Out 2A</td>
<td>1</td>
<td>1938660000</td>
</tr>
<tr>
<td>8 Digital Out 2A</td>
<td>1</td>
<td>1938680000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAI-AU M8 SB 8DI</td>
<td>1</td>
<td>1938600000</td>
</tr>
<tr>
<td>SAI-AU M12 SB 8DI</td>
<td>1</td>
<td>1938610000</td>
</tr>
<tr>
<td>SAI-AU M8 SB 8DIO 1</td>
<td>1</td>
<td>1938630000</td>
</tr>
<tr>
<td>SAI-AU M12 SB 8DIO 1</td>
<td>1</td>
<td>1938640000</td>
</tr>
<tr>
<td>SAI-AU M8 SB 8DO 2A</td>
<td>1</td>
<td>1938660000</td>
</tr>
<tr>
<td>SAI-AU M12 SB 8DO 2A</td>
<td>1</td>
<td>1938680000</td>
</tr>
</tbody>
</table>

**Technical data**

### Connections
- Supply voltage (AUX-IN): 24 V (18 V DC ... 30 V DC)
- Connection to Subbus (SUB-IN): 1 x M12 plug 5-pole, A-coded
- Connection to Subbus (SUB-OUT): 1 x M8 plug 4-pole, A-coded

### Voltage supply
- Operating voltage: -30 V to +30 V (protected against polarity reversal)
- Contact load: < 15 mA in accordance with EN 61131-2 Type 1
- Max. total current module: 2 mA to 15 mA in accordance with EN 61131-2 Type 1
- Input current, low: < 15 mA in accordance with EN 61131-2 Type 1
- Input current, high: 2 mA to 15 mA in accordance with EN 61131-2 Type 1
- Input filter: 1 ms, 3 ms, 5 ms, 10 ms, Configurable

### Digital inputs
- Permitted input voltage: none
- Input current, low: none
- Input current, high: none
- Input filter: none

### Digital outputs
- Max. current-carrying capacity per output signal: 2 A
- Separation of potentials to module electronics: 2 A
- Switching frequency, resistive load: max. 100 Hz
- Switching frequency, inductive load: max. 1 Hz
- Switching frequency, lamp load: max. 8 Hz
- Short-circuit-proof: Yes, cut-off for short circuit and error message
- Max. total current outputs: 4 A

### Subbus
- Automatic

### Fieldbus
- Subbus: automatic
- System integration: automatic

### General data
- L x W x H: 155 mm / 30 mm / 32 mm
- Earth: IP 67
- Operating temperature: 0 °C to +60 °C
- Storage temperature: -25 °C to +85 °C
- Protection degree: P007, P017
- Certificate: CE, cULus

---

**Note**
Subbus modules with analogue inputs/outputs

Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Analogue Out / 4 Analogue In</td>
<td>SAI-AU M12 SB 4AO</td>
<td>1</td>
<td>1938700000</td>
</tr>
<tr>
<td></td>
<td>SAI-AU M12 SB 4AI</td>
<td>1</td>
<td>1938690000</td>
</tr>
</tbody>
</table>

Technical data

**Connections**
- Connection to Subbus (SUB-IN)
- Connection to Subbus (SUB-OUT)

**Voltage supply**
- Operating voltage: 24 V (18 V DC ... 30 V DC)

**Analogue inputs**
- Measurement range: -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4...20 mA
- Maximum input voltage in relation to GND: 35 V
- Input resistance (load): <125 Ohm
- Max. input current (lateral): -50 mA to +50 mA (protected against polarity reversal)
- Resolution / Accuracy: 12-bit / < 0.2 %

**Analogue outputs**
- Measurement range: -10 V ... +10 V, 0 V ... 10 V, 0 ... 20 mA, 4...20 mA
- Output interval: 5 ms to 250 ms (can be configured)
- Short-circuit-proof: Yes
- Resolution / Accuracy: 12-bit / < 0.2 %

**Fieldbus**
- Bus system: Subbus
- Addressing: automatic
- System integration: automatic

**General data**
- L x W x H: 155 mm / 30 mm / 32 mm
- Earth: automatic
- Protection degree: IP 67
- Operating temperature: 0 °C ... +60 °C
- Storage temperature: -25 °C ... -85 °C
- Pecan, PBT / 5VA
- Certificate: UL 94 flammability rating

Note

- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded

- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded

- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded

- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded

155100000 - 2015

B.29
### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 counter inputs / 2 gate outputs</td>
<td>1</td>
<td>1938730000</td>
</tr>
</tbody>
</table>

### Technical data

#### Connections
- Supply voltage (AUX-IN)
- Connection to Subbus (SUB-IN)
- Connection to Subbus (SUB-OUT)

#### Voltage supply
- Operating voltage
- Max. total current module

#### Functional inputs
- Counting breadth
- Switching frequency
- Number of inputs

#### Fieldbus
- Bus system
- Addressing
- System integration

#### General data
- L x W x H
- Earth
- Protection degree
- Operating temperature
- Storage temperature
- Housing main material / UL 94 flammability rating
- Certificate

#### Note

**SAI Active Universal Pro**

**Subbus modules with functional inputs**

**SAI-AU Counter**

#### Type

- SAI-AU M12 SB 2Counter

#### Qty

- 1

#### Order No.

- 1938730000

#### Technical data

- 1x M12 plug 5-pole, A-coded
- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded
- 24 V (18 V DC ... 30 V DC)
- Per PIN max. 4 A
- 32 Bit
- 100 kHz
- 2 x enables, 2 x counters, 2 x count directions
- Subbus
- automatic
- automatic

#### Dimensions

- 180 mm / 20 mm / 32 mm
- < 200 g
- IP 67
- 0 °C...+60 °C
- -25 °C...+85 °C
- Pecan, PBT / 5VA
- CE, cULus
### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 thermal inputs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note**

### Technical data

#### Connections
- Connection to Subbus (SUB-IN)
- Connection to Subbus (SUB-OUT)

#### I/O connections

<table>
<thead>
<tr>
<th>Voltage supply</th>
<th>Operating voltage</th>
<th>Functional inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (18 V DC ... 30 V DC)</td>
<td>24 V (18 V DC ... 30 V DC)</td>
<td>24 V (18 V DC ... 30 V DC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I/O connections</th>
<th>Voltage supply</th>
<th>Operating voltage</th>
<th>Functional inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x M8 plug 4-pole, A-coded</td>
<td>1 x M8 female 4-pole, A-coded</td>
<td>1 x M8 female 4-pole, A-coded</td>
<td></td>
</tr>
<tr>
<td>4 x M12 female, 5-pole A-coded</td>
<td>4 x M12 female, 5-pole A-coded</td>
<td>4 x M12 female, 5-pole A-coded</td>
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</tr>
</tbody>
</table>

### Fieldbus

<table>
<thead>
<tr>
<th>Bus system</th>
<th>Addressing</th>
<th>System integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subbus</td>
<td>Subbus</td>
<td>Subbus</td>
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</tbody>
</table>

### General data

<table>
<thead>
<tr>
<th>L x W x H</th>
<th>Earth</th>
<th>Protection degree</th>
<th>Operating temperature</th>
<th>Storage temperature</th>
<th>Housing main material / UL 94 flammability rating</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>155 mm / 30 mm / 32 mm</td>
<td>&lt; 200 g</td>
<td>IP 67</td>
<td>0 °C ... +60 °C</td>
<td>-25 °C ... +85 °C</td>
<td>Pocan, PBT / 5VA</td>
<td>CE, cULus</td>
</tr>
</tbody>
</table>

**Note**

### SAI-AU Thermo

![SAI-AU Thermo](image)
### Ordering data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 PT100 inputs</td>
<td></td>
</tr>
</tbody>
</table>

### Technical data

#### Connections
- Connection to Subbus (SUB-IN)
- Connection to Subbus (SUB-OUT)

#### Voltage supply
- Operating voltage: 24 V (18 V DC ... 30 V DC)

#### Functional inputs
- Sensor
- Resolution
- Conversion time: 250 ms (can be configured to 65 ms)
- Measurement error: \( \leq 1 ^\circ C \)
- Measurement range for PT sensors: Configurable
- Measurement range for Ni sensors: \(-200 ^\circ C ... +850 ^\circ C\)
- Resistance measurement: max. 4000 Ohm
- Potentiometer: 100 to 4000 Ω (three-wire connection)
- Measurement current: Typically 0.5 mA

#### Fieldbus
- Bus system: Subbus
- Addressing: automatic
- System integration: automatic

#### General data
- L x W x H: 155 mm / 30 mm / 32 mm
- Weight: < 200 g
- Protection degree: IP67
- Operating temperature: \(-25 ^\circ C ... +85 ^\circ C\)
- Storage temperature: Pocan, PBT / 5VA
- Certificate: CE, cULus
- Housing main material / UL 94 flammability rating: Ul 94V0
- Earth: < 200 Ω
- Protection degree: IP67
- Operating temperature: \(-25 ^\circ C ... +85 ^\circ C\)
- Storage temperature: Pocan, PBT / 5VA
- Certificate: CE, cULus

### Note

- Type | Qty. | Order No. |
--------|------|-----------|
- SAI-AU M12 SB 4PT100 | 1 | 1938710000 |

- 1 x M8 plug 4-pole, A-coded
- 1 x M8 female 4-pole, A-coded
- 4 x M12 female, 5-pole A-coded

- 24 V (18 V DC ... 30 V DC)
Weidmüller is also offering the required sensor and actuator cables as a supplement to the new, innovative u-remote system. Generally, there are two different courses of action for cabling.

- Circular plug cables assembled on one end
- Cables assembled on both ends with u-remote plug-in connectors already connected

To make things easier to understand, only the M8 and M12 cables have been shown in this diagram. Actuator cables can also be found in catalogue 8.

**Standard cable lengths**

The cable lengths listed under order data are all 1.5 m. To order any other standard cable lengths, simply change the last four numbers in the order number. Additional lengths can be supplied at the request of the customer.

**Order data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5 m</td>
<td>xxxxxx0150</td>
</tr>
<tr>
<td></td>
<td>3.0 m</td>
<td>xxxxxx0300</td>
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<tr>
<td></td>
<td>5.0 m</td>
<td>xxxxxx0500</td>
</tr>
<tr>
<td></td>
<td>10.0 m</td>
<td>xxxxxx1000</td>
</tr>
</tbody>
</table>

**Description code example**

- **SAIL-URP M8 W-3 L 1.5 U**
  - L = metal nut
  - URP = u-remote connector PUSH IN
  - UZ = u-remote twin connector

The PUR cable used here is black, halogen-free and suitable for dragline cable carriers. The PVC cable is suitable for dragline cable carriers Further technical details are available in catalogue 8.

The minimum order quantity for each type of cable is 1 unit. This means that sample parts and the demand for replacement parts are also easy to manage.
Connecting cables

u-remote plug / M12
u-remote plug / M8

Technical data

<table>
<thead>
<tr>
<th>Rated current</th>
<th>4 A</th>
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</thead>
<tbody>
<tr>
<td>Rated voltage (in accordance with VDE standard 0110 ISO group C)</td>
<td>M12: 250 V / M8: 60 V (3-pole) / LED: 24 V</td>
</tr>
<tr>
<td>Temperature range of housing</td>
<td>-25 to +95 °C</td>
</tr>
<tr>
<td>Core cross-section</td>
<td>M12: 0.34 mm² / M8: 0.25 mm²</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP 67/68 (M12/M8 head)</td>
</tr>
<tr>
<td>Contact surface</td>
<td>Gold-plated</td>
</tr>
<tr>
<td>Sheath material</td>
<td>PUR</td>
</tr>
<tr>
<td>Wire core insulation</td>
<td>PVC</td>
</tr>
</tbody>
</table>

Order data

<table>
<thead>
<tr>
<th>Module variants</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO contact / u-remote plug - M12 straight socket</td>
<td>1</td>
<td>1475070150</td>
</tr>
<tr>
<td>NO contact / u-remote plug - M12 angled socket</td>
<td>1</td>
<td>1475080150</td>
</tr>
<tr>
<td>NC contact / u-remote plug - M12 straight socket</td>
<td>1</td>
<td>1475090150</td>
</tr>
<tr>
<td>NC contact / u-remote plug - M12 angled socket</td>
<td>1</td>
<td>1475120150</td>
</tr>
<tr>
<td>4-pin / u-remote plug - M12 straight socket</td>
<td>1</td>
<td>1475130150</td>
</tr>
<tr>
<td>4-pin / u-remote plug - M12 angled socket</td>
<td>1</td>
<td>1475140150</td>
</tr>
<tr>
<td>3-pin / u-remote plug - M8 straight socket</td>
<td>1</td>
<td>1475150150</td>
</tr>
<tr>
<td>3-pin / u-remote plug - M8 angled socket</td>
<td>1</td>
<td>1475160150</td>
</tr>
<tr>
<td>4-pin / u-remote plug - M12 angled socket - LED</td>
<td>1</td>
<td>1475170150</td>
</tr>
<tr>
<td>3-pin / u-remote plug - M8 angled socket - LED</td>
<td>1</td>
<td>1475180150</td>
</tr>
<tr>
<td>Twin / NO contact / u-remote plug - M12 straight socket</td>
<td>1</td>
<td>1475300150</td>
</tr>
<tr>
<td>Twin / NO contact / u-remote plug - M12 angled socket</td>
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<td>1475310150</td>
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<tr>
<td>Twin / 3-pin / u-remote plug - M8 straight socket</td>
<td>1</td>
<td>1475320150</td>
</tr>
<tr>
<td>Twin / 3-pin / u-remote plug - M8 angled socket</td>
<td>1</td>
<td>1475330150</td>
</tr>
</tbody>
</table>

Accessories

| M8/M12 cable gland tool torque | |

Wiring diagram

3-pin / NO contact

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screwty®-Set DM</td>
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<td>1820000000</td>
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</table>

NC contact

<table>
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<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screwty®-Set DM</td>
<td>1</td>
<td>1820000000</td>
</tr>
</tbody>
</table>

Screwty®-Set DM

1920000000

Accessories for sensor cables
## Accessories for sensor cables

### M12 cables with connector at one end only

#### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>3-pin</th>
<th>4-pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated current</td>
<td>4 A</td>
<td>4 A</td>
</tr>
<tr>
<td>Rated voltage (in accordance with VDE standard 0110 ISO group C)</td>
<td>250 V</td>
<td>250 V</td>
</tr>
<tr>
<td>Temperature range of housing</td>
<td>-25 to +85 °C</td>
<td>-25 to +85 °C</td>
</tr>
<tr>
<td>Core cross section</td>
<td>0.34 mm²</td>
<td>0.34 mm²</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP 67/68</td>
<td>IP 67/68</td>
</tr>
<tr>
<td>Contact surface</td>
<td>Gold-plated</td>
<td>Gold-plated</td>
</tr>
<tr>
<td>Sheath material</td>
<td>PUR</td>
<td>PVC</td>
</tr>
<tr>
<td>Wire core insulation</td>
<td>PUR</td>
<td>PVC</td>
</tr>
</tbody>
</table>

#### Order data

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAIL-M12BG-3-1.5V</td>
<td>1</td>
<td>1925570150</td>
</tr>
<tr>
<td>SAIL-M12BG-3-1.5U</td>
<td>1</td>
<td>9457820150</td>
</tr>
<tr>
<td>SAIL-M12BG-3-1.5UGE</td>
<td>1</td>
<td>1092910150</td>
</tr>
<tr>
<td>SAIL-M12BG-3-1.5T</td>
<td>1</td>
<td>1968590150</td>
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<tr>
<td>SAIL-M12BW-3-1.5V</td>
<td>1</td>
<td>1925630150</td>
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<tr>
<td>SAIL-M12BW-3-1.5U</td>
<td>1</td>
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<tr>
<td>SAIL-M12BW-3-1.5UGE</td>
<td>1</td>
<td>1092940150</td>
</tr>
<tr>
<td>SAIL-M12BW-3-1.5T</td>
<td>1</td>
<td>1968580150</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAIL-M12BG-4-1.5V</td>
<td>1</td>
<td>1925580150</td>
</tr>
<tr>
<td>SAIL-M12BG-4-1.5U</td>
<td>1</td>
<td>9457730150</td>
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<tr>
<td>SAIL-M12BG-4-1.5UGE</td>
<td>1</td>
<td>1092920150</td>
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<tr>
<td>SAIL-M12BG-4-1.5T</td>
<td>1</td>
<td>1968590150</td>
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<tr>
<td>SAIL-M12BW-4-1.5V</td>
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<tr>
<td>SAIL-M12BW-4-1.5U</td>
<td>1</td>
<td>9457740150</td>
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<tr>
<td>SAIL-M12BW-4-1.5UGE</td>
<td>1</td>
<td>1092960150</td>
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<tr>
<td>SAIL-M12BW-4-1.5T</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
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</thead>
<tbody>
<tr>
<td>Screwty®-Set DM</td>
<td>1</td>
<td>1920000000</td>
</tr>
</tbody>
</table>

#### Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8/M12 cable gland tool torque</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Accessories for sensor cables**

### M8 cables with connector at one end only

#### 3-pin

- **Type**: SAIL-M8BG-3-1.5V, SAIL-M8BG-3-1.5U, SAIL-M8BG-3-1.5UGE
- **Qty.**: 1
- **Order No.**: 1927240150, 9457450150, 1093190150

- **Type**: SAIL-M8BW-3-1.5V, SAIL-M8BW-3-1.5U, SAIL-M8BW-3-1.5UGE
- **Qty.**: 1
- **Order No.**: 1927320150, 9457380150, 1093220150

#### 4-pin

- **Type**: SAIL-M8BG-4-1.5V, SAIL-M8BG-4-1.5U, SAIL-M8BG-4-1.5UGE
- **Qty.**: 1
- **Order No.**: 1927260150, 9457850150, 1093200150

- **Type**: SAIL-M8BW-4-1.5V, SAIL-M8BW-4-1.5U, SAIL-M8BW-4-1.5UGE
- **Qty.**: 1
- **Order No.**: 1927340150, 9456150150, 1093240150

### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Rated current</td>
<td>4 A</td>
</tr>
<tr>
<td>Rated voltage (in accordance with VDE standard 0110 ISO group C)</td>
<td>60 V</td>
</tr>
<tr>
<td>Temperature range of housing</td>
<td>-25 to +85 °C</td>
</tr>
<tr>
<td>Core cross-section</td>
<td>0.25 mm²</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP 67/68</td>
</tr>
<tr>
<td>Contact surface</td>
<td>Gold-plated</td>
</tr>
<tr>
<td>Sheath material</td>
<td>PUR</td>
</tr>
<tr>
<td>Wire core insulation</td>
<td>PUR</td>
</tr>
</tbody>
</table>

### Ordering data

#### Module variants

- **PVC M8 straight socket**
- **Halogen-free PUR M8 straight socket**
- **Yellow halogen-free PUR M8 straight socket**

- **PVC M8 angled socket**
- **Halogen-free PUR M8 angled socket**
- **Yellow halogen-free PUR M8 angled socket**

#### Accessories

- **M8/M12 cable gland tool torque**

**Type**: Screwty®-Set-DM
- **Qty.**: 1
- **Order No.**: 1920000000
Accessories for sensor cables

M12/M8 cables with connector at one end only
With LED

3-pin / 2 LEDs

4-pin / 2 LEDs

Technical data

Rated current
Rated voltage (in accordance with VDE standard 0110 ISO group C)
Temperature range of housing
Core cross section
Type of protection
Contact surface
Sheath material
Wire core insulation

4 A
24 V
-25 to +85 °C
M12: 0.34 mm²/ M8: 0.25 mm²
IP 67/68
Gold-plated
PUR

Order data

Module variants

Type Qty. Order No.
SAIL-M12BW-3L1.5V 1925460150
SAIL-M12BW-3L1.5U 9457800150
SAIL-M12BW-3L1.5UGE 1114880150
SAIL-M12BW-3L1.5T 1004330150
SAIL-M8BW-3L1.5V 1927350150
SAIL-M8BW-3L1.5U 9456380150
SAIL-M8BW-3L1.5UGE 1093210150
SAIL-M8BW-3L1.5UGE 1093210150

Accessories

Type Qty. Order No.
Screwty®-Set-DM 1 1920000000

1555100000 - 2015
**M12 straight/angled socket**

**M8 straight/angled socket**

---

**Screwty® set - DM**

Contents:
- 1x interchangeable bit
- 1x torque handle
- 1x adjustment aid for Screwty® torque (M8: 0.5 - 0.6 Nm / M12: 0.8 - 1.2 Nm)
- 1x Screwty® M12, M8, M12 F, M8 F attachment

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screwty® Set DM</td>
<td>1</td>
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</tbody>
</table>

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## Index

<table>
<thead>
<tr>
<th>Index</th>
<th>Index Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Order No.</td>
<td>X.3</td>
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<tr>
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<td>X.4</td>
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<tr>
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<tr>
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