

# Automation and Software tools

Version 2024



**Weidmüller** 



# Automation and Software tools

## Catalogue 10

### Automation and Software tools

Automation and Industrial IoT with Weidmüller

#### Hardware

u-control – Controllers and Edge devices

u-remote – I/O systems

u-view – Touch Panels

#### Software

u-OS – Operating system

PROCON-Connect – Data acquisition, pre-processing and communication

PROCON-WEB – Visualisation software

AutoML – Data analysis and automated machine learning

ResMa® – Energy management software

u-link – Remote maintenance

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### Appendix

#### Service and support

#### Index

Index Type / Index Order No.  
Addresses worldwide

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## u-control – Controllers and Edge devices

### M3000 / M4000

Page B.2



- MultiCore technology for independent installation of several runtime systems
- M3000 with two CPU cores & M4000, with 4 CPU cores

### Control web

Page B.6



- Web-based // HTML5
- Dual-core CPU, 512 Mbyte RAM
- mit integrierter Software

### IoT-Gateway

Page B.10



- Flexible IoT integration
- Many PLC protocols are supported

## u-remote – I/O systems IP20

### Fieldbus coupler

Page C.4



- PROFINET, PROFIBUS, EtherCAT, ModbusTCP, EtherNet/IP, DeviceNet, CANopen, POWERLINK, CC-Link, CC-Link IE TSN, IEC 61162-450

### Digital input modules

Page C.36



- 2-16 digital inputs
- Positive & negative switching
- 2-wire, 3-wire and 3-wire+FE connection
- Electrogalvanised insulated variation

### Digital output modules

Page C.52



- 4-16 digital outputs
- Positive & negative switching
- 2-wire, 3-wire and 3-wire+FE connection
- Electrogalvanised insulated variation

### Digital input and output modules

Page C.68



- 8 digital inputs/outputs (configurable)
- Positive switching
- 2-wire, 3-wire connection

### Pulse width modulation and stepper motor modules

Page C.70



- Pulse-width modulation modules:
- 2 pulse width outputs
  - Load capacity up to 0.5 - 2 A per channel
- Stepper motor module:
- 4 digital inputs and 2 inputs for 2-channel incremental (rotary) encoder
  - 50 W power output stage

### Analogue input modules

Page C.76



- 2-8 analog inputs
- 12 to 32 bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Extended diagnostic function
- HART communication variation
- Electrogalvanised insulated variation

# u-remote – I/O systems IP20

## Temperature modules and potentiometer input module

Page C.92



Temperature modules:

- 4 - 8 analog inputs
- Temperature measurement via resistance

Potentiometer input module:

- 4 potentiometer inputs
- Measuring area from 300 Ω ... 50 kΩ

## Strain gauge module

Page C.98



- 2 differential inputs for strain gages
- 24 bit resolution
- 4- or 6-wire connection

## Power measurement module

Page C.100



- Acquisition and processing of measured variables from single-phase or three-phase power consumers (up to 500 V AC phase-to-phase voltage)
- Currents up to 5 A directly detectable
- Limit value monitoring

## Analogue output modules

Page C.104



- 2 and 4 analog outputs
- 16 bit resolution
- 2-wire and 4-wire connection
- Extended diagnostic function
- Electro-galvanised insulated variation

## Digital counter and communication modules

Page C.114



Counter modules

- Latch, gate- and reset input
- Counter width 32 Bit
- Maximum input frequency 100 kHz

Communication modules:

- IP67 SAI-PRO modules can be integrated
- Interface for RS232, RS485 and RS422 periphery
- IO-Link standard according to IEC 61131-9

## Safe I/O modules and safe power-feed modules

Page C.126



- PROFIsafe or FailSafe over EtherCAT
- 4 to 8 digital inputs (partly parameterizable)
- 4 digital outputs (partly parameterizable)
- OSSD-output reports status to controller

## Power-feed modules

Page C.134



- Input of the current paths
- Feed-in current 10 A

## Accessories

Page C.138



- Potential distribution modules
- Empty slot module
- Markers and plug-in connectors

## u-remote – I/O systems IP67

### PROFINET IO-LINK

Page C.150



- IO-Link, 4x Type A, 4x Type B
- Fieldbus protocol PROFINET
- Width 30 to 60 mm

### Multiprotocol (PROFINET + EtherCAT + EtherNet/IP)

Page C.151



- 8 to 16 digital inputs and outputs
- Fieldbus protocol PROFINET, EtherNet/IP and EtherCAT
- M12, L-coded or 7/8" connection

### Push/ Pull

Page C.155



- 8 to 16 digital inputs and outputs
- Fieldbus protocol PROFINET
- Connection 8x M12 socket 5-pole, acoded

### Subbus

Page C.159



- Subbus Module
- 8 digital inputs/ 8 digital outputs
- 4 analog outputs
- Function modules

### Accessories

Page C.163



- Sensor cables
- Assembly tool

## u-view – Touch Panels

### Touch Panels – Eco Line

Page D.4



- Resistive touch
- 4,3", 7", 10,1"
- High-quality plastic frame

### Touch Panels – Avanced Line

Page D.6



- Capacitive multi-touch
- 7"; 10,1"; 15,6"
- Fitted glass front

## u-OS – Operating system

### u-OS

Page E.2



- Open: Easy integration of your own applications
- Flexible: Can be expanded to meet individual requirements
- Independent: Future-proof thanks to open standards

## PROCON-Connect – Data acquisition, pre-processing and communication

### PROCON-Connect

Page F.2



- Platform-independent app
- Open standards and interfaces
- Intuitive web engineering

## PROCON-WEB – Visualisation software

### PROCON-WEB Embedded Systems

Page G.2



- Portable and easily configurable HMI and IIoT solution
- High performance with low resource requirements
- Compatible with devices featuring OPC-UA server, Modbus interface, Codesys PLCs, and u-OS PLCs
- Dynamic web interface

### PROCON-WEB SCADA

Page G.6



- Easy creation of modern user interfaces
- Dynamic web interface
- User and rights management
- Ideal for control systems or complex digitalization tasks

# AutoML – Data analysis and automated machine learning

## AutoML

Page H.2



- ModelBuilder  
From Data to Model
- ModelRuntime  
Flexible Deployment in the Cloud

## edgeML

Page H.4



- edgeML  
Simple and flexible ML integration into automation
- edgeML ModelRuntime

# ResMa<sup>®</sup> – Energy management software

## ResMa<sup>®</sup>

Page I.2



- ResMa<sup>®</sup> Basic  
Analyze data – Plan optimizations
- ResMa<sup>®</sup> Packages
  - ResMa<sup>®</sup> Energy
  - ResMa<sup>®</sup> Production
  - ResMa<sup>®</sup> Regression Analysis
  - ResMa<sup>®</sup> Recipe Management
  - ResMa<sup>®</sup> Import



## u-link – Remote maintenance

### u-link

Page J.2



- Secure remote access and remote diagnostics
- Condition monitoring and status reporting
- Individual system management
- Low configuration effort

## Service and support

### Service connects – worldwide Page V.2

Page V.2



- Service connects – worldwide
- Engineering services and customised products
- easyConnect – Your Industrial Service Platform
- Support Center
- Additional support services
- Weidmüller Configurator

### Digital ordering options Page V.10

Page V.10



Purchasing made easy:

- Weidmüller eShop
- OCI interface
- EDI interface



# Automation and Industrial IoT with Weidmüller

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Automation and Industrial IoT  
with Weidmüller

Introduction

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A.2

# The easy way into Industrial IoT and automation

## With our integrated and future-oriented portfolio

### Build on openness

Innovative Industrial IoT and automation applications create significant added value for our customers. The added value is mainly generated by software. Whether energy management, remote maintenance, predictive maintenance, asset management or classic anomaly detection – all use cases are based on a similar mode of operation: data is collected in the field, pre-processed at the machine (edge), converted into control commands and communicated to a central location (cloud or on-premise system). There, software visualizes and analyses the data and converts it into added value. **From data to value.**

This is how it works in a wide variety of industrial segments: From mechanical engineering, renewable energies and shipbuilding to smart agriculture. As an **enabler**, we offer you, our diverse customers, a comprehensive and universal **modular system** in the field of Industrial IoT and automation. We cover all data levels „from data to value“ with our **hardware, software, cloud applications and associated services**. Depending on the combination and parameterisation/ configuration of the individual components, different systems are created to suit your application.



Scalability plays a central role for us, as it gives you maximum flexibility and the ability to map applications of varying complexity. **Everything can, nothing must – from individual components to fully vertically integrated systems.** Our top priority is to make it **as easy as possible** for you. Easy access to our digital services is just one example of this. With our Industrial Service Platform easyConnect, we make this possible throughout the entire life cycle.

We also focus on openness in terms of partnerships, technologies and products. We believe in open source and de facto standards. In many of our industrial IoT and automation projects, we connect ecosystems with each other through open communication interfaces, for example, thus creating future security and the greatest possible flexibility for you. Our open software platform for industrial IoT and automation u-OS is a concrete example of this.

The potential around Industry 4.0 is huge. By combining Industrial IoT and automation, we enable you **to tap into individual fields of application easily, efficiently, and consistently** and move step by step towards Industry 4.0.



# From single purpose system for automation to multi purpose Use Case



An existing automation task is to be expanded to include Industrial IoT functionalities. Nowadays, it is often no longer just about controlling a machine, for example.

To be future-proof, it is crucial to have the option to easily integrate additional software. This enables the realisation of use cases in the field of Industrial IoT.

## Open for the future | u-OS

The open, modular u-OS operating system enables efficient data pre-processing and precise control directly at the machine. CODESYS or other solutions from u-OS technology partners are available for automation. u-OS offers a web-based system configuration and is expandable so that further use cases can be realised. Various apps from Weidmüller can be used here. Thanks to the open concept, third-party apps can also be easily integrated.

The u-OS Datahub enables the software to be closely interlinked or I/O systems to be integrated quickly and easily. All apps installed on u-OS access the u-OS Datahub to retrieve the relevant data. This facilitates the interaction of different apps, which leads to a significant increase in efficiency.

The actual engineering involves little effort. No programming is necessary, configuration is sufficient.

### Your Advantages:

- Maximum flexibility and modularity
- Future-proof thanks to the open concept
- No extensive programming knowledge required, the actual engineering involves little effort



# The easy way to remote maintenance

## Use case



The remote maintenance of machines and plants is often complex and time-consuming. Additionally, there is also the demand for a targeted and safeguarded functional connection to the associated IT systems. For many users, these two issues make the connection of plants around the world a major obstacle. How do you guarantee a quick and secure access to machines while also allowing for efficient management of production plants, user clients, access rights or firmware versions?

### u-link – System for individually designed remote maintenance solutions

The easy way to remote maintenance or: how you can easily and securely reduce your service technician interventions by up to 60%.

Seamless production sits at the core of every company's operations. If production stops, due to an error for example, a quick response is required. But what if the specialist for the plant is not on site? Thanks to digitalisation, the magic words in this case are often remote maintenance. Estimates assume that up to 60% of errors can be resolved or at least supported via remote access. Not having to send out a service technician can mean savings of EUR 1,000 or more.

However, remote maintenance is not only important for analysing and correcting errors: It is also beneficial for setting up and maintaining the plant, as well as for carrying out optimisation work. Weidmüller's u-link remote access service offers a system that is easy to install, easy to configure and easy to manage – and guarantees a high level of security at all times.

#### Your Advantages:

- Secure remote access
- A wide range of functions for your use cases
- Simple operation and configuration



# The easy way to machine learning

## Use case



The use of artificial intelligence usually requires specific know-how in the field of data science. However, data science know-how alone is not enough – only the combination of data science and application knowledge provides the perfect basis for optimizing your production.

How can you bring this know-how together and make the most out of machine learning for your production without years of data science training?

### Industrial Automated Machine Learning Tool for machinery and plant engineering

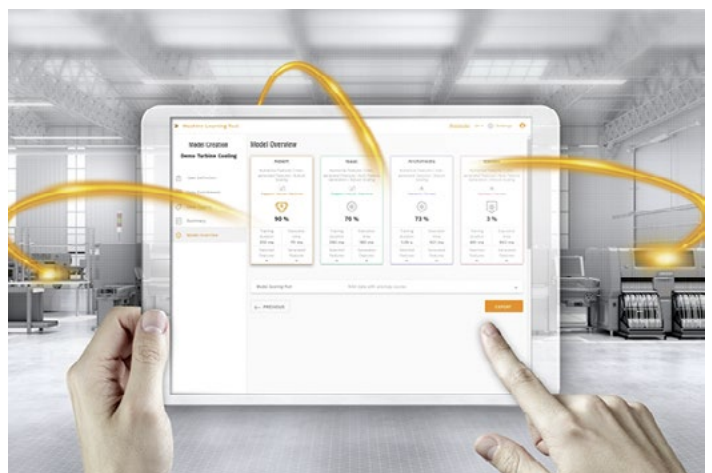
Weidmüller has standardised and simplified the use of ML for industrial applications to such an extent that domain experts without specialist knowledge of data science can generate ML solutions themselves.

The software tool guides the user through the process of model development, which is why Weidmüller also refers to this as „guided analytics“. Machine and process experts can easily create, modify and execute ML models without the support of data scientists, in order to reduce downtime and errors, optimise maintenance activities and improve product quality.

The software helps with translating and archiving the complex application knowledge into a reliable machine learning application. The experts focus on their knowledge of machine and process behaviour and link this to the ML steps running in the background.

#### Your Advantages:

- Transparency for your data
- Build your own machine learning models within minutes
- Build customer relationships and new business models



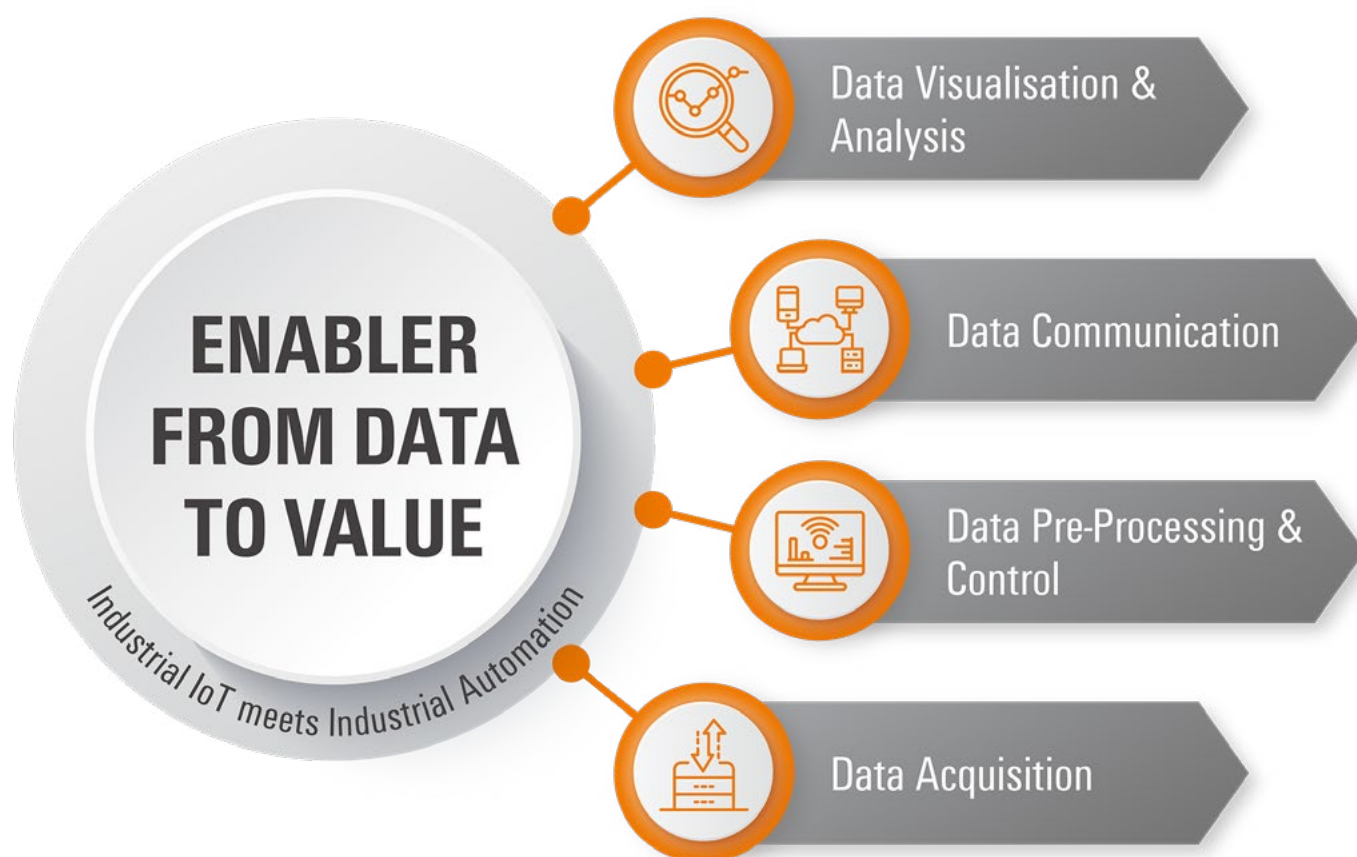


## Components and systems for all data levels

The easy way „from data to value“

With our Industrial IoT and automation portfolio, we cover all data levels from **data acquisition, data pre-processing/control** and **data communication** to **data visualization/analysis**. As an **enabler from data to value**, we offer you individual components as well as a comprehensive modular system for both greenfield and brownfield applications. Our range of services covers hardware, software, cloud applications and the associated services.

We hope you enjoy making your selection.





# u-control – Controllers and Edge devices

<b>u-control – Controllers and Edge devices</b>	M3000/M4000	B.2
	u-control WL2000	B.6
	IoT-Gateways	B.10

# Combining OT and IT to perfection

## Modular controllers for industrial automation and IoT applications

### B

In the context of automation, more and more physical devices are being integrated into networks. This promotes the trend towards convergence of IT and OT systems. The new modular control systems u-control M3000 and M4000 point the way to the future.

#### M3000 or M4000 – which controller is right for you?

With u-control M3000, automation solutions can be perfectly integrated into the IoT integration. The powerful controller also serves as an edge device for information in the network and can be expanded by connecting function modules – ideal for automation and Industrial IoT applications. u-control M4000 also offers two additional CPU cores, four Ethernet interfaces and more RAM, NV-RAM and flash memory for complex edge computing in automation.



#### Approvals:



#### Planned approvals:



PLC and edge device in one device

MultiCore technology



u-OS inside

2 Ethernet interfaces

4 Ethernet interfaces

Simple option for connecting additional function modules

Optional extension with additional interfaces (field buses, Wifi, GSM)

## M3000/M4000

### UC20-M3000

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Dual-core CPU, 1.2 GHz
- 2 x 10 A current path

### UC20-M3000



#### Technical data

##### System data

Connection type  
max. number of modules  
Configuration interface  
Processor  
Memory (Flash)  
Real-time clock  
Engineering tool

##### Supply

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path), max.  
Feed current for  $I_{OUT}$  (output current path), max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

##### General data

Weight  
Dimensions H x W x D

##### Note

PUSH IN
64
USB-C (3.1), MicroSD CARD
Dual Core ARM Cortex A53, 1200 MHz
16 GB
Battery buffered
u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
116 mA
588 g
120 mm / 80 mm / 101 mm

#### Ordering data

##### Module variants

##### Note

Type	Qty.	Order No.
UC20-M3000	1	2839150000

A termination kit (UC20-EBK-ACC) is included in the controller package.

#### Accessories

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

##### Control accessories

SD Memory Card

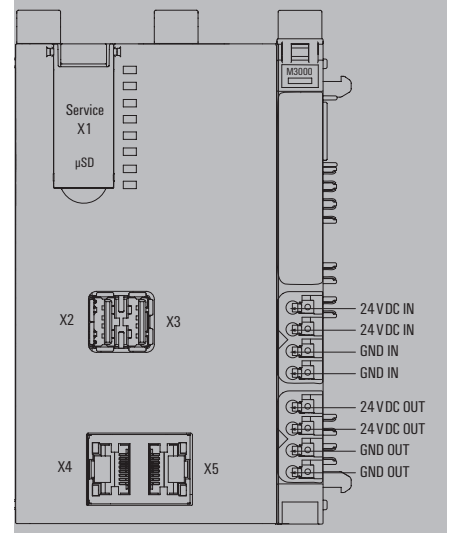
##### Note

Type	Qty.	Order No.
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-2839150000-SP	5	2884000000
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SD-CARD	1	2684400000
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u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter 6



**UC20-M3000**

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Quad-Core CPU, 1.2 GHz
- 2 x 10 A current path

**Technical data**

<b>System data</b>	
Connection type	PUSH IN
max. number of modules	64
Configuration interface	USB-C (3.1), MicroSD CARD
Processor	Quad Core ARM Cortex A53, 1200 MHz
Memory (Flash)	16 GB
Real-time clock	Battery buffered
Engineering tool	u-OS
<b>Supply</b>	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA
<b>General data</b>	
Weight	604 g
Dimensions H x W x D	120 mm / 80 mm / 101 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
<b>Note</b>	

**Accessories**

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)	
<b>Replacement parts</b>	
Plug-in connector unit	
<b>Control accessories</b>	
SD Memory Card	
<b>Note</b>	

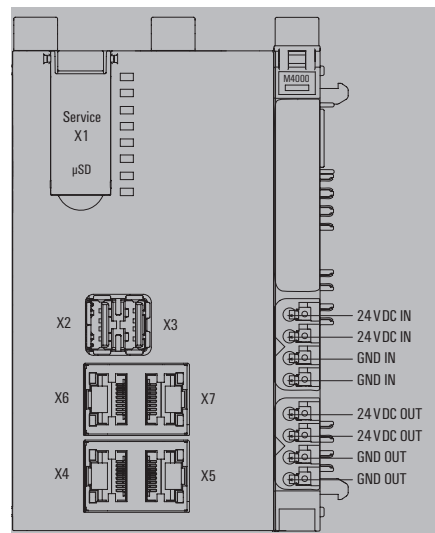
**UC20-M4000**



<b>System data</b>		
Connection type	PUSH IN	
max. number of modules	64	
Configuration interface	USB-C (3.1), MicroSD CARD	
Processor	Quad Core ARM Cortex A53, 1200 MHz	
Memory (Flash)	16 GB	
Real-time clock	Battery buffered	
Engineering tool	u-OS	
<b>Supply</b>		
Supply voltage for inputs	24 V DC +20 %/ -15 %	
Supply voltage for outputs	24 V DC +20 %/ -15 %	
Feed current for I <sub>IN</sub> (input current path) , max.	10 A	
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A	
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA	
<b>General data</b>		
Weight	604 g	
Dimensions H x W x D	120 mm / 80 mm / 101 mm	
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UC20-M4000	1	2839160000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000
<b>Replacement parts</b>		
UR20-PK-2839160000-SP	5	2883990000
<b>Control accessories</b>		
SD-CARD	1	2684400000
u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G		



**B**

## Flexible automation of applications

### u-control WL2000 for compact and cost-optimised control

The u-control WL2000 controller is based on the compact design of the u-remote fieldbus coupler – for even greater space saving and maximum flexibility when it comes to the implementation of individual automation solutions. It is compatible with the u-remote range and allows for direct connection of I/O modules. Combined with our open u-OS operating system, it can be utilised for its entire range of applications, and offers an excellent level of customisation. For further information on u-OS, read chapter E.

The u-control WL2000 is equipped with an Ethernet-based fieldbus and one or optionally two TCP/IP interfaces. The controller also has an optional CAN interface. In addition, communication via the Modbus TCP protocol or OPC-UA is also possible over our u-OS operating system and Codesys. u-control WL2000 also has a Dual-Core ARM A9 processor and a USB service interface. In addition to the battery-buffered real-time clock, there is also a plug-in station for a microSD card with up to 32 GB of storage space for your projects.





**Versatile connection options**  
Fitted with a fieldbus and TCP/IP interface, plus an optional CAN interface.

**Battery-buffered real-time clock**  
Battery-buffered real-time clock and slot for MicroSD cards up to 32 GB.

**Separate power supply**  
Galvanic isolation of the physical input and output power supply.

**u-OS inside**

**Simple data exchange**  
The micro USB interface enables easy data exchange and service of the control.

**Input & output current**  
3 separate current paths for system bus, as well as input current and output current path.

**u-control WL2000**

**UC20-WL2000-AC**

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path

**UC20-WL2000-AC**



**Technical data**

**System data**

Connection type	2 x RJ45 plug-in connectors
max. number of modules	64
Configuration interface	Micro USB 2.0
Processor	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
Memory (Flash)	8 GB, 32 GB via microSD
Real-time clock	Battery buffered
Engineering tool	u-create web, u-OS

**Supply**

Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	5 A
Feed current for I <sub>OUT</sub> (output current path) , max.	5 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA

**General data**

Weight	232 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm

**Note**

**Ordering data**

**Module variants**

Automation controller (Web engineering)

**Note**

**Accessories**

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

**Control accessories**

SD Memory Card  
Battery for real-time clock

**Note**

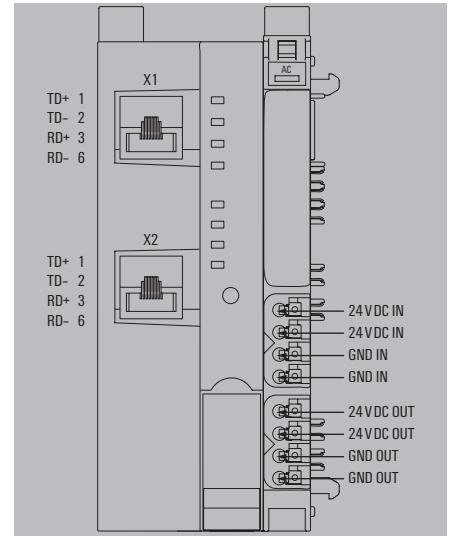
Type	Qty.	Order No.
UC20-WL2000-AC	1	1334950000

A termination kit (UC20-EBK-ACC) is included in the controller package.

Type	Qty.	Order No.
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000

Type	Qty.	Order No.
UR20-PK-1334950000-SP	5	2605360000
SD-CARD	1	2684400000
BATTERY-CR1220-3V	1	2684410000

u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G



### UC20-WL2000-AC-CAN

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path
- CAN Interface

#### Technical data

System data	
Connection type	2 x RJ45 plug-in connectors
max. number of modules	64
Configuration interface	Micro USB 2.0
Processor	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
Memory (Flash)	8 GB, 32 GB via microSD
Real-time clock	Battery buffered
Engineering tool	u-create web, u-OS
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	5 A
Feed current for I <sub>OUT</sub> (output current path) , max.	5 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA
General data	
Weight	232 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Automation controller (Web engineering)
Note	

#### Accessories

	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
Control accessories	
	SD Memory Card
	Battery for real-time clock
Note	

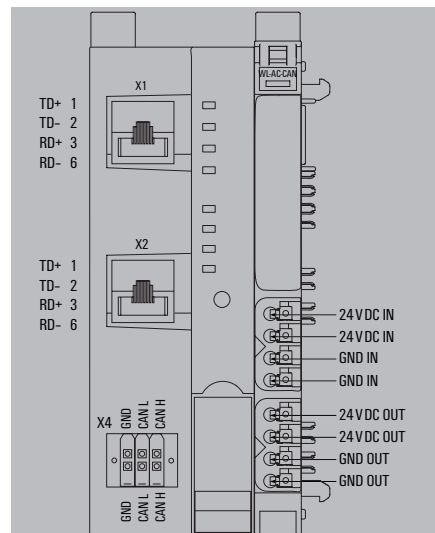
### UC20-WL2000-AC-CAN



	2 x RJ45 plug-in connectors
	64
	Micro USB 2.0
	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
	8 GB, 32 GB via microSD
	Battery buffered
	u-create web, u-OS
	24 V DC +20 %/ -15 %
	24 V DC +20 %/ -15 %
	5 A
	5 A
	116 mA
	232 g
	120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UC20-WL2000-AC-CAN	1	2928020000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		
UR20-PK-2928020000-SP	5	2742900000
Control accessories		
SD-CARD	1	2684400000
BATTERY-CR1220-3V	1	2684410000
u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G		



B

# Integration of existing components into IoT networks

## Complete application representation for the IoT gateway

The intelligent networking of machines and devices in the IoT opens up many possibilities and offers opportunities for new business models. IoT gateways enable the exchange of data between field devices and servers or cloud applications. The transmitted data can be used to deepen process knowledge, carry out optimisations or offer new services.

With our IoT gateway, you can collect machine data and gain access to your field devices and controls. Various protocols and interfaces are available for this purpose. The Weidmüller u-OS operating system is pre-installed on the IoT gateway. This means customers can choose to install a wide range of apps for data pre-processing. One option is Node-RED as a graphic development tool for IoT applications, which makes available a large community and an extensive selection of system interfaces, as well as pre-processing functions free of charge. Nodes are available to easyConnect, AWS or Google cloud to ensure a simple, configurable connection to these systems. A connection to Siemens Industrial Edge via the convenient App Manager within u-OS is also possible as another example. Last but not least, of course, integration into the u-link remote access service is available, for remote maintenance of systems from any location. For location-independent remote system maintenance, you can also integrate the gateway into the u-link remote access service.

### Your special advantage:

- Full flexibility via u-OS for your own and third party applications  
Simple installation of (software) containers and other apps through the App Manager
- Secure and cost-optimised use of cloud systems through pre-processing and storage
- Can also be used as a controller through Linux with PREEMPT-RT

Also  
available in  
IP54

**Flexible IoT integration**

Process data can be collected via various interfaces, such as Ethernet, CAN, RS485 or RS232. In addition, many protocols for coupling with PLC systems are supported – e.g. Siemens, Rockwell or the industry standard OPC-UA.

**Integrated remote access**

The simple and secure remote access solution u-link remote access service enables a quick response to changes in situations on site – and that worldwide.

**Versatile IT integration**

Whether via company network or mobile radio: The open IoT standard Node-RED allows data to be pre-processed and transmitted to other systems, such as servers, SCADA systems or cloud platforms, via various transmission media and protocols.

## IoT-Gateways

### IoT-Gateways

- Enables machine data acquisition and provides access to field devices and PLC's via various protocols and interfaces
- Interfaces to your own IT systems as well as to common cloud systems
- Data traffic reduction through preprocessing on edge via the open IoT standard Node-RED
- Secure and easy remote maintenance with Weidmüller u-link remote access Service
- Integration of most common communication interfaces in small design
- D1Open programming platform Node-RED with strong community support



### Technical data

Interfaces	
Digital outputs	1x, 19.2 - 28 V high; max. 1 A
Digital inputs	2x, >10 V high, <3.6 V low; max. 30 V DC
Ethernet ports	2
RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Serial port	1x RS232/RS485
USB port	1x USB 2.0 (Type A; max. 500 mA)
System data	
Real-time clock	Capacity buffered (max. 5 days)
Processor	Dual Core ARM Cortex A9, 600 MHz
Memory (Flash)	4 GB
Memory (RAM)	1 GB, DDR3
VPN functionality	
u-link	OpenVPN-based remote access service via the Weidmüller u-link cloud
Technical data	
Housing main material	Metal
Speed	Fast Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	125 / 35 / 105 mm
Net weight	412 g
Environmental conditions	
Operating temperature	-20 °C...60 °C
Humidity	5 to 95 % (non-condensing)
Power supply	
Voltage supply	24 V DC
Voltage supply range	19.2...28VDC
Current consumption	0.24A @ 24V
Reverse polarity protection	Yes
Note	

Approvals	
EMC standards	EN 61000-6-3, EN 61000-6-2
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
ROHS marking	J

### Ordering data

Type	Qty.	Order No.
IOT-GW30	1	2682620000

Mobile phone antennas and connection cables can be found in Chapter I.

## IoT-Gateways

- Enables machine data acquisition and provides access to field devices and PLC's via various protocols and interfaces
- Interfaces to your own IT systems as well as to common cloud systems
- Data traffic reduction through preprocessing on edge via the open IoT standard Node-RED
- Secure and easy remote maintenance with Weidmüller u-link remote access Service
- Integration of most common communication interfaces in small design
- D1Open programming platform Node-RED with strong community support



## Technical data

Interfaces	
Connector for external antennas	2x SMA female
Number of SIM-Card slots	1
Digital outputs	1x, 19.2 - 28 V high; max. 1 A
Digital inputs	2x, >10 V high, <3.6 V low; max. 30 V DC
Ethernet ports	2
RJ45 ports	10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port
Serial port	1x RS232/RS485
SIM-Card slot type	Micro-SIM
USB port	1x USB 2.0 (Type A; max. 500 mA)
System data	
Real-time clock	Capacity buffered (max. 5 days)
Processor	Dual Core ARM Cortex A9, 600 MHz
Memory (Flash)	4 GB
Memory (RAM)	1 GB, DDR3
VPN functionality	
u-link	OpenVPN-based remote access service via the Weidmüller u-link cloud
Technical data	
Housing main material	Metal
Speed	Fast Ethernet
Protection degree	IP20
Type of mounting	DIN rail
Dimensions H x W x D	125 / 35 / 105 mm
Net weight	500 g
Environmental conditions	
Operating temperature	-20 °C...60 °C
Humidity	5 to 95 % (non-condensing)
Power supply	
Voltage supply	24 V DC
Voltage supply range	19.2...28VDC
Current consumption	0.24A @ 24V
Reverse polarity protection	Yes
Note	

Mobile radio interface	
Frequency band	LTE: 2100MHz (B1), 1800MHz (B3), 850MHz (B5), 2600MHz (B7), 900MHz (B8), 800MHz (B20), 2600MHz (B38), 2300MHz (B40), 2600MHz (B41), UMTS/WCDMA: 2100MHz (B1), 850MHz (B5), 900MHz (B8), GSM/GPRS/EDGE: 900MHz (B8), 1800MHz (B3)
Wireless module	LTE / HSPA+ multiband wireless module (4G / 3G / 2G) for fast wireless Internet access
LTE category	CAT 4
Download rate, max.	150
Upload rate, max.	50
Approvals	
EMC standards	EN 61000-6-3, EN 61000-6-2
Shock	according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6
ROHS marking	J

## Ordering data

Type	Qty.	Order No.
IOT-GW30-4G-EU	1	2682630000
IOT-GW30-4G-NA	1	2682640000

Mobile phone antennas and connection cables can be found in Chapter I.





# u-remote – I/O Systems

<b>u-remote – I/O Systeme</b>	<b>I/O system IP20</b>		
		Introduction	C.2
		Fieldbus coupler	C.4
		Digital input modules	C.36
		Digital output modules	C.52
		Digital input and output modules	C.68
		Pulse width modulation and stepper motor modules	C.70
		Analogue input modules	C.76
		Temperature modules and potentiometer input module	C.92
		Strain gauge module	C.98
		Power measurement module	C.100
		Analogue output modules	C.104
		Digital counter and communication modules	C.114
		Safe I/O modules and safe power-feed modules	C.126
		Power-feed modules	C.134
		Accessories	C.138
		System overview	C.144
		Decentralised I/O system IP20 – u-remote	C.146
	<b>I/O system IP67</b>	Introduction	C.148
		u-remote IP67 – PROFINET IO-Link, Multiprotocol, Push/Pull	C.150
		SAI Active Universal Pro	C.158
		Accessories for sensor cables	C.162
		Quick selection IP67 remote I/O modules	C.168
		u-mation configurator	C.170

# Achieving maximum efficiency in the control cabinet

## With great savings potential and optimum system performance

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 fieldbus coupler, up to 64 I/O modules, optional power-feed modules and a wealth of accessories, such as markers and terminating elements.

**C** The fieldbus 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 fieldbus coupler. Every fieldbus 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 fieldbus 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 or 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. 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 mm<sup>2</sup>, 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.



**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 unrivaled channel density and extremely flexible design options.

**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.

**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.

**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.



# PROFIBUS fieldbus coupler

## DP-V1, Web server tool, Sub-D connection



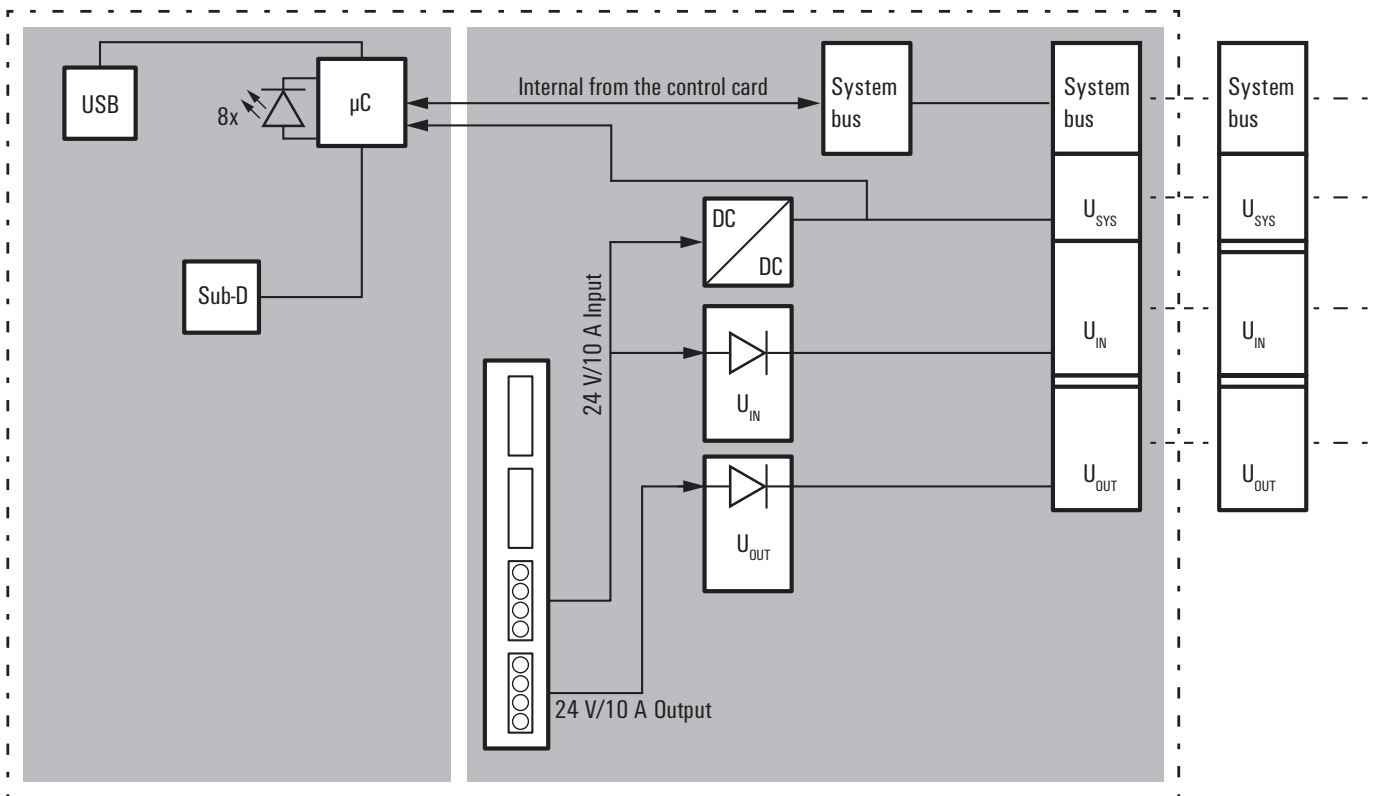
In automation technology, the PROFIBUS-DP standard enables the controlled incorporation of sensors and actuators via one central control unit. The UR20-FBC-PB-DP-V2 fieldbus coupler is a PROFIBUS-DP-V1 participant certified by the PROFIBUS user organisation. With options for connecting up to 64 u-remote 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.

**C**

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 fieldbus 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 to fault diagnosis.

**Block diagram PROFIBUS fieldbus coupler**



## PROFIBUS

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

## UR20-FBC-PB-DP-V2



### Technical data

#### System data

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Configuration interface
Transmission rate of field bus, max.
Transmission speed of system bus, max.

#### Supply

Supply voltage for inputs
Supply voltage for outputs
Feed current for $I_{IN}$ (input current path) , max.
Feed current for $I_{OUT}$ (output current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

#### General data

Weight
Dimensions H x W x D

#### Note

9-pole SUB-D socket (female)
PROFIBUS DP-V1
488 Byte
244 Byte
244 Byte
64
Micro USB 2.0
12 Mbit/s
48 Mbit

24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
90 mA

247 g
120 mm / 52 mm / 76 mm

Download of GSD-file on [www.weidmueller.com](http://www.weidmueller.com)

### Ordering data

#### Module variants

Field bus coupler, Profibus DP-V1

#### Note

Type	Qty.	Order No.
UR20-FBC-PB-DP-V2	1	2614380000

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

### Accessories

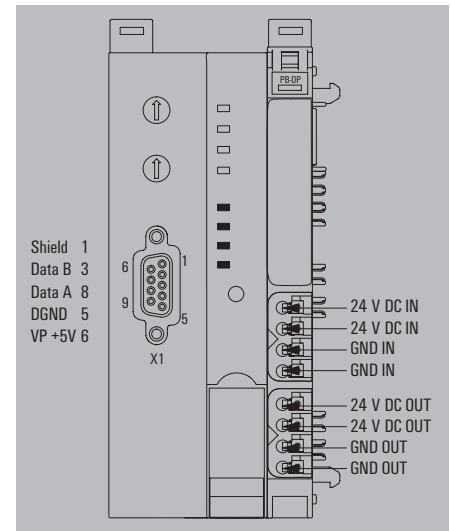
Type	Qty.	Order No.
Termination kit	5	1346610000
Swivel marker	20	1339920000
Connection marker for pusher custom printing	192	1323700000
Connection marker for pusher neutral	960	1323710000
Module marker for custom printing	100	1341610000
Module marker for neutral	500	1341630000
Thermotransfer version (Material: Polyester)	1	1429910000
Thermotransfer version (material: polyester)	1	1429420000
Paper version for Laserprinter	10	1429430000
USB cable (USB A to Micro USB)	1	1487980000

#### Replacement parts

Plug-in connector unit

#### Note

UR20-PK-2614380000-SP	5	2623120000
1 roll = 1000 labels = 1 Qty.		
1 sheet = 60 labels = 1 unit		



# PROFINET fieldbus coupler

## Web server tool, two RJ45 Ports, 100 Mbit/s

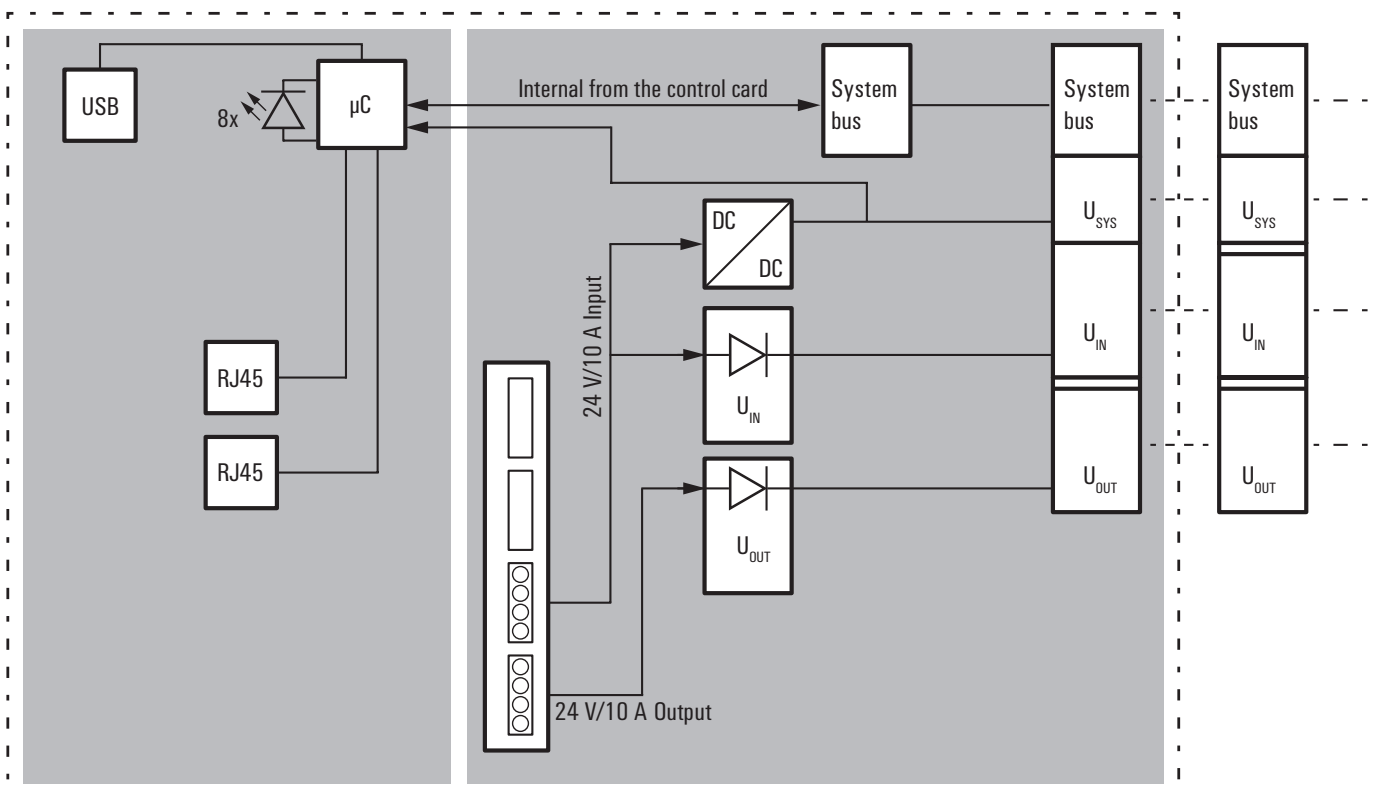


PROFINET is gaining in importance as a rapidly growing Industrial Ethernet Standard. By supporting real-time functionality (RT) and isochronous real-time functionality (IRT), the technology complies with modern system and application requirements to a large extent. The UR20-FBC-PN-IRT-V2 fieldbus coupler 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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

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

### Block diagram PROFINET fieldbus coupler



**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

**UR20-FBC-PN-IRT-V2**



**Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	PROFINET IRT+RT
Process data	1024 Byte
Parameter data	1485 Byte
Diagnostic data	1485 Byte
Fast Startup	Yes
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>in</sub> (input current path) , max.	10 A
Feed current for I <sub>out</sub> (output current path) , max.	10 A
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	100 mA
General data	
Weight	247 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of GSDML-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

Type	Qty.	Order No.
UR20-FBC-PN-IRT-V2	1	2566380000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

**Ordering data**

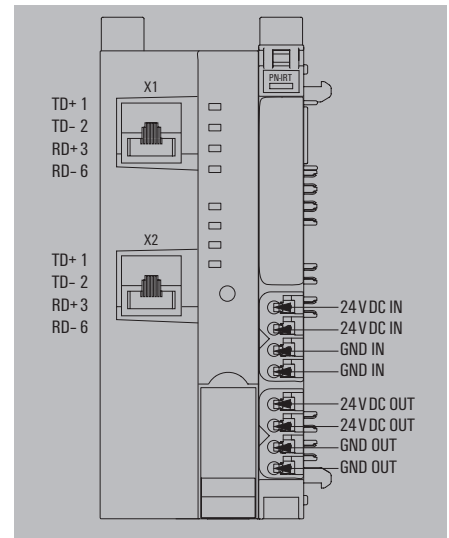
Module variants	
	Field bus coupler, PROFINET IRT
Note	

**Accessories**

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
USB cable (USB A to Micro USB)	IE-USB-A-MICRO-1.8M	1	1487980000

Replacement parts	
	Plug-in connector unit
Note	
UR20-PK-2566380000-SP	
1 roll = 1000 labels = 1 Qty.	
1 sheet = 60 labels = 1 unit	

Type	Qty.	Order No.
UR20-PK-2566380000-SP	5	2623640000
1 roll = 1000 labels = 1 Qty.		
1 sheet = 60 labels = 1 unit		



# PROFINET fieldbus coupler ECO

Web server tool,  
two RJ45 Ports, 100 Mbit/s



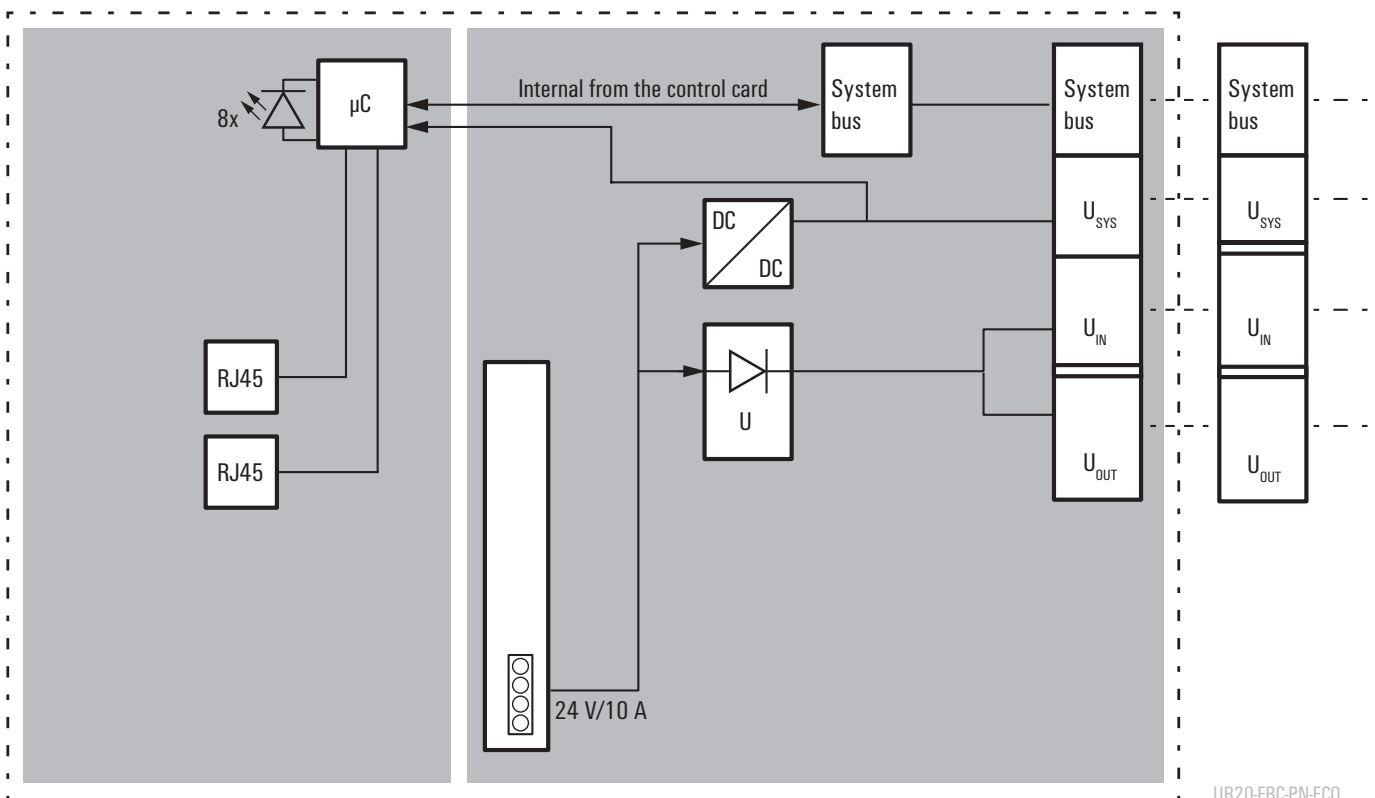
PROFINET is gaining in importance as a rapidly growing Industrial Ethernet Standard. By supporting real-time functionality (RT), the technology complies with modern system and application requirements to a large extent. The UR20-FBC-PN-ECO fieldbus coupler is a PROFINET participant certified by the PROFIBUS user organisation. It can connect up to 16 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

**C**

The coupler can be activated with a system-independent web server application via 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 ECO fieldbus coupler.

PROFINET products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. using a GSDML file and diagnostic messages. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram PROFINET fieldbus coupler ECO



UR20-FBC-PN-ECO



**PROFINET ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- PROFINET RT capable
- PROFINET diagnosis

**UR20-FBC-PN-ECO****Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
Fast Startup
max. number of modules
Transmission rate of field bus, max.
Transmission speed of system bus, max.

2x RJ45 plug-in connectors
PROFINET RT
1024 Byte
4362 kByte
1408 Byte
Yes
16
100 Mbit/s
48 Mbit/s

**Supply**

Voltage supply
Feed current for $I_{in}$ (input current path) , max.
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %, via the system bus
10 A
80 mA

**General data**

Weight
Dimensions H x W x D

247 g
120 mm / 52 mm / 76 mm

**Note**

Download of GSDML-file on [www.weidmueller.com](http://www.weidmueller.com)

**Ordering data****Module variants**

Field bus coupler, PROFINET RT

**Note**

Type	Qty.	Order No.
UR20-FBC-PN-ECO	1	2659680000

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

**Accessories**

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

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

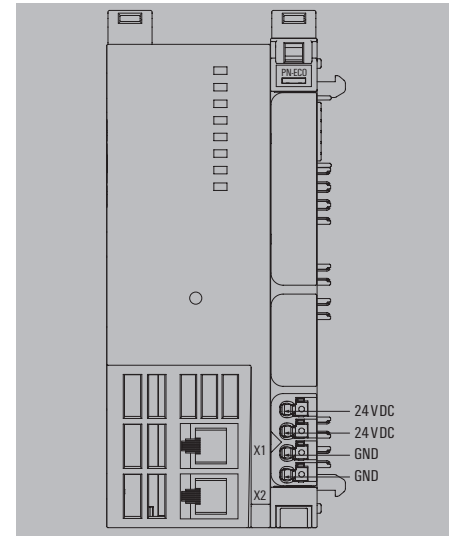
**Replacement parts**

Plug-in connector unit

UR20-PK-2659680000-SP	5	2702590000
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**Note**

1 roll = 1000 labels = 1 Qty.  
1 sheet = 60 labels = 1 unit



# EtherCAT fieldbus coupler

## Web server tool, two RJ45 Ports, 10/100 Mbit/s



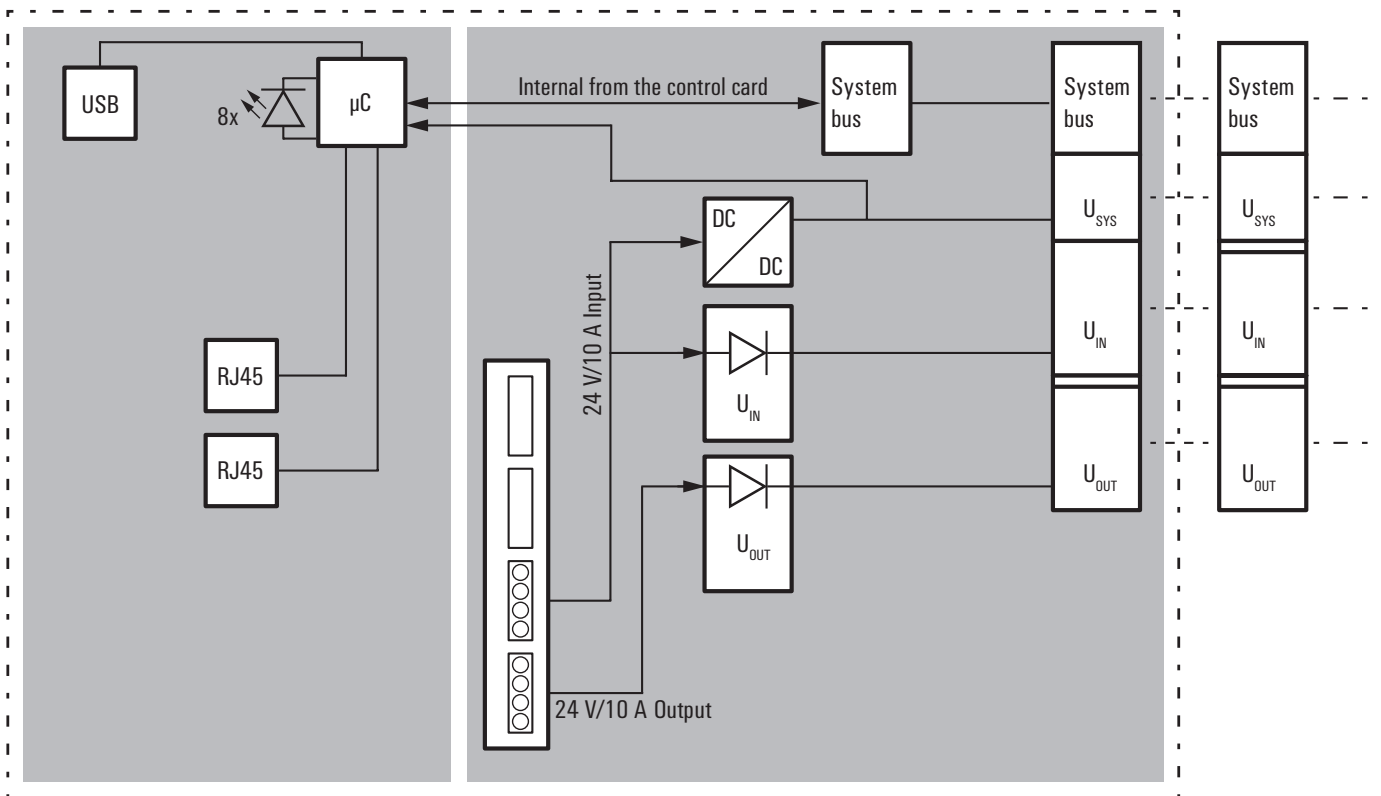
EtherCAT is a popular field bus standard for systems with stringent time requirements. The UR20-FBC-EC fieldbus coupler is an EtherCAT participant certified by the EtherCAT Technology Group. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system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

### C

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 fieldbus 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 EtherCAT fieldbus coupler**



## EtherCAT

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Various EtherCAT services

## UR20-FBC-EC



## Technical data

### System data

Connection type	2x RJ45 plug-in connectors
Field bus protocol	EtherCAT
Process data	1024 Byte
Parameter data	4 kByte
Diagnostic data	3200 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s

### Supply

Supply voltage for inputs	24 V DC +20 %/-15 %
Supply voltage for outputs	24 V DC +20 %/-15 %
Feed current for $I_{IN}$ (input current path) , max.	10 A
Feed current for $I_{OUT}$ (output current path) , max.	10 A
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.	130 mA

### General data

Weight	227 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm

### Note

Download of ESHfile on [www.weidmueller.com](http://www.weidmueller.com)

## Ordering data

### Module variants

Field bus coupler, EtherCAT

### Note

Type	Qty.	Order No.
UR20-FBC-EC	1	1334910000

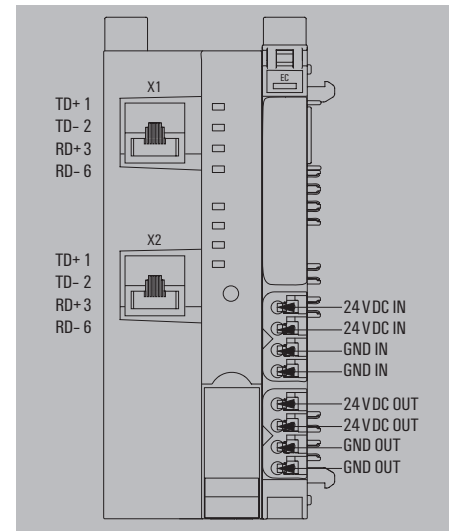
A termination kit (UR20-EBK-ACC) is included in the coupler package

## Accessories

Type	Qty.	Order No.
Termination kit	5	1346610000
Swivel marker	20	1339920000
Connection marker for pusher custom printing	192	1323700000
Connection marker for pusher neutral	960	1323710000
Module marker for custom printing	100	1341610000
Module marker for neutral	500	1341630000
Thermotransfer version (Material: Polyester)	1	1429910000
Thermotransfer version (material: polyester)	1	1429420000
Paper version for Laserprinter	10	1429430000
USB cable (USB A to Micro USB)	1	1487980000
Replacement parts		
Plug-in connector unit	5	1484440000

### Note

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



# EtherCAT fieldbus coupler ECO

Web server tool,  
two RJ45 Ports, 100 Mbit/s



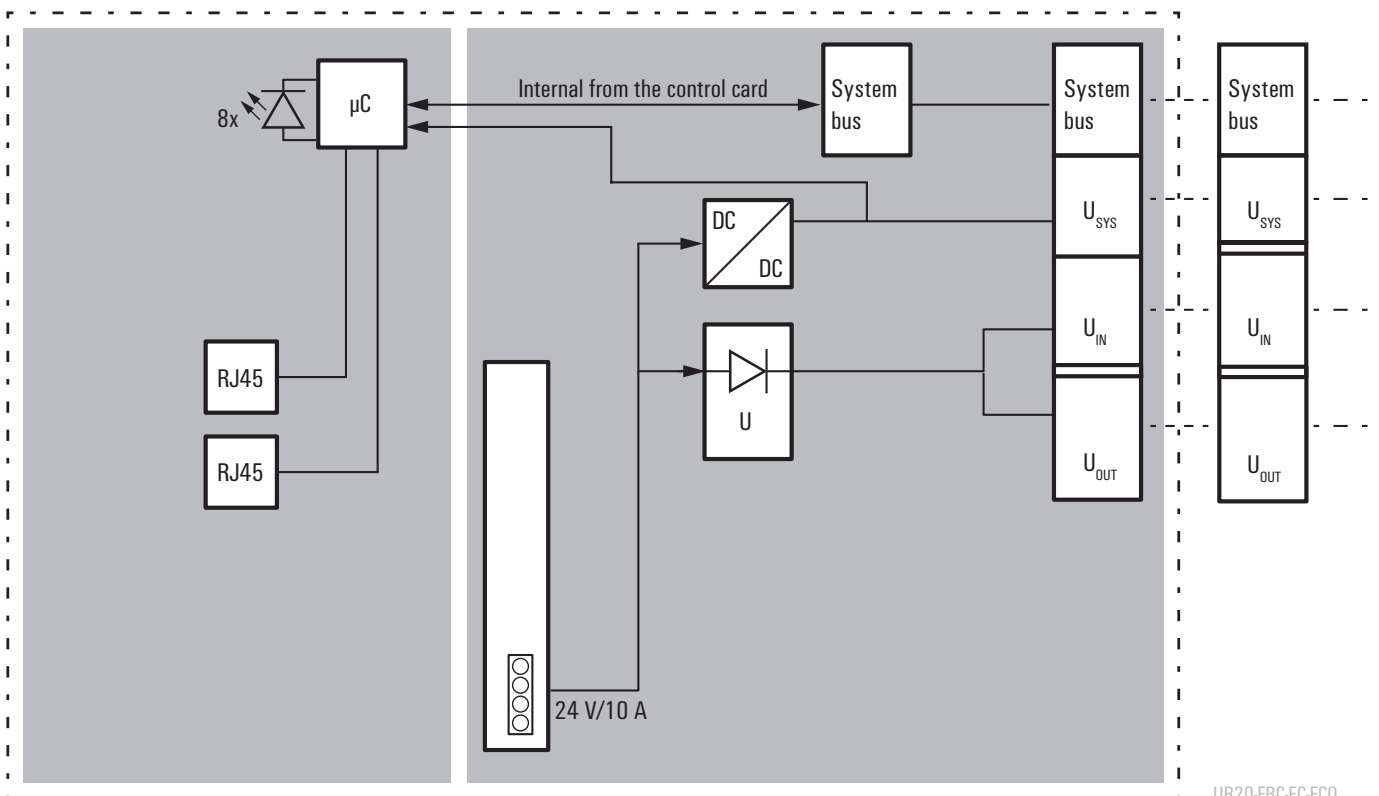
EtherCAT is a popular field bus standard for systems with stringent time requirements. The UR20-FBC-EC-ECO fieldbus coupler is an EtherCAT participant certified by the EtherCAT Technology Group. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus. The EtherCAT coupler ECO has two Ethernet ports with integrated switch for implementing a line network structure.

C

The coupler can be activated with a system-independent web server application via 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 fieldbus coupler.

EtherCAT products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. the use of ESI files. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

## Block diagram EtherCAT fieldbus coupler ECO



**EtherCAT ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- Various EtherCAT services

**UR20-FBC-EC-ECO**



**Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	EtherCAT
Process data	1024 Byte
Parameter data	1024 Byte
Diagnostic data	800 Byte
max. number of modules	16
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Current consumption I <sub>N</sub> (power segment of the field bus coupler), typ.	80 mA
General data	
Weight	247 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of ESH-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

Type	Qty.	Order No.
UR20-FBC-EC-ECO	1	2659690000
A termination kit (UR20-EBK-ACC) is included in the coupler package.		

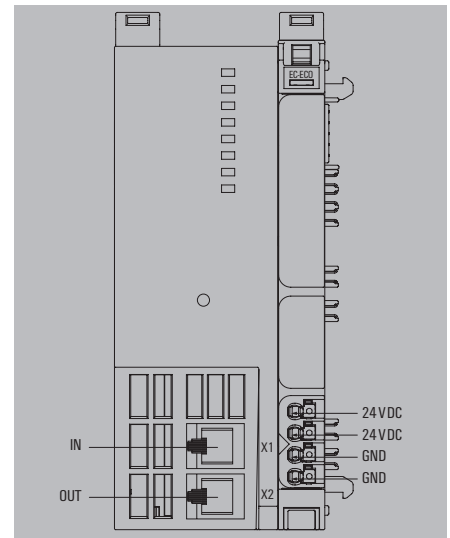
**Ordering data**

Module variants	
	Field bus coupler, EtherCAT
Note	

**Accessories**

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Plug-in connector unit	UR20-PK-2659690000-SP	5	2702600000
Note			
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit			

Type	Qty.	Order No.
UR20-FBC-EC-ECO	1	2659690000
A termination kit (UR20-EBK-ACC) is included in the coupler package.		



# ModbusTCP fieldbus coupler

## Web server tool, two RJ45 Ports, 10/100 Mbit/s

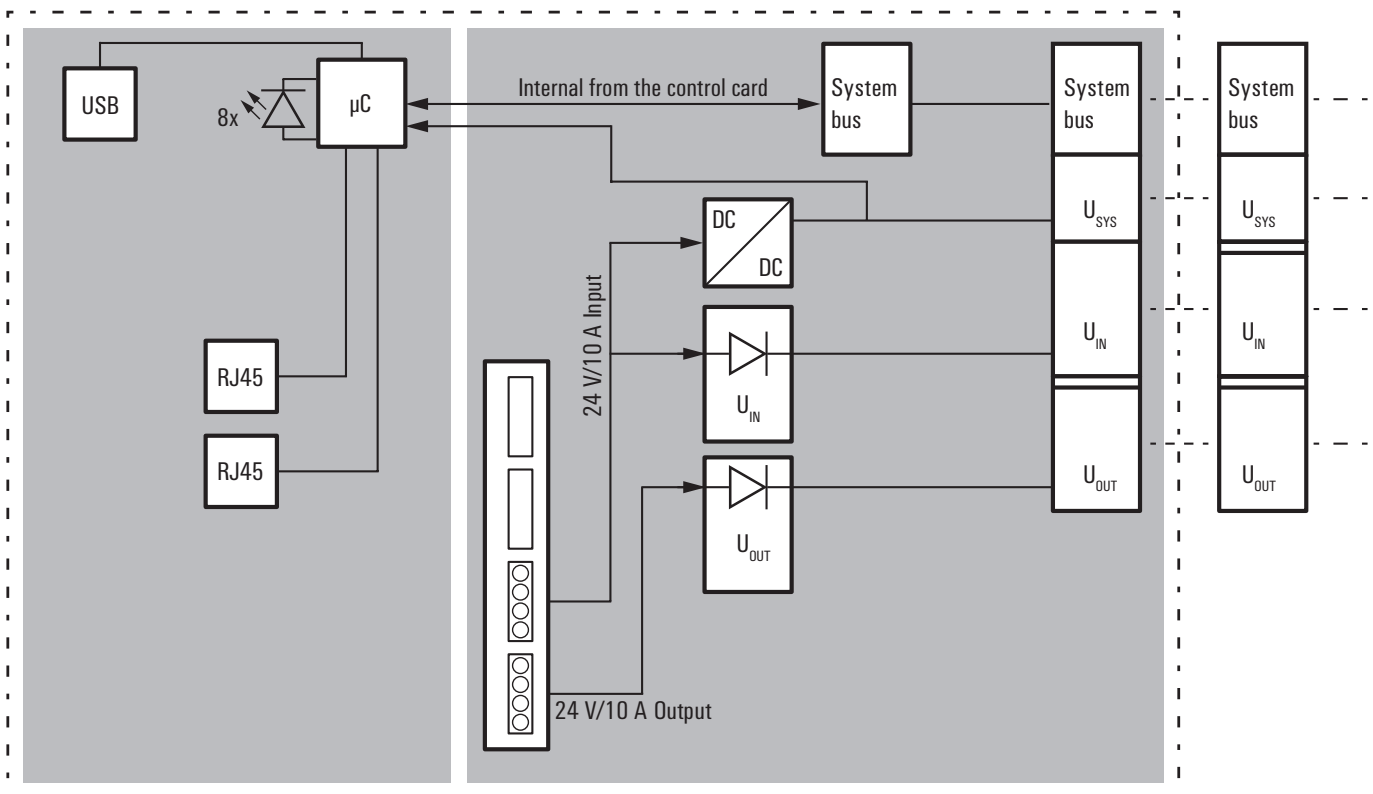
# ModbusTCP

System safety around the globe is provided by the ModbusTCP version, which is stated in IEC 61158 as an Industrial Ethernet Standard. The UR20-FBC-MOD-TCP-V2 from Weidmüller is a fieldbus 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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the ModbusTCP 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 Modbus TCP fieldbus coupler



**ModbusTCP**

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Dual LAN mode
- Various Modbus services

**UR20-FBC-MOD-TCP-V2****Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	Modbus/TCP
Process data	1 kByte
Parameter data	1024 Byte
Diagnostic data	1024 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	112 mA
General data	
Weight	223 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-FBC-MOD-TCP-V2	1	2476450000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

**Ordering data**

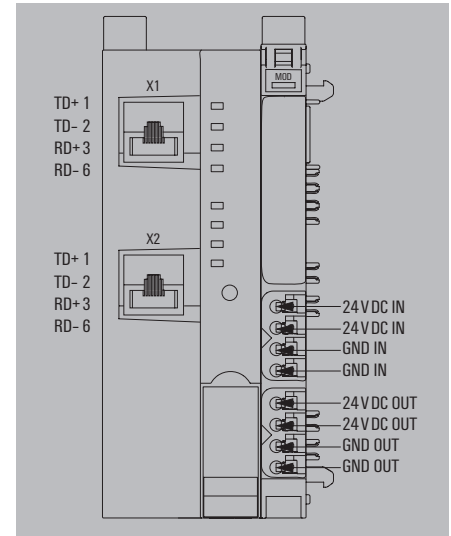
Module variants	
	Fieldbus coupler, ModbusTCP
Note	

Type	Qty.	Order No.
UR20-FBC-MOD-TCP-V2	1	2476450000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

**Accessories**

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
USB cable (USB A to Micro USB)	IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts			
Plug-in connector unit	UR20-PK-2476450000-SP	5	2485280000
Note			
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit			

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		
UR20-PK-2476450000-SP	5	2485280000
Note		
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit		



# ModbusTCP fieldbus coupler ECO

Web server tool,  
two RJ45 Ports, 100 Mbit/s

**ModbusTCP**

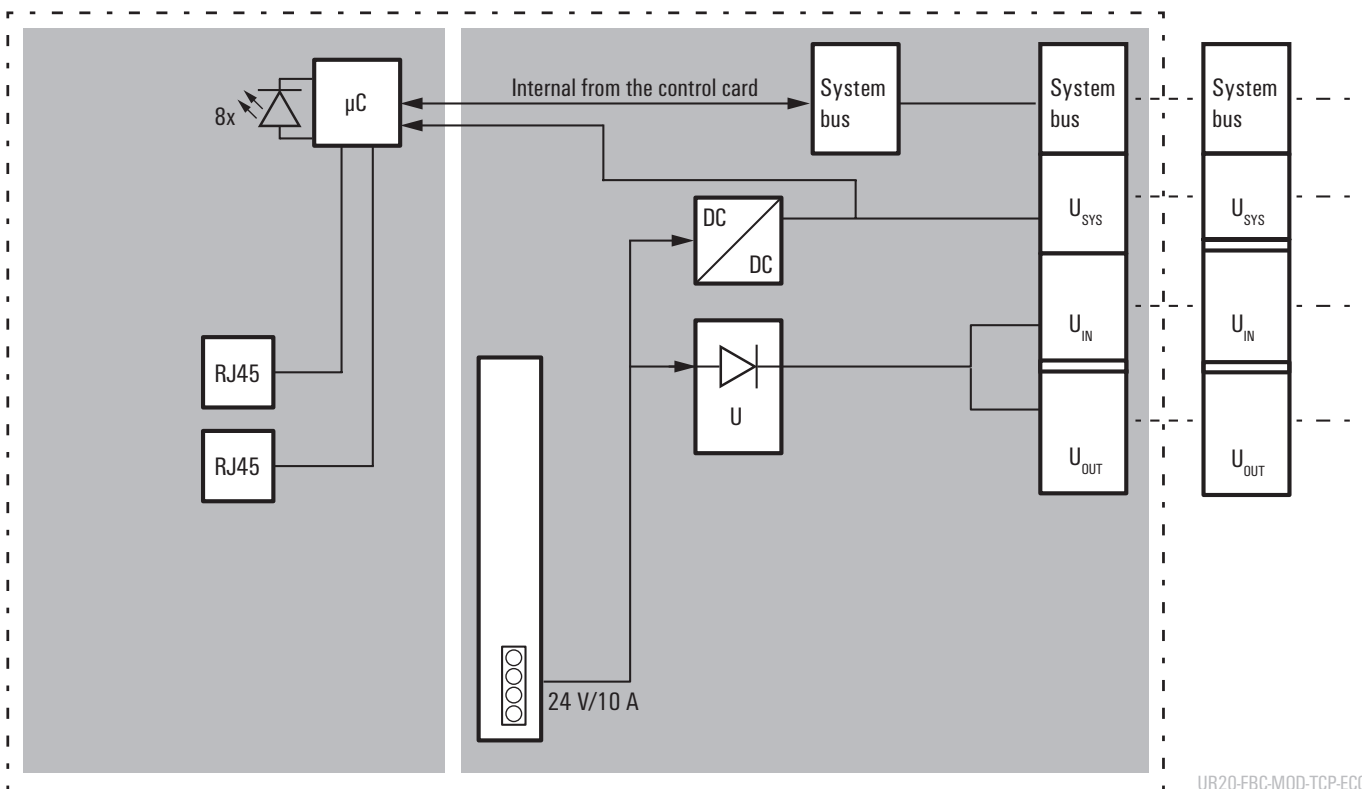
System safety around the globe is provided by the Modbus TCP version, which is stated in IEC 61158 as an Industrial Ethernet Standard. The UR20-FBC-MOD-TCP-ECO from Weidmüller is a fieldbus coupler designed in accordance with IEC 61158. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus.

**C**

The coupler can be activated with a system-independent web server application via 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 fieldbus coupler.

ModbusTCP products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

**Block diagram Modbus TCP fieldbus coupler ECO**



UR20-FBC-MOD-TCP-ECO



**ModbusTCP ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- Various Modbus services

**UR20-FBC-MOD-TCP-ECO****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

2x RJ45 plug-in connectors

Modbus/TCP

1 kByte

1 kByte

1 kByte

16

100 Mbit/s

48 Mbit/s

**Supply**

Voltage supply  
Feed current for  $I_{IN}$  (input current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

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

10 A

80 mA

**General data**

Weight  
Dimensions H x W x D

247 g

120 mm / 52 mm / 76 mm

**Note****Ordering data****Module variants**

Fieldbus coupler, ModbusTCP

**Note**

Type	Qty.	Order No.
UR20-FBC-MOD-TCP-ECO	1	2659700000

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

**Accessories**

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

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

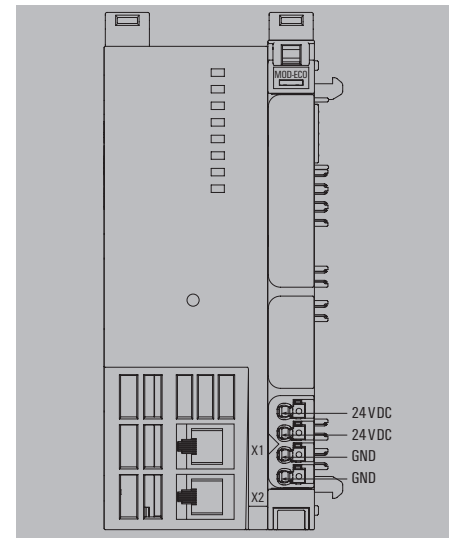
**Replacement parts**

Plug-in connector unit

**Note**

Type	Qty.	Order No.
UR20-PK-2659700000-SP	5	2702610000

1 roll = 1000 labels = 1 Qty.  
1 sheet = 60 labels = 1 unit



# EtherNet/IP™ fieldbus coupler

## Web server tool, two RJ45 Ports, 10/100 Mbit/s

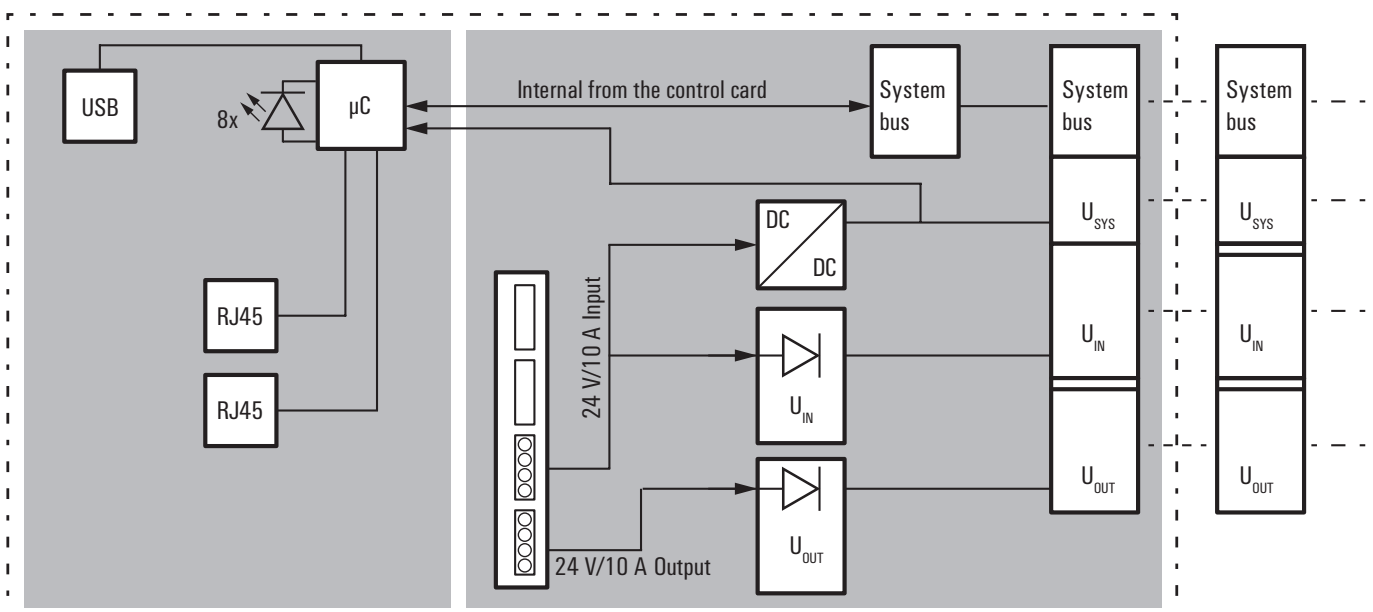
EtherNet/IP™ is a widely used, real-time capable industrial Ethernet field bus system. Based on Ethernet technology standards such as TCP and UDP, EtherNet/IP™ offers not only the transmission of unicast messages between two participants but also the possibility of sending I/O data cyclically to several recipients via multicast. The fieldbus couplers UR20-FBC-EIP and UR20-FBC-EIP-V2, developed according to IEC 61158, are EtherNet/IP™ participants. 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 coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

The UR20-FBC-EIP-V2 coupler also supports the redundancy protocols Device Level Ring (DLR), Parallel Redundancy Protocol (PRP) and RSTP. VLAN tagging can also be activated.

EtherNet/IP™ products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram EtherNet/IP™ fieldbus coupler



**EtherNet/IP™**

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

**UR20-FBC-EIP****Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Configuration interface
Transmission rate of field bus, max.
Transmission speed of system bus, max.

2x RJ45 plug-in connectors
EtherNet/IP
988 Byte
4 kByte
3008 Byte
64
Micro USB 2.0
100 Mbit/s
48 Mbit/s

**Supply**

Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>IN</sub> (input current path) , max.
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
112 mA

**General data**

Weight
Dimensions H x W x D

223 g
120 mm / 52 mm / 76 mm

**Note**

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

**Ordering data****Module variants**

Field bus coupler, EtherNet/IP

**Note**

Type	Qty.	Order No.
UR20-FBC-EIP	1	1334920000

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

**Accessories**

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)

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000

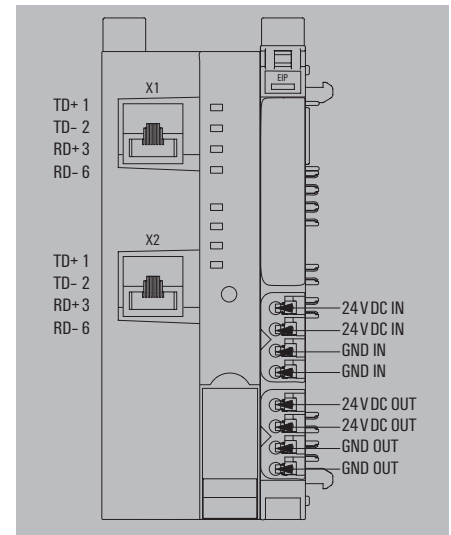
**Replacement parts**

Plug-in connector unit

**Note**

UR20-PK-1334920000-SP	5	1541290000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Fieldbus coupler

### EtherNet/IP™

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Redundancy capable via DL/PRP (IEC 62439-6)

### UR20-FBC-EIP-V2



### Technical data

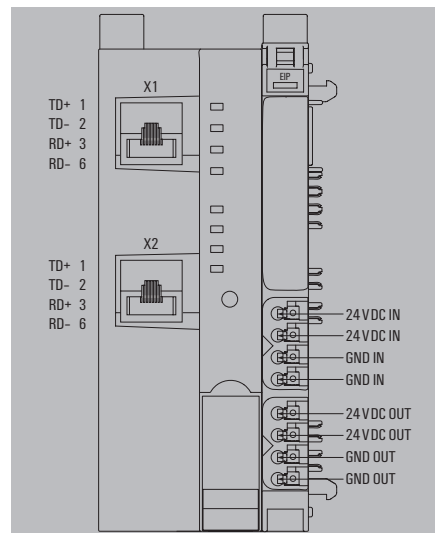
System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	EtherNet/IP
Process data	988 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	100 mA
General data	
Weight	223 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of EDS-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

### Ordering data

Module variants	
	Field bus coupler, EtherNet/IP
Note	
A termination kit (UR20-EBK-ACC) is included in the coupler package	

### Accessories

	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
	Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
	USB cable (USB A to Micro USB)	IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		UR20-PK-1550550000-SP	1	2780340000
Note		1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





# EtherNet/IP™ fieldbus coupler ECO

## Web server tool, two RJ45 Ports, 10/100 Mbit/s

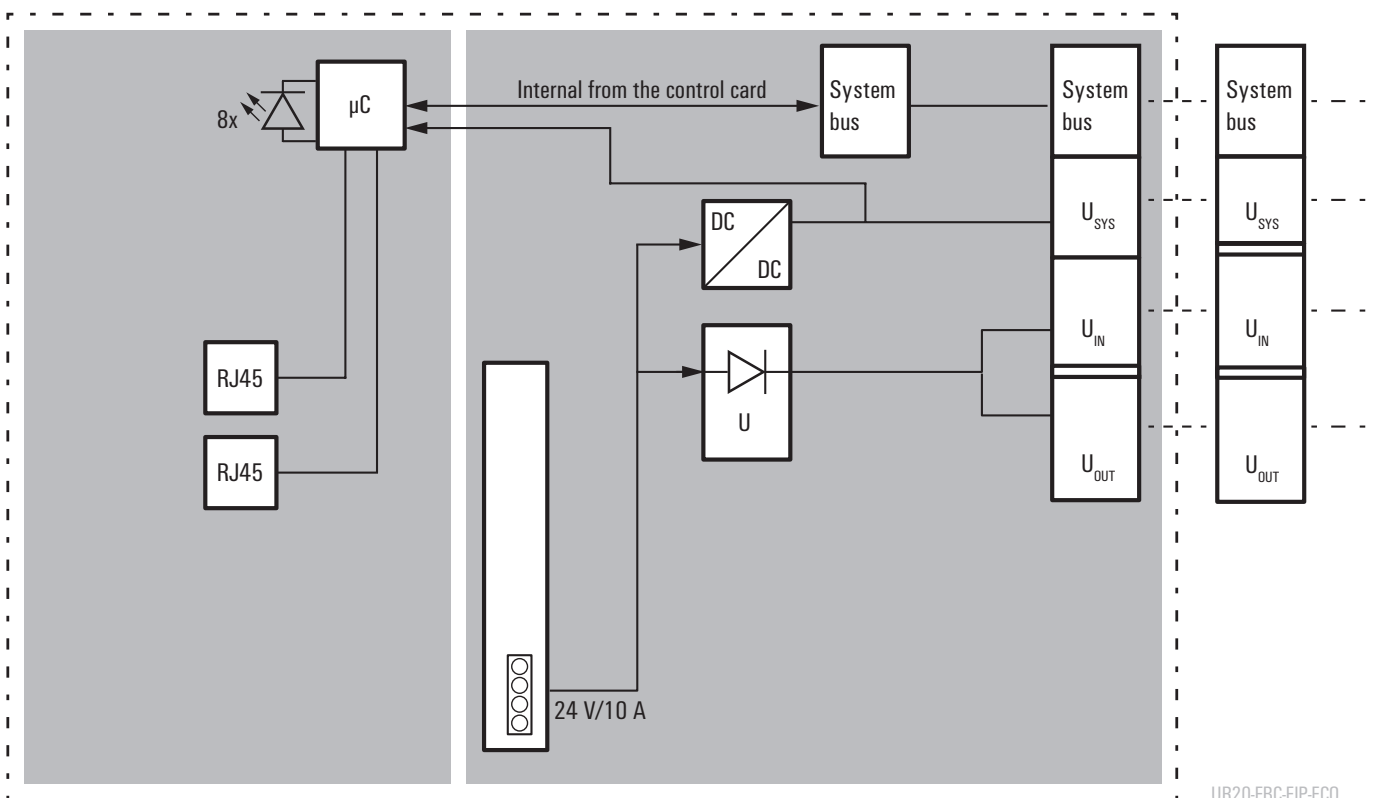
EtherNet/IP™ is a widely used, real-time capable industrial Ethernet field bus system. Based on Ethernet technology standards such as TCP and UDP, EtherNet/IP™ offers not only the transmission of unicast messages between two participants but also the possibility of sending I/O data cyclically to several recipients via multicast. The fieldbus coupler UR20-FBC-EIP-ECO, developed according to IEC 61158, is an EtherNet/IP™ participant. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus.

### C

The coupler can be activated with a system-independent web server application via 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 coupler.

EtherNet/IP™ products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram EtherNet/IP™ fieldbus coupler ECO



UR20-FBC-EIP-ECO

**EtherNet/IP™ ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C

**Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Transmission rate of field bus, max.
Transmission speed of system bus, max.

**Supply**

Voltage supply
Feed current for $I_{IN}$ (input current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

**General data**

Weight
Dimensions H x W x D

**Note****Ordering data****Module variants**

Field bus coupler, EtherNet/IP

**Note****Accessories**

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**

Plug-in connector unit

**Note****UR20-FBC-EIP-ECO**

2x RJ45 plug-in connectors

EtherNet/IP

988 Byte

1024 Byte

752 Byte

16

100 Mbit/s

48 Mbit/s

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

10 A

61 mA

247 g

120 mm / 52 mm / 76 mm

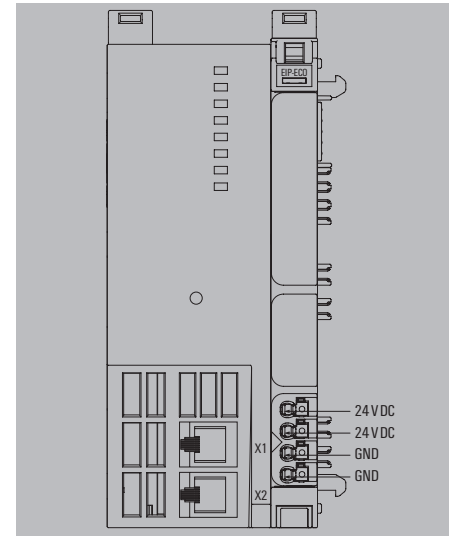
Download of EDS-file on [www.weidmueller.com](http://www.weidmueller.com)

Type	Qty.	Order No.
UR20-FBC-EIP-ECO	1	<b>2799510000</b>

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

Type	Qty.	Order No.
UR20-EBK-ACC	5	<b>1346610000</b>
UR20-SM-ACC	20	<b>1339920000</b>
PM 2.7/2.6 MC SDR	192	<b>1323700000</b>
PM 2.7/2.6 MC NE WS	960	<b>1323710000</b>
DEK 5/8-11.5 MC SDR	100	<b>1341610000</b>
DEK 5/8-11.5 MC NE WS	500	<b>1341630000</b>
THM UR20 GE	1	<b>1429910000</b>
THM UR20 WS	1	<b>1429420000</b>
ESO UR20 DIN A4 WS	10	<b>1429430000</b>

UR20-PK-2799510000-SP	1	<b>2832900000</b>
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.

# DeviceNet™ fieldbus coupler

## Web server tool, PCB plug-in connector

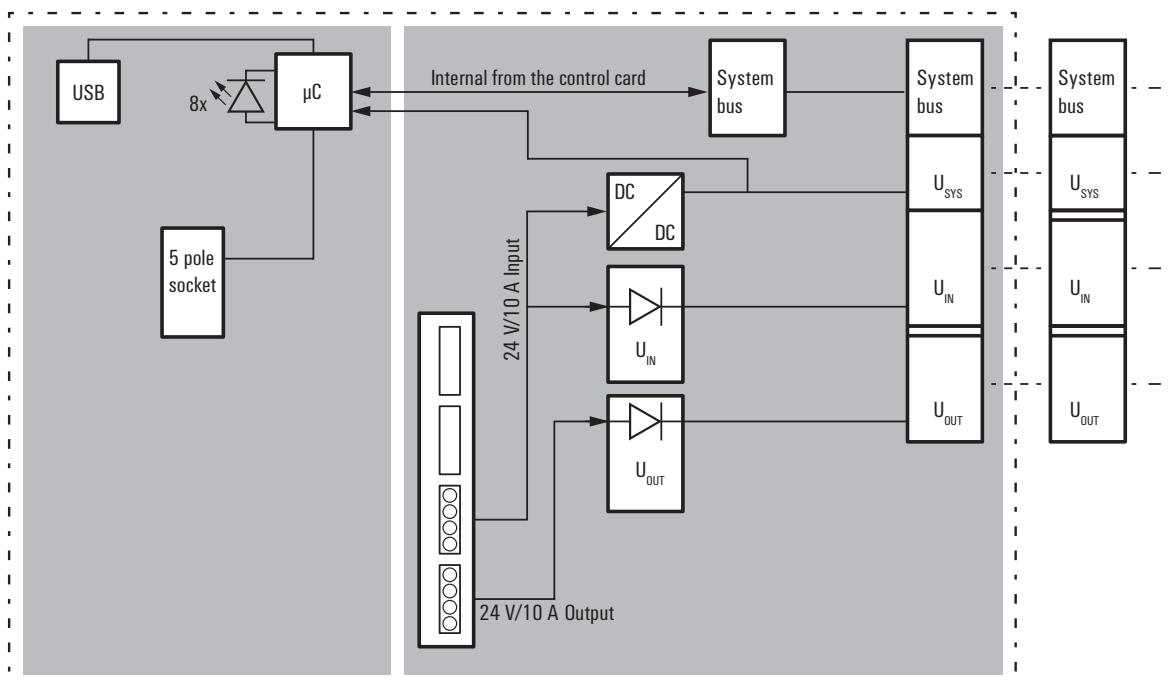
DeviceNet™ is a serial, CAN-based field bus system, which was developed by Allen-Bradley and later on passed as an open standard to the ODVA (Open DeviceNet™ Vendor Association). Today it is used worldwide in automation technology. DeviceNet™ can be operated with a maximum of 64 network nodes per field bus segment. The fieldbus coupler UR20-FBC-DN is connected via a 5-pin PCB connector to the network. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

C

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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the DeviceNet™ 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 DeviceNet™ fieldbus coupler





**DeviceNet™**

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

**UR20-FBC-DN**



**Technical data**

System data	
Connection type	Socket for 5-pole PCB plug-in connector
Field bus protocol	DeviceNet
Process data	1008 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	500 kbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>N</sub> (power segment of the field bus coupler), typ.	75 mA (+15 mA from DeviceNet supply)
General data	
Weight	220 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of EDS-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

Type	Qty.	Order No.
UR20-FBC-DN	1	1334900000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

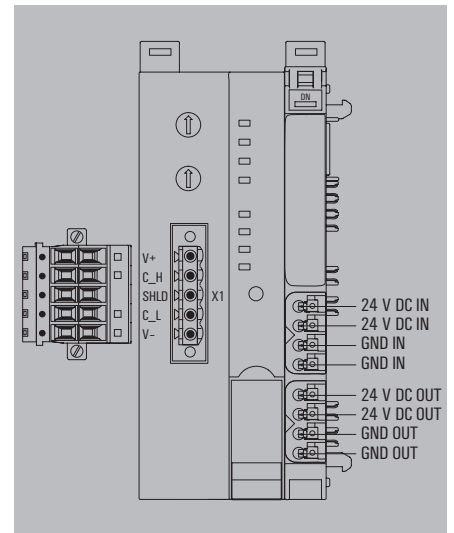
**Ordering data**

Module variants	
	Field bus coupler, DeviceNet
Note	

**Accessories**

	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
	Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
	USB cable (USB A to Micro USB)	IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts				
	PCB plug-in connector, socket plug, 5 pole, 10 pin	BLDZ DN5.08/05/180F GY BX PRT	50	1919990000
	Plug-in connector unit	UR20-PK-1334900000-SP	5	2003540000
Note				
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.				

Type	Qty.	Order No.
UR20-FBC-DN	1	1334900000
A termination kit (UR20-EBK-ACC) is included in the coupler package		



**C**

# CANopen<sup>®</sup> fieldbus coupler

## Web server tool; Sub-D connection



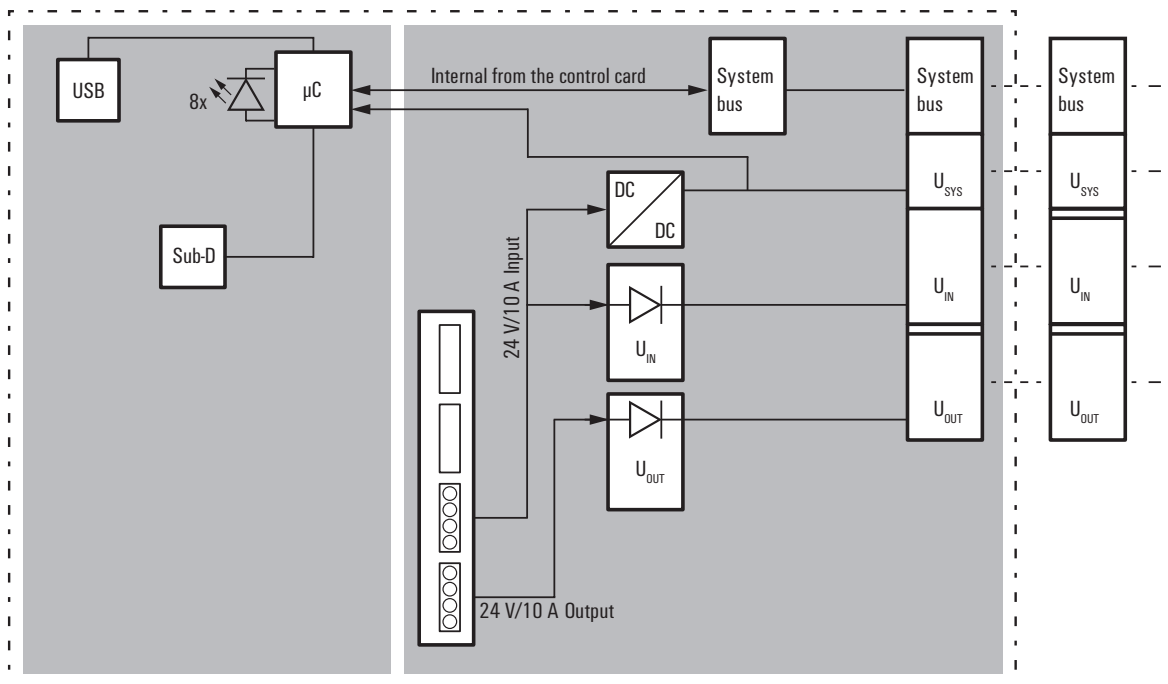
**C**

The CAN bus (Controller Area Network) is a serial field bus, which was introduced in 1983 by Bosch and Intel. Due to the good characteristics it is particularly suitable for applications where high data security is required. The fieldbus coupler UR20-FBC-CAN uses the CAN based Layer 7 communication protocol CANopen<sup>®</sup>, the device profile CiA DS401 for digital and analog I/O modules is supported. 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. 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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the CANopen<sup>®</sup> 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 CANopen<sup>®</sup> fieldbus coupler



**CANopen®**

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

**UR20-FBC-CAN****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

**General data**

Weight  
Dimensions H x W x D

**Note**

SUB-D9 (male plug)

CANopen

488 Byte

244 Byte

244 Byte

64

Micro USB 2.0

1 Mbit/s

48 Mbit/s

24 V DC +20 %/-15 %

24 V DC +20 %/-15 %

10 A

10 A

90 mA

220 g

120 mm / 52 mm / 76 mm

Download of EDS-file on [www.weidmueller.com](http://www.weidmueller.com)**Ordering data****Module variants**

Field bus coupler, CANopen

**Note****Accessories**

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

**Note**

Type	Qty.	Order No.
UR20-FBC-CAN	1	1334890000

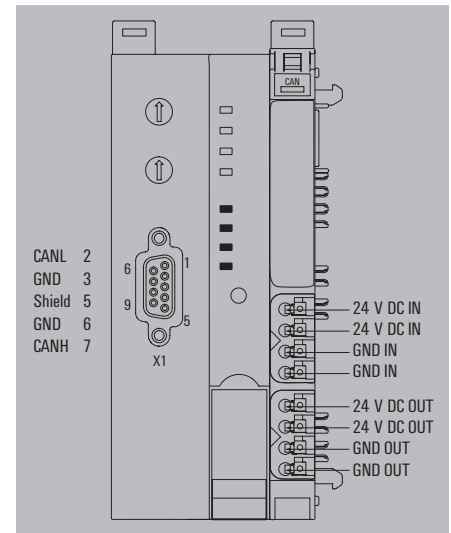
A termination kit (UR20-EBK-ACC) is included in the coupler package

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-1334890000-SP	5	2003530000
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1 roll = 1000 label = 1 Qty.

1 sheet = 60 label = 1 Qty.



# POWERLINK fieldbus coupler

## Web server tool, two RJ45 Ports, 100 Mbit/s



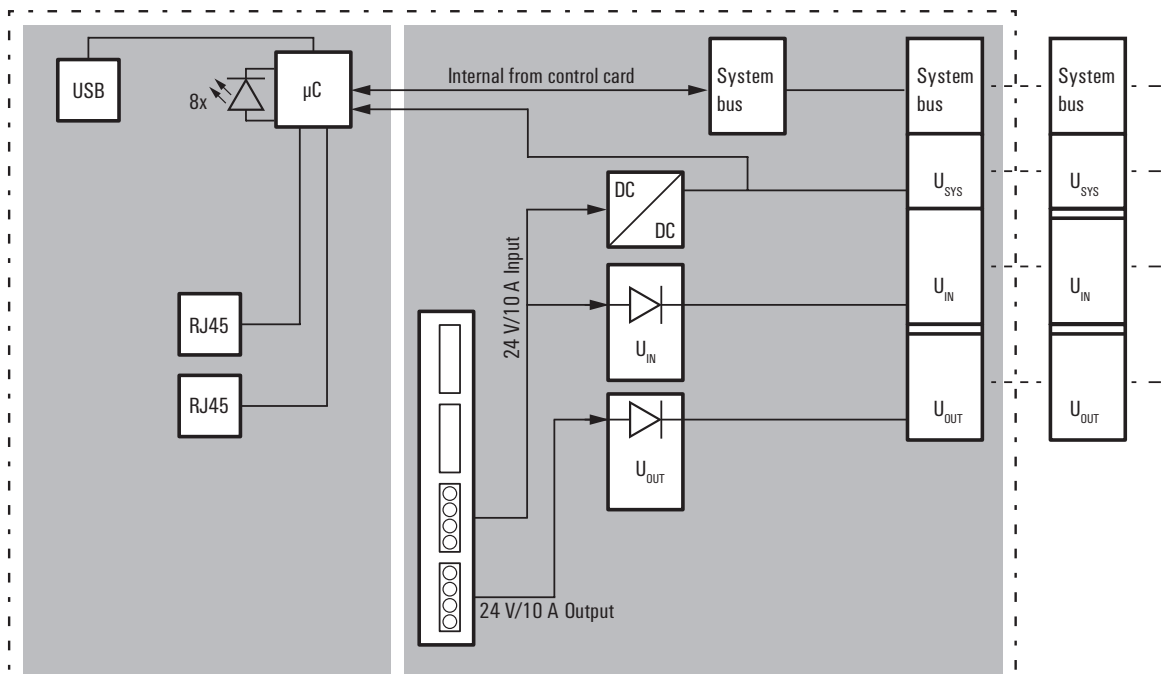
The POWERLINK fieldbus coupler supports the Industrial Ethernet standard. An integrated web server enables system diagnostics even before the controller is connected. The UR20-FBC-PL fieldbus coupler is a Ethernet POWERLINK Standardization Group (EPSG)-certified Ethernet POWERLINK device. It is the head module for the u-remote system bus, to which up to 64 active u-remote modules can be connected. The POWERLINK coupler has two Ethernet connections, the integrated hub has a supports a line network structure.

### C

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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

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

### Block diagram POWERLINK fieldbus Coupler



**POWERLINK**

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Address can be set using rotary switch

**UR20-FBC-PL****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

2x RJ45 plug-in connectors  
POWERLINK  
2980 Byte  
4 kByte  
3008 Byte  
64  
Micro USB 2.0  
100 Mbit/s  
48 Mbit/s

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %  
24 V DC +20 %/ -15 %  
10 A  
10 A  
100 mA

**General data**

Weight  
Dimensions H x W x D

224 g  
120 mm / 52 mm / 76 mm

**Note**

Download of XDD-files on [www.weidmuller.com](http://www.weidmuller.com)

**Ordering data****Module variants**

Field bus coupler, POWERLINK

**Note**

Type	Qty.	Order No.
UR20-FBC-PL	1	1334940000

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

**Accessories**

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)

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000

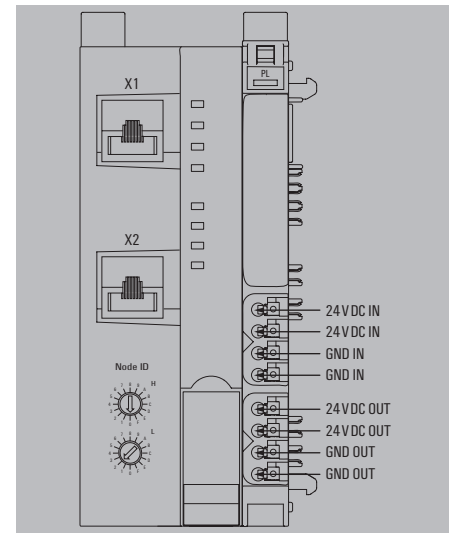
**Replacement parts**

Plug-in connector unit

**Note**

UR20-PK-1334940000-SP	5	2425170000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



# CC-Link V2 fieldbus coupler

## Web server tool, PCB plug-in connector, 10 Mbit/s



CC-Link V2 is an industrial network for automation that can transmit both control data and information at high speed, ensuring efficient, integrated system or process automation.

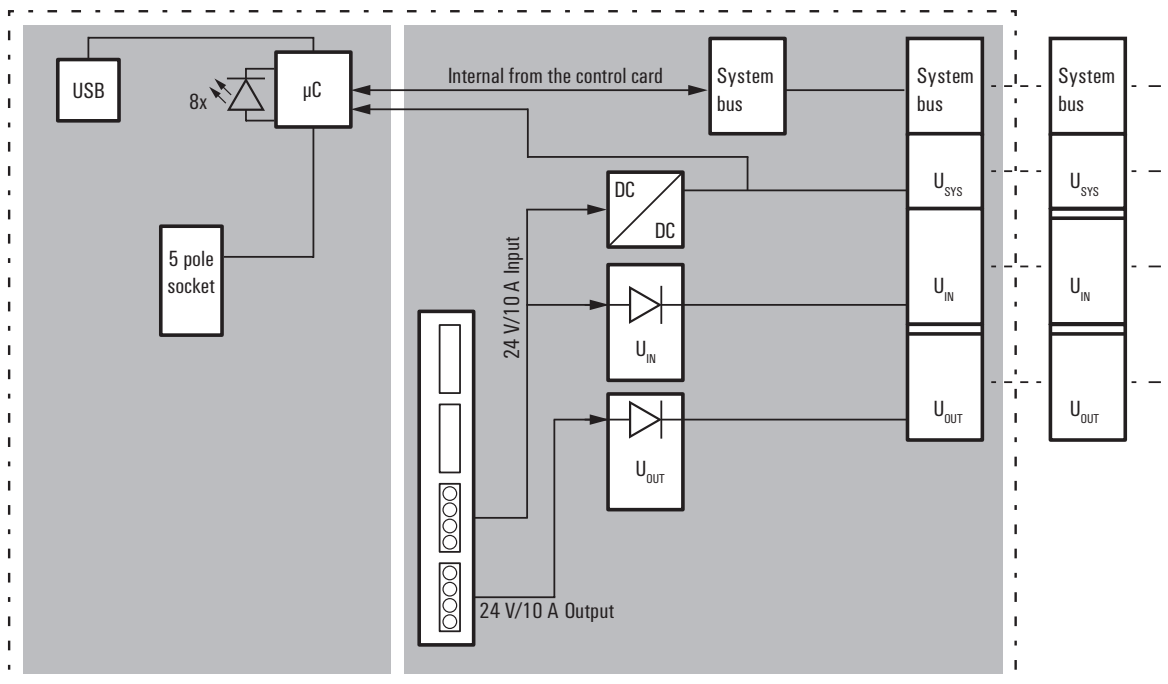
With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The fieldbus coupler has a 5-pole PCB connector with integrated switch for implementing a line network structure.

### C

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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

CC-Link products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. the use of CSP files. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram CC-Link V2 fieldbus coupler



### CC-Link V2

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- CC-Link V2 capable

### UR20-FBC-CC



### Technical data

System data	
Connection type	Socket for 5-pole PCB plug-in connector
Field bus protocol	CC-Link
Process data	512 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	10 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 % / -15 %
Supply voltage for outputs	24 V DC +20 % / -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	85 mA
General data	
Weight	320 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of CSP-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

### Ordering data

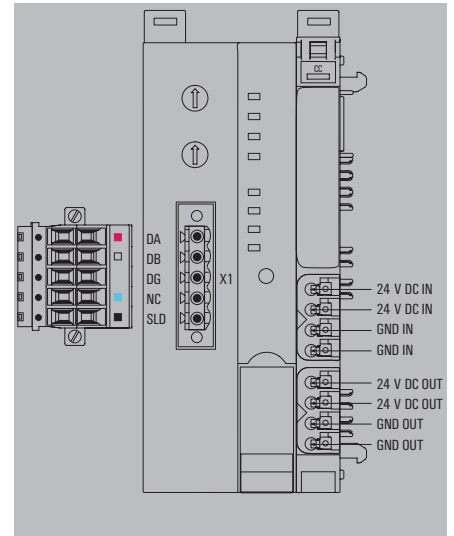
Module variants	
	Field bus coupler, CC-Link
Note	

### Accessories

	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
Note	

Type	Qty.	Order No.
UR20-FBC-CC	1	2625010000
A termination kit (UR20-EBK-ACC) is included in the coupler package.		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		
UR20-PK-2625010000-SP	5	2625060000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



# CC-Link IE TSN fieldbus coupler

Web server tool,  
two RJ45 Ports, 1 Gbit/s



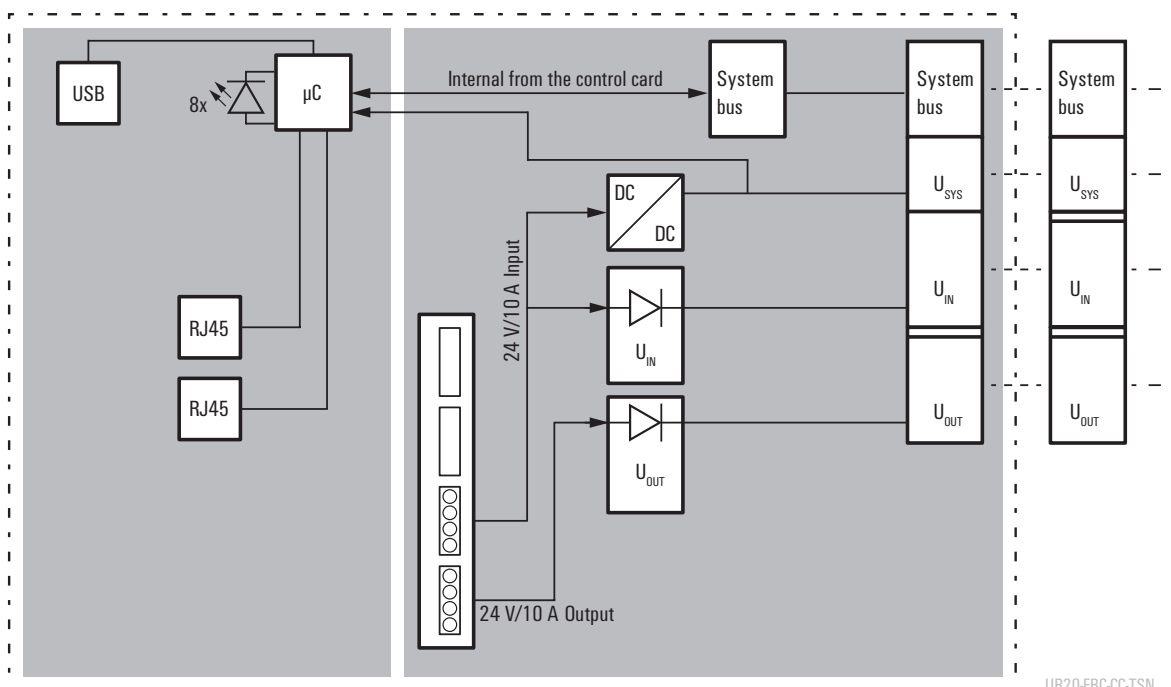
CC-Link IE TSN combines gigabit bandwidth with Time-Sensitive Networking (TSN) standards as an open industrial Ethernet. CC-Link IE TSN is a key technology for the convergence of operational technology (OT) and information technology (IT). It can connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

## C

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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

CC-Link IE TSN products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. using a CSP file and diagnostic messages. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram CC-Link IE TSN fieldbus coupler





**CC-Link IE TSN**

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

**UR20-FBC-CC-TSN****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

**General data**

Weight  
Dimensions H x W x D

**Note**

2x RJ45 plug-in connectors

CC-Link IE TSN

1024 Byte

4 kByte

3008 Byte

64

Micro USB 2.0

1 Gbit/s

48 Mbit/s

24 V DC +20 %/ -15 %

24 V DC +20 %/ -15 %

10 A

10 A

140 mA

210 g

120 mm / 52 mm / 76 mm

Download of CSP-file on [www.weidmueller.com](http://www.weidmueller.com)**Ordering data****Module variants**

Field bus coupler, CC-Link IE TSN

**Note****Accessories**

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

**Note**

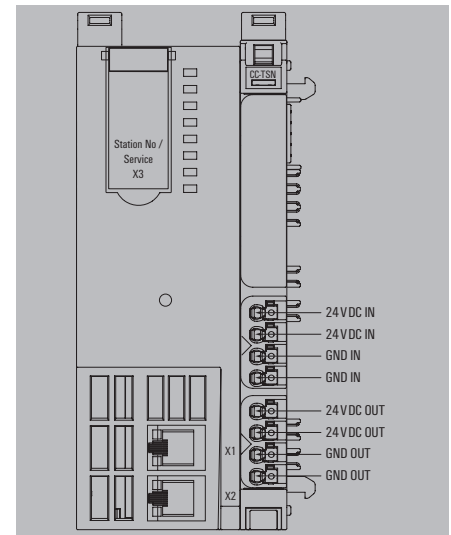
Type	Qty.	Order No.
UR20-FBC-CC-TSN	1	2680260000

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

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-2680260000-SP	5	2699160000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



# IEC 61162-450 fieldbus coupler

Web server tool,  
two RJ45 Ports, 100 Mbit/s

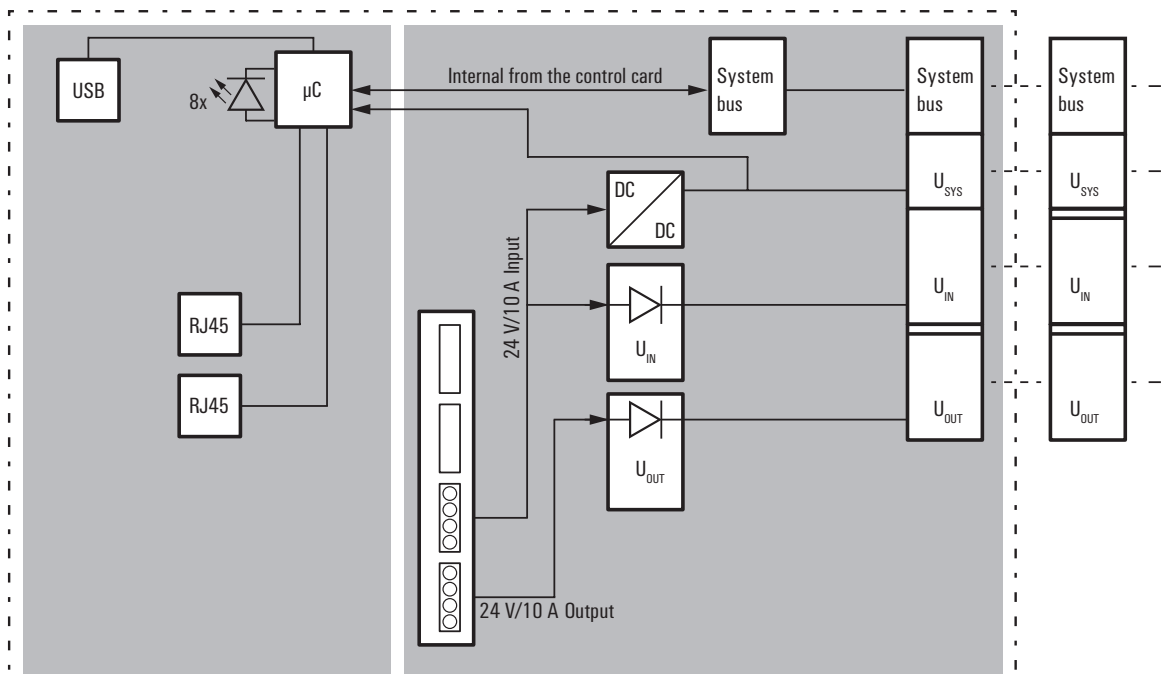
# IEC 61162-450

IEC 61162-450 specifies physical interface requirements as well as protocols and data formats for high-speed communication on ships, such as for wireless or navigation equipment and other ship systems. The fieldbus coupler can connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

**C**

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 fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

**Block diagram IEC 61162-450 fieldbus coupler**



**IEC 61162-450**

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- SNGF device according IEC 61162-450

**Technical data****System data**

Connection type  
Field bus protocol  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{in}$  (input current path), max.  
Feed current for  $I_{out}$  (output current path), max.  
Current consumption  $I_M$  (power segment of the field bus coupler), typ.

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Field bus coupler, IEC 61162-450

**Note****Accessories**

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

**Note****UR20-FBC-IEC61162-450**

2x RJ45 plug-in connectors

IEC 61162-450

64

Micro USB 2.0

100 Mbit/s

48 Mbit/s

24 V DC +20 %/ -15 %

24 V DC +20 %/ -15 %

10 A

10 A

112 mA

314 g

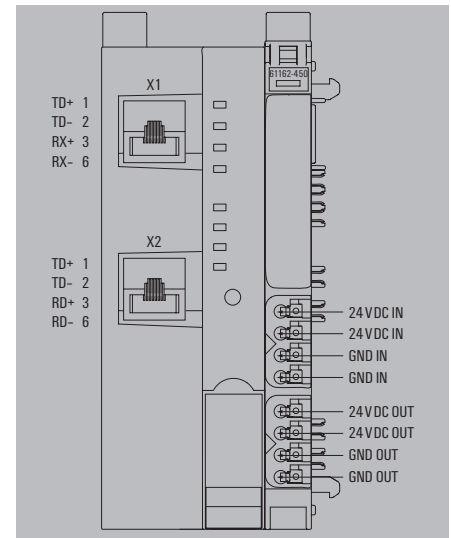
120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UR20-FBC-IEC61162-450	1	2661310000

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

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-2661310000-SP	5	2680540000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.

## Digital input modules

### P- or N-switching, Reverse polarity protection, up to 3-wire+FE

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 coordinated project planning with reserve potential.

All modules are available with 4, 8 or 16 inputs and comply fully with IEC 61131-2. The digital input modules are available as P- or N-switching variant. 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  $\mu$ s resolution. Further solutions are possible with the module UR20-4DI-2W-230V-AC which works with accurate current up to 230 V as an input signal.

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

UR20-4DI-P



UR20-4DI-P-3W



UR20-8DI-P-2W



UR20-8DI-P-3W



UR20-8DI-P-3W-HD



UR20-16DI-P



UR20-16DI-P-PLC-INT



UR20-2DI-P-TS



UR20-4DI-P-TS



UR20-4DI-N



UR20-8DI-N-3W



UR20-16DI-N



UR20-16DI-N-PLC-INT



UR20-4DI-2W-230V-AC



UR20-8DI-ISO-2W



**4DI-P**

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- Reverse polarity protection
- 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 speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
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 x W x D

**Note****UR20-4DI-P**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
10 mA + load

4  
Types 1 and 3, EN 61131-2  
configurable  
<5 V  
> 11 V  
Yes  
2-wire, 3-wire, 3-wire + FE  
Yes  
Yes  
No

87 g  
120 mm / 11.5 mm / 76 mm

**Ordering data****Module variants**

Digital input module, 4 channels

**Note**

Type	Qty.	Order No.
UR20-4DI-P	1	1315170000

**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

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

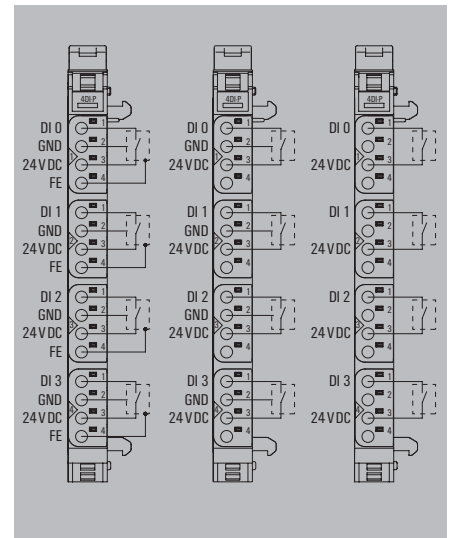
**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

UR20-EM-1315170000-SP	1	1346640000
UR20-BM-SP	5	1350930000
UR20-PK-1315170000-SP	5	1346440000

**Note**

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



## I/O system IP20 – Digital input modules

### 4DI-P-3W

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

### UR20-4DI-P-3W



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	4
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
Supply		
Voltage supply	24 V DC +20 % / -15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	10 mA + load	
Digital inputs		
Number of digital inputs	4	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

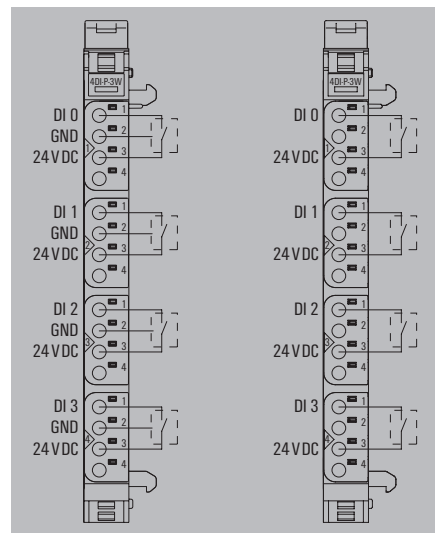
Module variants	
	Digital input module, 4 channels, 3-wire
Note	

Type	Qty.	Order No.
UR20-4DI-P-3W	1	2009360000

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2009360000-SP	1	2011260000
UR20-BM-SP	5	1350930000
UR20-PK-2009360000-SP	5	2011240000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**8DI-P-2W**

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

**UR20-8DI-P-2W****Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
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 x W x D

**Note**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 % / -15 %, via the system bus  
8 mA

8  
Types 1 and 3, EN 61131-2  
configurable  
< 5 V  
> 11 V  
Yes  
2-wire  
Yes  
Yes  
No

85 g  
120 mm / 11.5 mm / 76 mm

**Ordering data****Module variants**

Digital input module, 8 channels, 2-wire

**Note**

Type	Qty.	Order No.
UR20-8DI-P-2W	1	1315180000

**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

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

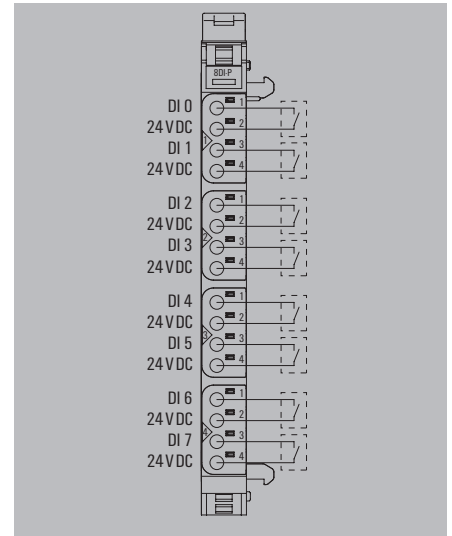
**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

UR20-EM-1315180000-SP	1	1490220000
UR20-BM-SP	5	1350930000
UR20-PK-1315180000-SP	5	1346430000

**Note**

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



## I/O system IP20 – Digital input modules

### 8DI-P-3W

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- 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	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	<22 mA + sensor feed
Digital inputs	
Number of digital inputs	8
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital input module, 8 channels, 3-wire
Note	

### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

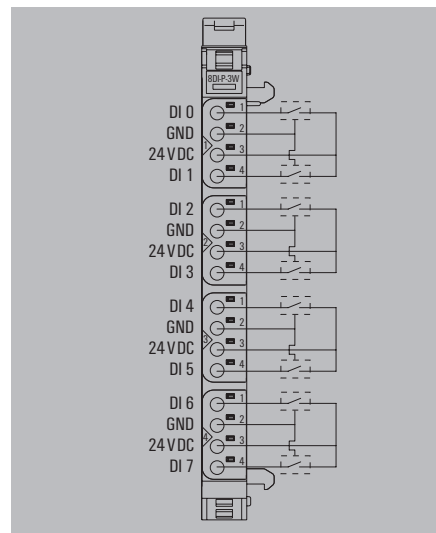
### UR20-8DI-P-3W



System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
Supply		
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_M$ (the respective power segment)	<22 mA + sensor feed	
Digital inputs		
Number of digital inputs	8	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	83 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

Type	Qty.	Order No.
UR20-8DI-P-3W	1	1394400000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Replacement parts		
UR20-EM-1394400000-SP	1	1346650000
UR20-BM-SP	5	1350930000
UR20-PK-1394400000-SP	5	1411430000
Note		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		





**8DI-P-3W-HD**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- 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 speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
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 x W x D

**Note****Ordering data****Module variants**

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

**Note****Accessories**

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

**Connector and tools**

<sup>\*)</sup> HD plug  
<sup>\*)</sup> Stripping tool  
<sup>\*)</sup> Pressing tool

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-8DI-P-3W-HD**

Note: Please order connector separately

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
<22 mA + sensor feed

8  
Types 1 and 3, EN 61131-2  
configurable  
<5 V  
> 11 V  
Yes  
2-wire, 3-wire  
Yes  
Yes  
No

66 g  
120 mm / 11.5 mm / 76 mm

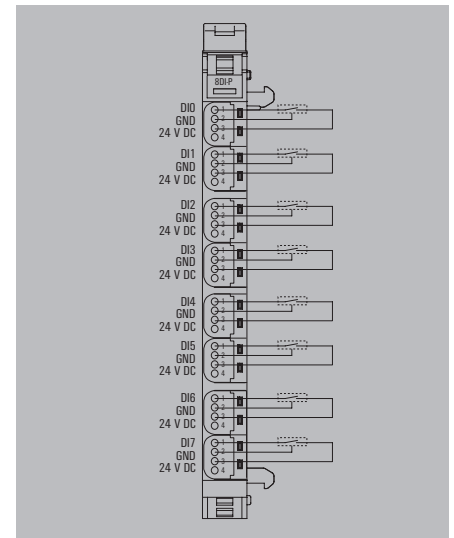
Type	Qty.	Order No.
UR20-8DI-P-3W-HD	1	1315190000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	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

UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000

UR20-EM-1315190000-SP	1	1346670000
UR20-BM-SP	5	1350930000
UR20-PK-1315190000-SP	5	1518800000

Note: please order plug (1469340000) separately.



## I/O system IP20 – Digital input modules

### 16DI-P

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

### UR20-16DI-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<25 mA
Digital inputs	
Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2
Input filter	3 ms
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	No
Sensor connection	Single-conductor
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	44 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

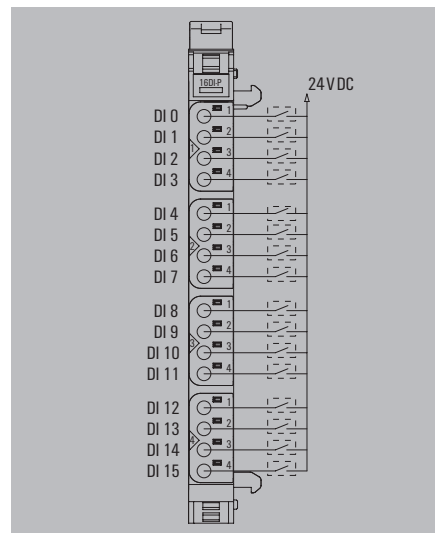
Type	Qty.	Order No.
UR20-16DI-P	1	1315200000

#### Ordering data

Module variants	
	Digital input module, 16 channels
Note	

#### Accessories

	Coding elements	KOSM BHZ5.00	100	1483050000
	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
	Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
Replacement parts				
	Electronic module	UR20-EM-1315200000-SP	1	1346680000
	Basic module	UR20-BM-SP	5	1350930000
	Plug-in connector unit	UR20-PK-1315200000-SP	5	1346400000
Note				
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.				



**16DI-P-PLC-INT**

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

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_{M1}$  (power segment of the field bus coupler), typ.  
Current consumption  $I_{M2}$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
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 x W x D

**Note****Ordering data****Module variants**

Digital input module, 16 channels, PLC interface

**Note****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

**Connector and cable**

PLC interface element  
Pre-assembled cable, 1m

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-16DI-P-PLC-INT**

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

16  
Types 1 and 3, EN 61131-2  
3 ms  
< 5 V  
> 11 V  
external  
PLC-Interface  
Yes  
Yes  
No

85 g  
120 mm / 11.5 mm / 76 mm

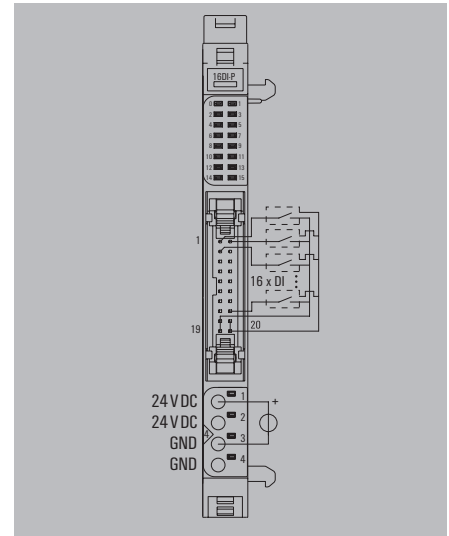
Type	Qty.	Order No.
UR20-16DI-P-PLC-INT	1	1315210000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010

UR20-EM-1315210000-SP	1	1346690000
UR20-BM-SP	5	1350930000
UR20-PK-1315210000-SP	5	1346590000

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



## I/O system IP20 – Digital input modules

### 2DI-P-TS

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

### UR20-2DI-P-TS



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	2
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Time stamp data width	16 Bit
Time stamp resolution	1 µs
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
Supply		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	10 mA + load	
Digital inputs		
Number of digital inputs	2	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Time stamp data width	16 Bit	
Time stamp resolution	1 µs	
General data		
Weight	83 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

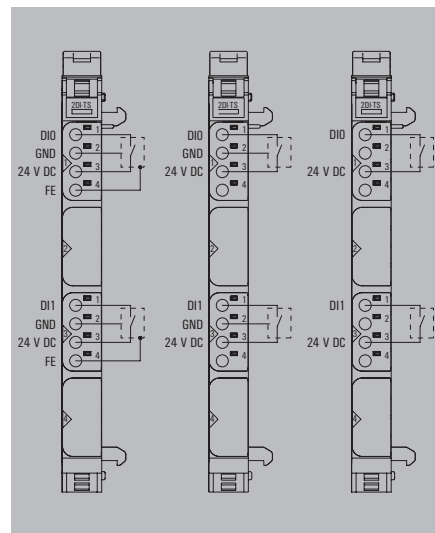
Module variants	
Digital input module, 2 channels, Timestamp	
Note	

Type	Qty.	Order No.
UR20-2DI-P-TS	1	1460140000

#### 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	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
UR20-EM-1460140000-SP	1	1463690000
UR20-BM-SP	5	1350930000
UR20-PK-1460140000-SP	5	1484110000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 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
- 1 µs Timestamp resolution
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

### UR20-4DI-P-TS



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	4
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Time stamp data width	16 Bit
Time stamp resolution	1 µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

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

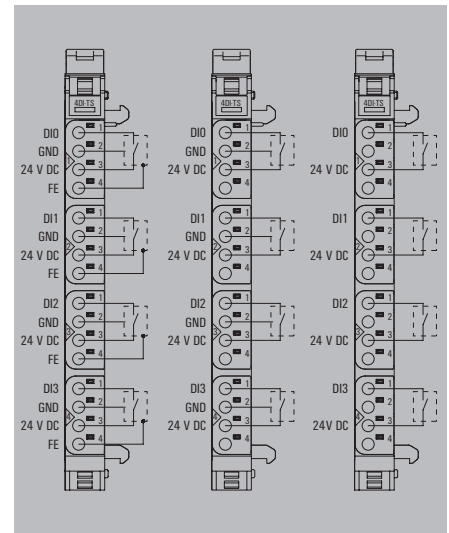
#### Ordering data

Module variants	
Digital input module, 4 channels, Timestamp	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-1460150000-SP	1	1463680000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1460150000-SP	5	1484430000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

Type	Qty.	Order No.
UR20-EM-1460150000-SP	1	1463680000
UR20-BM-SP	5	1350930000
UR20-PK-1460150000-SP	5	1484430000



## C

## I/O system IP20 – Digital input modules

### 4DI-N

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Negative switching
- 2-wire, 3-wire, 3-wire+FE connection
- Reverse polarity protection
- 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	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	4
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	> -5 V referred to +24 V of the input power supply $U_N$
Input voltage, high	< 11 V referred to +24 V of the input power supply $U_N$
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital input module, 4 channels
Note	

### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

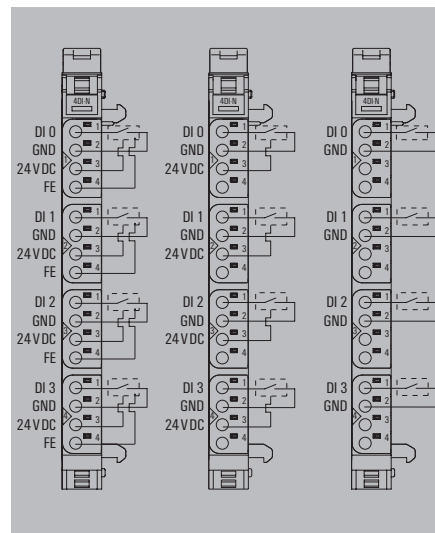
### UR20-4DI-N



u-remote system bus	48 Mbit
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	8 mA
10 mA + load	
4	Types 1 and 3, EN 61131-2
configurable	> -5 V referred to +24 V of the input power supply $U_N$
< 11 V referred to +24 V of the input power supply $U_N$	Yes
Yes	2-wire, 3-wire, 3-wire + FE
Yes	Yes
Yes	Yes
No	
87 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-4DI-N	1	1315350000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1315350000-SP	1	1346870000
UR20-BM-SP	5	1350930000
UR20-PK-1315350000-SP	5	1559770000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**8DI-N-3W**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Negative switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- 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 speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_M$  (power segment of the field bus coupler), typ.  
Current consumption  $I_M$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
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 x W x D

**Note****Ordering data****Module variants**

Digital input module, 8 channels, 3-wire

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-8DI-N-3W**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
<20 mA + sensor feed

8  
Types 1 and 3, EN 61131-2  
configurable  
> - 5 V referred to +24 V of the input power supply  $U_M$   
< 11 V referred to +24 V of the input power supply  $U_M$   
Yes  
2-wire, 3-wire  
Yes  
Yes  
No

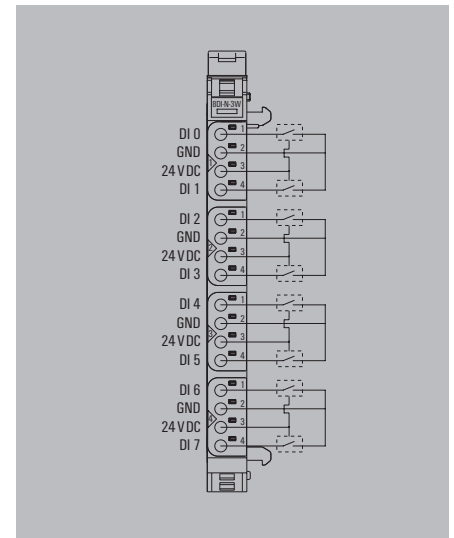
83 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-8DI-N-3W	1	1315370000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-1315370000-SP	1	1346880000
UR20-BM-SP	5	1350930000
UR20-PK-1315370000-SP	5	1559780000

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



**16DI-N**

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

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<15 mA
<b>Digital inputs</b>	
Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2
Input filter	3 ms
Input voltage, low	> - 5 V referred to +24 V of the input power supply U <sub>N</sub>
Input voltage, high	< 11 V referred to +24 V of the input power supply U <sub>N</sub>
Sensor supply	No
Sensor connection	Single-conductor
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
<b>General data</b>	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
	Digital input module, 16 channels
<b>Note</b>	

**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	
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

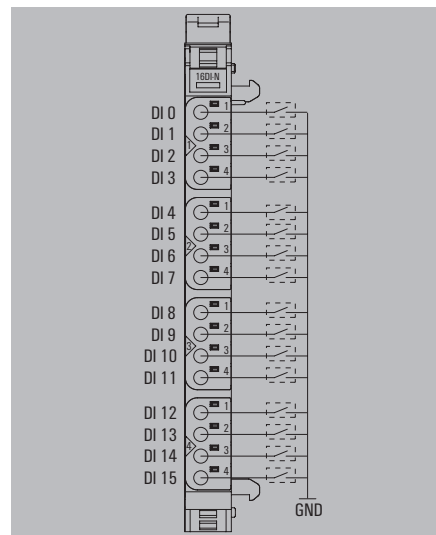
**UR20-16DI-N**



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	<15 mA	
<b>Digital inputs</b>		
Number of digital inputs	16	
Type	Types 1 and 3, EN 61131-2	
Input filter	3 ms	
Input voltage, low	> - 5 V referred to +24 V of the input power supply U <sub>N</sub>	
Input voltage, high	< 11 V referred to +24 V of the input power supply U <sub>N</sub>	
Sensor supply	No	
Sensor connection	Single-conductor	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
<b>General data</b>		
Weight	86 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

Type	Qty.	Order No.
UR20-16DI-N	1	1315390000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
<b>Replacement parts</b>		
UR20-EM-1315390000-SP	1	1346920000
UR20-BM-SP	5	1350930000
UR20-PK-1315390000-SP	5	1559790000
<b>Note</b>		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		





**16DI-N-PLC-INT**

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

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_{IN}$ (the respective power segment)	<15 mA
Digital inputs	
Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2
Input filter	3 ms
Input voltage, low	> -5 V referred to +24 V of the input power supply $U_{IN}$
Input voltage, high	< 11 V referred to +24 V of the input power supply $U_{IN}$
Sensor supply	external
Sensor connection	PLC-Interface
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	82 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

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

**Accessories**

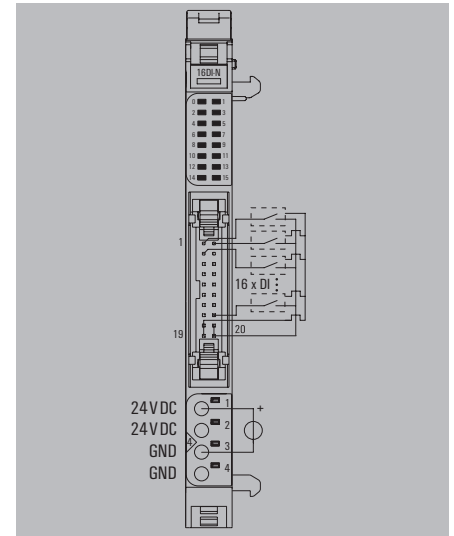
Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Connector and cable			
PLC interface element	RS 16IO 1W H S	1	9445700000
Pre-assembled cable, 1m	PAC-UNIV-HE20-LCH-1M	1	7789306010
Replacement parts			
Electronic module	UR20-EM-1315400000-SP	1	1346930000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315400000-SP	5	1559800000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

**UR20-16DI-N-PLC-INT**

Type		
Type	Qty.	Order No.
UR20-16DI-N-PLC-INT	1	1315400000

Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

Type		
Type	Qty.	Order No.
RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010
UR20-EM-1315400000-SP	1	1346930000
UR20-BM-SP	5	1350930000
UR20-PK-1315400000-SP	5	1559800000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 8DI-ISO-2W

- 8 digital inputs for sensors
- Insulation up to 500 V
- 2-wire connection
- Reverse polarity protection
- Types 1 and 3 acc. to IEC 61131-2

### UR20-8DI-ISO-2W



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	no
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	No
Digital inputs	
Number of digital inputs	8
Type	Types 1 and 3, EN 61131-2
Input filter	Input delay adjustable from 0 to 40 ms
Input voltage, low	<10 V
Input voltage, high	> 11 V
Sensor supply	No
Sensor connection	2-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Insulation	500 V (channel to channel), 500 V (channel to supply voltage)
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

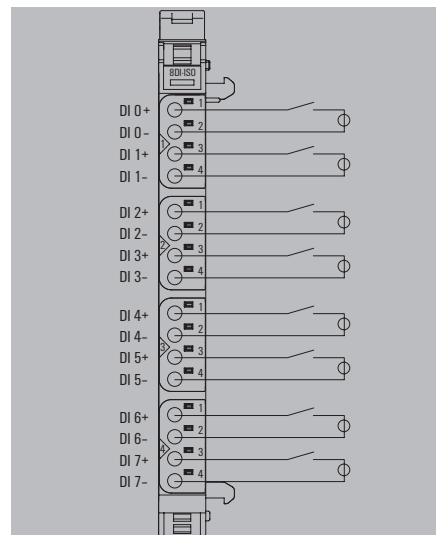
Type	Qty.	Order No.
UR20-8DI-ISO-2W	1	2457240000

#### Ordering data

Module variants	
	Digital input module, 8 channels, isolated
Note	

#### Accessories

	Coding elements	KOSM BHZ5.00	100	1483050000
	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
	Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts				
	Electronic module	UR20-EM-2457240000-SP	1	2545780000
	Basic module	UR20-BM-SP	5	1350930000
	Plug-in connector unit	UR20-PK-2457240000-SP	5	2545760000
Note				
		1 roll = 1000 label = 1 Qty.		
		1 sheet = 60 label = 1 Qty.		



### 4DI-2W-230V-AC

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire connection
- Input filter can be set channel by channel
- Galvanic isolation by 4 kV
- Types 3 acc. to IEC 61131-2

### Technical data

#### System data

Interface  
Transmission speed of system bus, max.  
Galvanic isolation  
Line-to-line voltage

#### Supply

Voltage supply  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.

#### Digital inputs

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Supply voltage (input)  
Input frequency  
Sensor supply  
Sensor connection  
Module diagnosis  
Individual channel diagnosis

#### General data

Weight  
Dimensions H x W x D

#### Note

### Ordering data

#### Module variants

Digital input module, 4 channels, 230V AC

#### Note

### 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

Electronic module  
Basic module  
Plug-in connector unit

#### Note

### UR20-4DI-2W-230V-AC



u-remote system bus  
48 Mbit  
500 V DC between the current paths  
400 V is possible between the channels

24 V DC +20 %/ -15 %, via the system bus  
8 mA

4  
Types 1 and 3, EN 61131-2  
configurable, 10 ms  
< 65 V  
≥ 80 V  
277 V AC (UL), 265 V AC (VDE)  
50 Hz, 60 Hz  
No  
2-wire  
Yes  
No

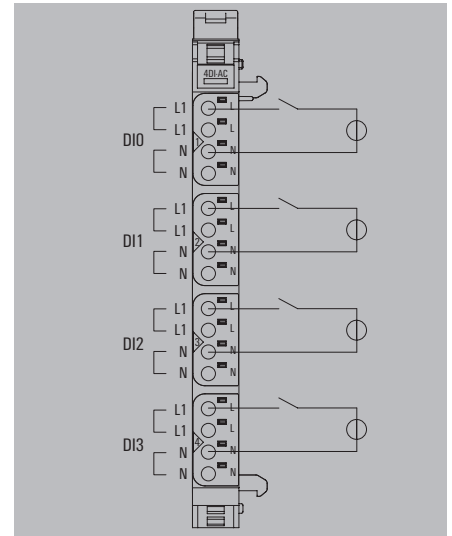
89 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DI-2W-230V-AC	1	1550070000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-1550070000-SP	1	1558880000
UR20-BM-SP	5	1350930000
UR20-PK-1550070000-SP	5	1559820000

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



## Digital output modules

### P- or N-switching, short-circuit-proof, up to 3-wire+FE

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. The digital output modules are available as P- or N-switching variant. 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 modules.

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



**4DO-P**

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

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-P**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
10 mA + load

4  
Lamp load, Ohmic, Inductive  
100  $\mu$ s  
250  $\mu$ s  
500 mA  
2000 mA

1 kHz  
0.2 Hz  
1 kHz  
2-wire, 3-wire, 3-wire + FE

Yes (thermal cut-out)  
Yes

Yes  
No  
<150 mJ / channel  
<100  $\mu$ s

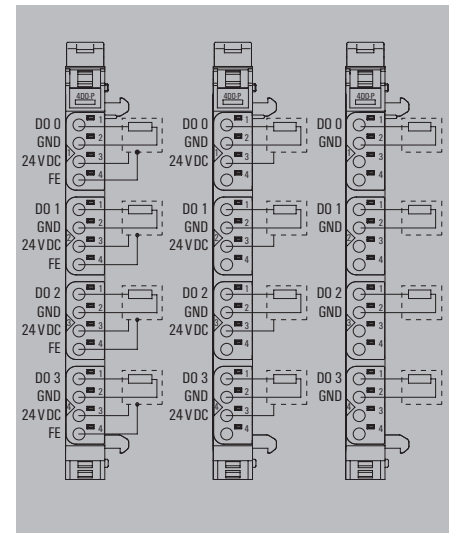
86 g  
120 mm / 11.5 mm / 76 mm

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

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-EM-1315220000-SP	1	1346700000
UR20-BM-SP	5	1350930000
UR20-PK-1315220000-SP	5	1483960000

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



## I/O system IP20 – Digital output modules

### 4D0-P-2A

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

### UR20-4D0-P-2A



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	10 mA + load
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	2000 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	< 150 mJ / channel
Response time of the protective circuit (current limiting)	< 100µs
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4D0-P-2A	1	1315230000

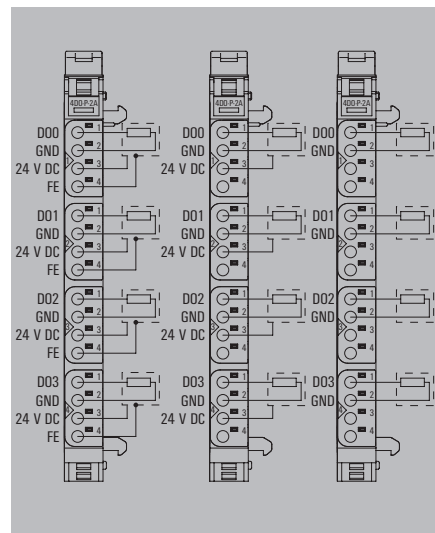
#### Ordering data

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

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD 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 = 60 label = 1 Qty.		



**4DO-PN-2A**

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

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital outputs**

Number of digital outputs  
Positive or negative switching  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-PN-2A**

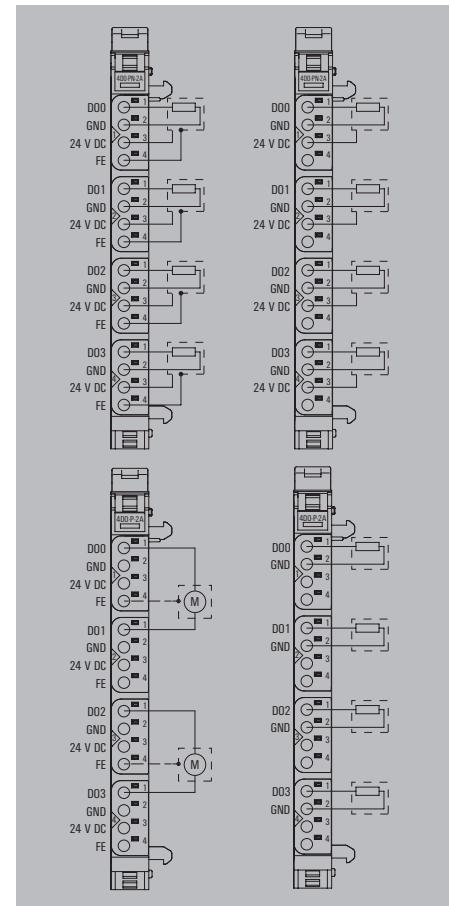
u-remote system bus  
48 Mbit  
500 V DC between the current paths  
24 V DC +20 %/ -15 %, via the system bus  
8 mA  
10 mA + load  
4  
Positive or negative switching  
Inductive, Ohmic, Lamp load  
100  $\mu$ s  
250  $\mu$ s  
2 A  
8000 mA  
1 kHz  
2 Hz  
1 kHz  
2-wire, 3-wire, 3-wire + FE  
Yes (thermal cut-out)  
Yes  
Yes  
No  
< 150 mJ / channel  
< 100  $\mu$ s

85 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DO-PN-2A	1	1394420000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1394420000-SP	1	1480950000
UR20-BM-SP	5	1350930000
UR20-PK-1394420000-SP	5	1483980000

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



## I/O system IP20 – Digital output modules

### 8DO-P

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

### UR20-8DO-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	15 mA + load
Digital outputs	
Number of digital outputs	8
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	4000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	2-wire
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	< 150 mJ / channel
Response time of the protective circuit (current limiting)	< 100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

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

For this and additional technical data, please refer to the manual available at [www.weidmueller.de](http://www.weidmueller.de).

#### Ordering data

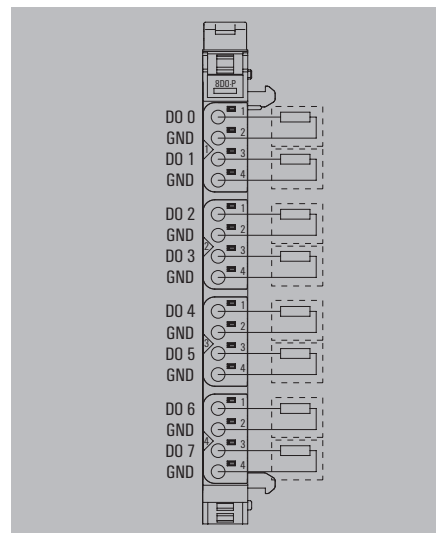
Module variants	
	Digital output module, 8 channels
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315240000-SP	1	1346720000
UR20-BM-SP	5	1350930000
UR20-PK-1315240000-SP	5	1346410000

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





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

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

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 8 channels, HD-plug

**Note****Accessories**

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

**Connector and tools**

<sup>\*)</sup> HD plug  
<sup>\*)</sup> Stripping tool  
<sup>\*)</sup> Pressing tool

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

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

Note: Please order connector separately

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
40 mA

8  
Lamp load, Ohmic, Inductive  
50  $\mu$ s  
100  $\mu$ s  
500 mA  
4000 mA

1 kHz  
0.2 Hz  
1 kHz  
2-wire  
Yes (thermal cut-out)  
Yes

Yes  
No  
< 150 mJ / channel  
< 100 $\mu$ s

66 g  
120 mm / 11.5 mm / 76 mm

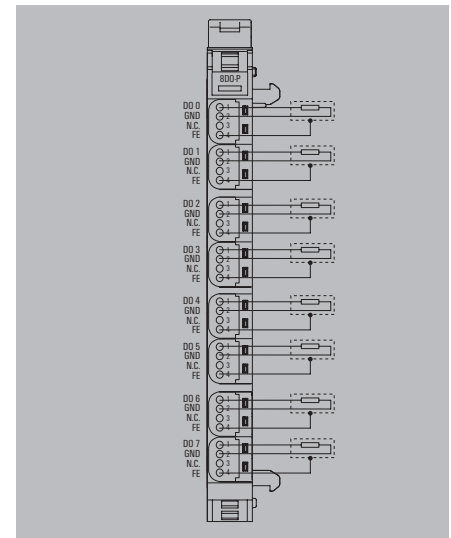
Type	Qty.	Order No.
UR20-8DO-P-2W-HD	1	1509830000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000

UR20-EM-1509830000-SP	1	1515450000
UR20-BM-SP	5	1350930000
UR20-PK-1509830000-SP	5	1559720000

Note: please order plug (1469340000) separately.



## I/O system IP20 – Digital output modules

### 16DO-P

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

### UR20-16DO-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	20 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-16DO-P	1	1315250000

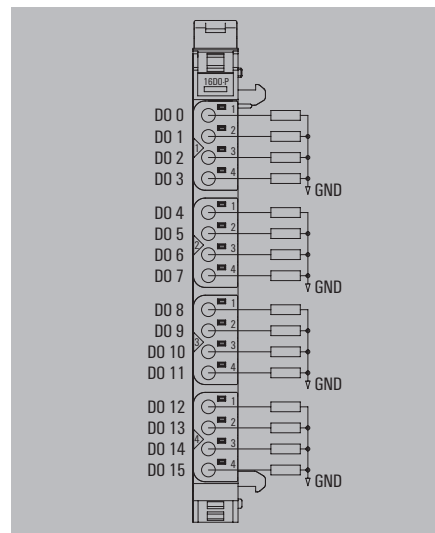
#### Ordering data

Module variants	
	Digital output module, 16 channels
Note	

#### 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		
	Electronic module	
	Basic module	
	Plug-in connector unit	
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315250000-SP	1	1346730000
UR20-BM-SP	5	1350930000
UR20-PK-1315250000-SP	5	1483990000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**16DO-P-PLC-INT**

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

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	20 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	PLC-Interface
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	< 150 mJ / channel
Response time of the protective circuit (current limiting)	< 100 $\mu$ s
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	
In case of supply via the ribbon cable, the maximum output current per module is 2 A.	

**Ordering data**

Module variants	
Digital output module, 16 channels, PLC interface	
Note	

**Accessories**

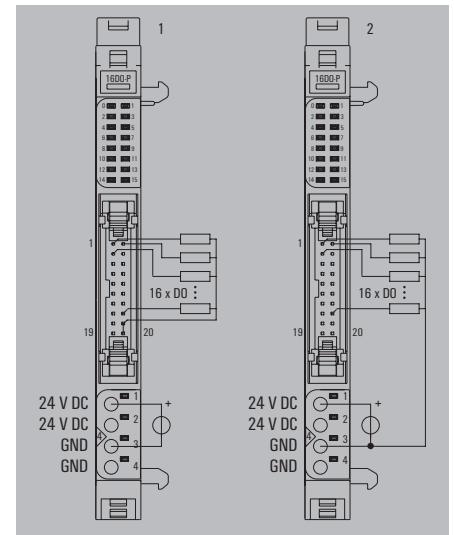
Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher custom printing	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (Material: Polyester)	
Thermotransfer version (material: polyester)	
Paper version for Laserprinter	
Connector and cable	
PLC interface element	
Pre-assembled cable, 1m	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

**UR20-16DO-P-PLC-INT**

u-remote system bus	
48 Mbit	
500 V DC between the current paths	
24 V DC +20 %/ -15 %, via the system bus	
8 mA	
20 mA + load	
16	
Lamp load, Ohmic, Inductive	
100 $\mu$ s	
250 $\mu$ s	
500 mA	
8000 mA	
1 kHz	
0.2 Hz	
1 kHz	
PLC-Interface	
Yes (thermal cut-out)	
Yes	
Yes	
No	
< 150 mJ / channel	
< 100 $\mu$ s	
85 g	
120 mm / 11.5 mm / 76 mm	
In case of supply via the ribbon cable, the maximum output current per module is 2 A.	

Type	Qty.	Order No.
UR20-16DO-P-PLC-INT	1	1315270000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010
UR20-EM-1315270000-SP	1	1346740000
UR20-BM-SP	5	1350930000
UR20-PK-1315270000-SP	5	1483940000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Digital output modules

### 4DO-N

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

### UR20-4DO-N



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	10 mA + load
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	2000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	< 150 mJ / channel
Response time of the protective circuit (current limiting)	< 100µs
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

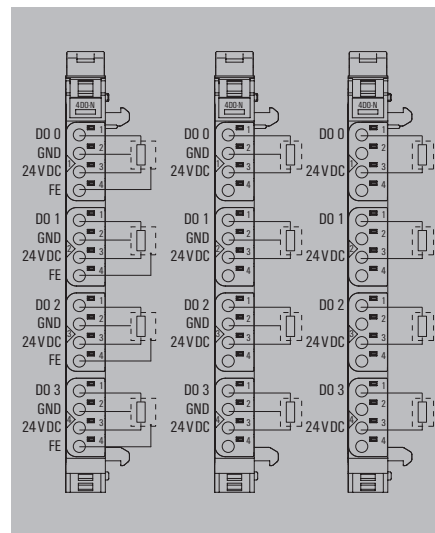
Module variants	
	Digital output module, 4 channels
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-4DO-N	1	1315410000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315410000-SP	1	1346940000
UR20-BM-SP	5	1350930000
UR20-PK-1315410000-SP	5	1559840000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**4DO-N-2A**

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

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels, 2 A

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-N-2A**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
10 mA + load

4  
Lamp load, Ohmic, Inductive  
100  $\mu$ s  
250  $\mu$ s  
2000 mA  
8000 mA

1 kHz  
2 Hz  
10 Hz  
2-wire, 3-wire, 3-wire + FE

Yes  
Yes  
Yes  
No  
< 150 mJ / channel  
< 100 $\mu$ s

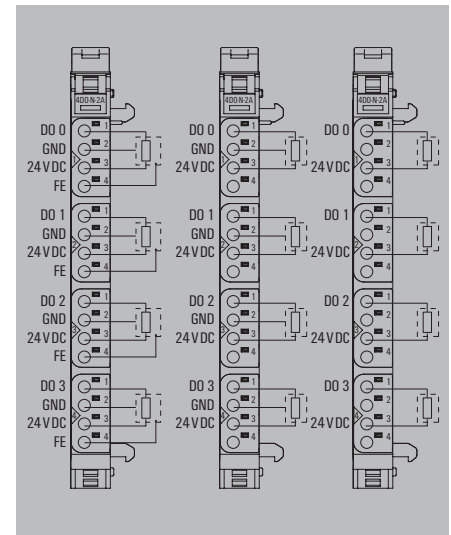
87 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DO-N-2A	1	1315420000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-EM-1315420000-SP	1	1346950000
UR20-BM-SP	5	1350930000
UR20-PK-1315420000-SP	5	1559850000

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



## I/O system IP20 – Digital output modules

### 8DO-N

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

### UR20-8DO-N



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	15 mA + load
Digital outputs	
Number of digital outputs	8
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	4000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	< 150 mJ / channel
Response time of the protective circuit (current limiting)	< 100µs
General data	
Weight	86.4 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-8DO-N	1	1315430000

#### Ordering data

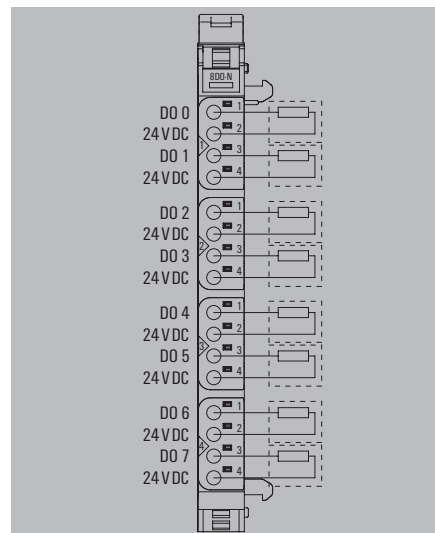
Module variants	
	Digital output module, 8 channels
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315430000-SP	1	1346970000
UR20-BM-SP	5	1350930000
UR20-PK-1315430000-SP	5	1984770000

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



**16DO-N**

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

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	30 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100 $\mu$ s
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Digital output module, 16 channels
Note	

**Accessories**

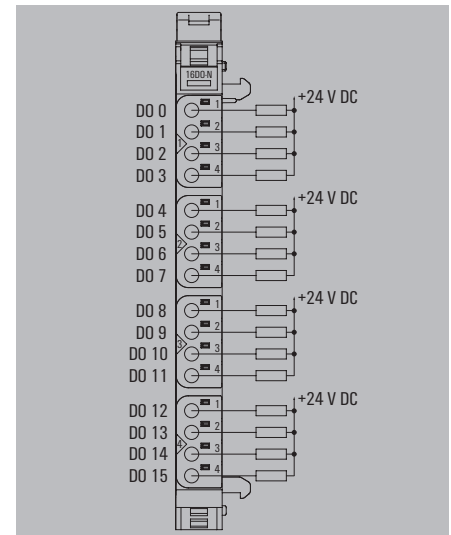
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher custom printing
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version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

**UR20-16DO-N**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	30 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100 $\mu$ s
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-16DO-N	1	1315440000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
UR20-EM-1315440000-SP	1	1346980000
UR20-BM-SP	5	1350930000
UR20-PK-1315440000-SP	5	2000520000
Note		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Digital output modules

### 16DO-N-PLC-INT

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

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	PLC-Interface
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Digital output module, 16 channels, PLC interface	
Note	

### 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	
Connector and cable	
PLC interface element	
Pre-assembled cable, 1m	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

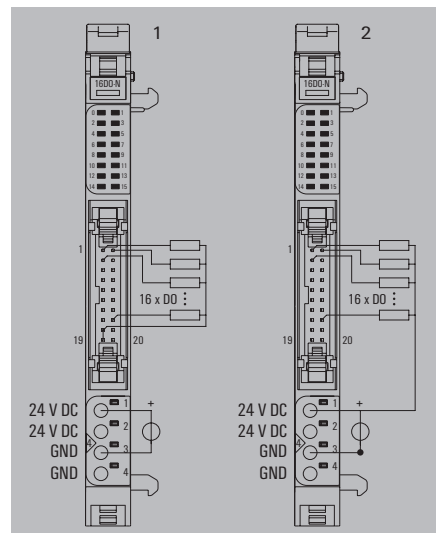
### UR20-16DO-N-PLC-INT



System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	PLC-Interface
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-16DO-N-PLC-INT	1	1315450000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Connector and cable		
RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010
Replacement parts		
UR20-EM-1315450000-SP	1	1346990000
UR20-BM-SP	5	1350930000
UR20-PK-1315450000-SP	5	2000540000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





**4DO-ISO-4A**

- 4 digital outputs
- Insulation up to 500 V between the channels
- Can be loaded up to 4 A per channel
- 2-wire connection
- Short-circuit-proof
- IEC 61131-2 compliant

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels, isolated

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-ISO-4A**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
30 mA

4  
Lamp load, Ohmic, Inductive  
250  $\mu$ s  
250  $\mu$ s  
4 A  
10 A

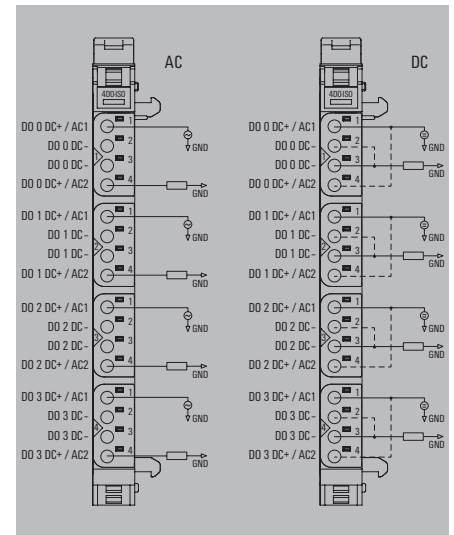
1 kHz  
0.2 Hz  
10 Hz  
2-wire  
Yes  
Yes  
Yes  
No  
<150 mJ / channel  
<100 $\mu$ s

91 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DO-ISO-4A	1	2457250000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-EM-2457250000-SP	1	2545790000
UR20-BM-SP	5	1350930000
UR20-PK-2457250000-SP	5	2545770000



## I/O system IP20 – Digital output modules

### 4RO-SSR-255

- 4 digital outputs
- Can be loaded up to 1 A per channel
- Solid state relay

### UR20-4RO-SSR-255



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	<15 mA
Digital outputs	
Number	4
Type	SSR / Triac
Max. response time, high	10 ms
Max. response time, low	10 ms
Output current per channel, max.	1 A
Output current per module, max.	4 A
Max. switching frequency	20 Hz
Short-circuit-proof	No
Feedback-free	Yes
Switching voltage, max.	255 V AC, UL: 277 V AC
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	47 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

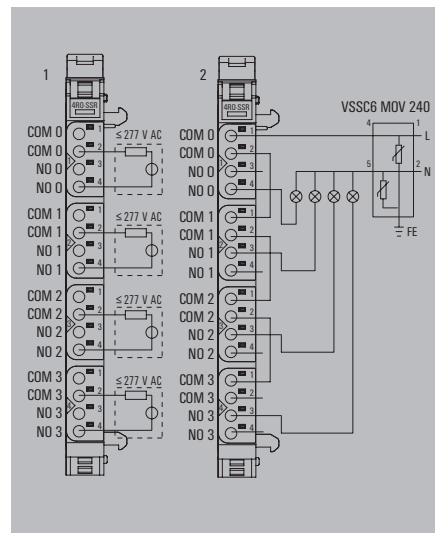
Module variants	
	Digital output module, 4 channels, SSR
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-4RO-SSR-255	1	1315540000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
UR20-EM-1315540000-SP	1	1347120000
UR20-BM-SP	5	1350930000
UR20-PK-1315540000-SP	5	1484000000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4R0-C0-255

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

### UR20-4R0-C0-255



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	< 15 mA
Digital outputs	
Number	4
Type	CO contact
Max. response time, high	20 ms
Max. response time, low	20 ms
Output current per channel, max.	6 A
Output current per module, max.	24 A
Max. switching frequency	5 Hz
Short-circuit-proof	No
Feedback-free	Yes
Switching voltage, max.	255 V AC, UL: 277 V AC, DC
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	119 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	
Note temperature derating!	

#### Ordering data

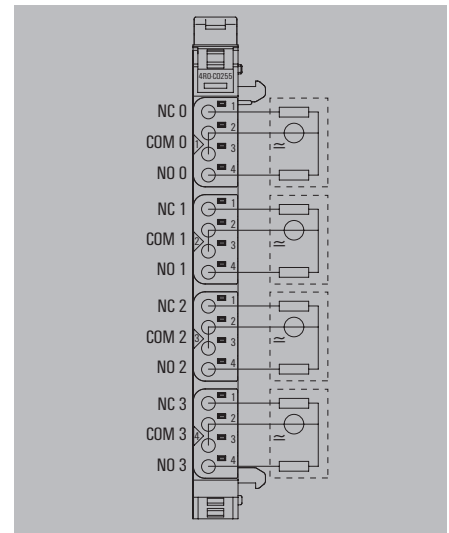
Module variants	
	Digital output module, 4 channels, relay
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-4R0-C0-255	1	1315550000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315550000-SP	1	1347130000
UR20-BM-SP	5	1350930000
UR20-PK-1315550000-SP	5	1346500000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## Digital input and output modules

### 8 universally switchable digital inputs/outputs

The automation of machines and plants is usually planned in great detail. The aim is to ensure smooth commissioning and error-free operation. If unexpected changes nevertheless occur, a flexible automation infrastructure is a great advantage.

**C** u-remote UR20-8DIO-P-3W-DIAG is a universally applicable digital I/O module in which each individual channel can be parameterised independently as an input or output. Sensors and actuators can be connected to the same module, which reduces the number of modules per I/O station.

In addition, subsequent changes to the system can be made by reconfiguring the system. Adjustable individual channel diagnoses for inputs and outputs increase the transparency of the device or system status.

The digital input or output module provides 8 channels, each of which can be configured as an input or output. Up to 2 sensors or actuators can be connected to each plug-in connector in 2-wire or 3-wire connection. The inputs are designed as type 1 and 3 according to IEC 61131-2. The sensor supply is limited to 0.3 A per connecting plug and is equipped with an individual channel diagnosis. For the outputs, the individual channel diagnosis monitors switched-on outputs for overload and switched-off outputs for load (line break detection). The short-circuit-proof outputs have a max. output current of 0.5 A at 24 V DC.

UR20-8DIO-P-3W-DIAG



**8DIO-P-3W-DIAG**

- 8 digital inputs and 8 digital outputs
- 2-wire, 3-wire connection
- Overcurrent monitoring and electronic protection
- Overload monitoring
- Line break detection

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Digital inputs**

Number of digital inputs  
Input type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**Digital outputs**

Number of digital outputs  
Type  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof / Feedback-free  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input and output module, 8 channels

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-8DIO-P-3W-DIAG**

u-remote system bus  
48 Mbit  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
32 mA + I-Last

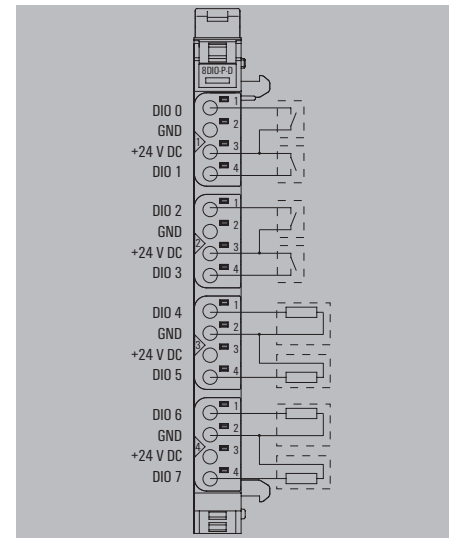
8  
P-switching, for Type 1 and Type 3 sensors as per IEC 61131-2  
Input delay adjustable from 0 to 40 ms  
< + 5 V referred to 0 V of the output power supply  $U_{out}$   
> + 11 V referred to 0 V of the output power supply  $U_{out}$   
 $\geq 0.3$  A per connector, limited electronically  
2-wire, 3-wire  
No, Input voltage below -10 V can destroy the module  
Yes  
only auxiliary voltage output

8  
PNP switched  
0.5 A  
4 A  
1 kHz  
0.2 Hz  
10 Hz  
2-wire, 3-wire  
Yes / Yes  
Yes, Overcurrent monitoring > 0.5 A, line break detection  
< 150 mJ / channel  
< 100 $\mu$ s

83 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-8DIO-P-3W-DIAG	1	2456530000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2456530000-SP	1	2593330000
UR20-BM-SP	5	1350930000
UR20-PK-2456530000-SP	5	2593320000



## Pulse width modulation and stepper motor modules

As part of the u-remote system, Weidmüller offers a specialised solution for controlling small motors with a current requirement of 0.5 A to 2 A, which can also be used to control valve flaps. The pulse width modulation modules can be adjusted within the switching frequencies up to 40 kHz and the modules can also be switched in the motor control with the aid of push/pull output stages, e.g. to change the direction of rotation.

### C

Weidmüller's stepper motor module is efficient and flexible for use in the automation of robots, handling systems or placement machines with stepper motors. Variably adjustable operating parameters as well as a wide range supply from 12 V DC to 50 V DC make the module flexibly applicable for various target applications. Six integrated, parameterisable encoder or digital inputs and two digital outputs with 0.5 A make the control module a complete solution in the smallest of spaces.

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

**UR20-2PWM-PN-0.5A-V2**



**UR20-2PWM-PN-2A-V2**



**UR20-2PWM-I-2.5A-2DI-P**



**UR20-1SM-50W-6DI2DO-P**



**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)

**UR20-2PWM-PN-0.5A-V2**



**Technical data**

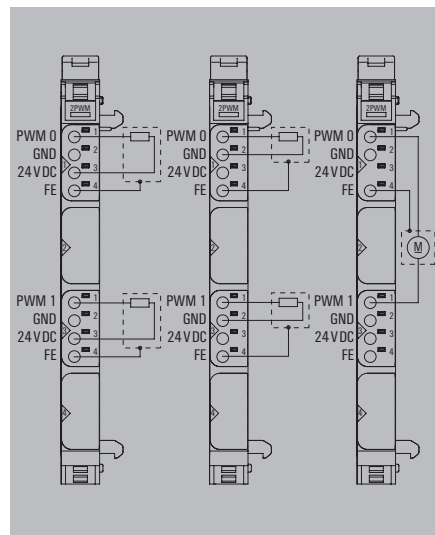
<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA
<b>Digital outputs</b>	
Number of digital outputs	2
Type	DO PWM push / pull
Resolution	32 Bit
Accuracy	1 Bit
Max. response time, high	100 ns
Max. response time, low	100 ns
Output current per channel, max.	500 mA
Output current per module, max.	1000 mA
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
<b>General data</b>	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	192 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA	
<b>Digital outputs</b>		
Number of digital outputs	2	
Type	DO PWM push / pull	
Resolution	32 Bit	
Accuracy	1 Bit	
Max. response time, high	100 ns	
Max. response time, low	100 ns	
Output current per channel, max.	500 mA	
Output current per module, max.	1000 mA	
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz	
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz	
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz	
Actuator connection	2-wire, 3-wire, 3-wire + FE	
Short-circuit-proof	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Feedback-free	Yes	
Pulse duty factor	0--100% push/pull or push, parameterisable	
<b>General data</b>		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

<b>Module variants</b>	
	Digital output module, PWM, 2 channels, 0.5 A
<b>Note</b>	

Type	Qty.	Order No.
UR20-2PWM-PN-0.5A-V2	1	3036960000
<b>Note</b>		



### 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)

### UR20-2PWM-PN-2A-V2



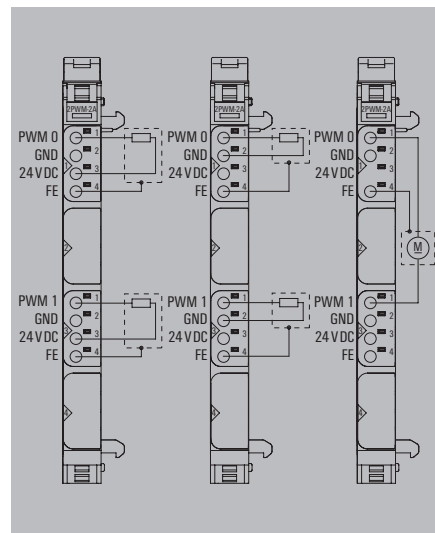
#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA
Digital outputs	
Number of digital outputs	2
Type	DO PWM push / pull
Resolution	32 Bit
Accuracy	1 Bit
Max. response time, high	100 ns
Max. response time, low	100 ns
Output current per channel, max.	2000 mA
Output current per module, max.	4000 mA
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2PWM-PN-2A-V2	1	3036950000

#### Ordering data

Module variants	
	Digital output module, PWM, 2 channels, 2 A
Note	





**2PWM-I-2.5A-2DI-P**

- 2 pulse width outputs
- PWM-controlled current regulation (parameterisable)
- Loadable up to 3 A (1-channel) or 2.5 A (2-channel)
- Switching frequency (pulse width modulation, adjustable): 30 kHz ± 10 %
- Overload-proof and short-circuit-proof
- Push/pull output enables current flow switching (direction of rotation of motors)

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ...9mA	0...9mA
Current consumption from I <sub>out</sub> (the respective power segment)	0...25mA
<b>Digital outputs</b>	
Number of digital outputs	2
Type	Power amplifier output, PWM signal
Resolution	12 Bit (A/D converter), 16 Bit (current target value)
Output current per channel, max.	2.5 A
Output current per module, max.	5 A
Actuator connection	bipolar (A+, A- and B+, B-), unipolar (each with additional return conductor CA and CB), parameterisable
Module diagnosis	Yes
Individual channel diagnosis	Yes
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
<b>General data</b>	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Digital output module, PWM, 2 channels, 2.5 A	
<b>Note</b>	

**Accessories**

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
<b>Replacement parts</b>			
Electronic module	UR20-EM-2697910000-SP	1	2735380000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2697910000-SP	5	2735370000
<b>Note</b>			

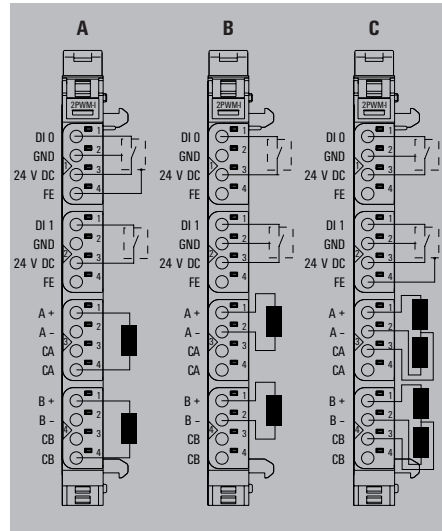
**UR20-2PWM-I-2.5A-2DI-P**



<b>u-remote system bus</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	192 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ...9mA	0...9mA	
Current consumption from I <sub>out</sub> (the respective power segment)	0...25mA	
<b>Digital outputs</b>		
Number of digital outputs	2	
Type	Power amplifier output, PWM signal	
Resolution	12 Bit (A/D converter), 16 Bit (current target value)	
Output current per channel, max.	2.5 A	
Output current per module, max.	5 A	
Actuator connection	bipolar (A+, A- and B+, B-), unipolar (each with additional return conductor CA and CB), parameterisable	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Feedback-free	Yes	
Pulse duty factor	0--100% push/pull or push, parameterisable	
<b>General data</b>		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UR20-2PWM-I-2.5A-2DI-P	1	2697910000
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
<b>Replacement parts</b>		
UR20-EM-2697910000-SP	1	2735380000
UR20-BM-SP	5	1350930000
UR20-PK-2697910000-SP	5	2735370000
<b>Note</b>		



## I/O system IP20 – Pulse width modulation and stepper motor modules

### 1SM-50W-6DI2DO-P

- Power output stage for drive power up to 50 W
- 6 configurable encoder/digital inputs
- 2 digital outputs (0.5 A)
- Supply voltage range from 12 to 50 V DC
- Up to 256 micro-steps
- Relative and absolute positioning

### UR20-1SM-50W-6DI2DO-P



#### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/ -15 %
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	10 mA + load
Current consumption from external power supply	35 mA + load
<b>Stepper motor connections</b>	
Number of channels	1
Power output stage, max.	50 W
Connection type	4-wire
<b>Digital inputs DI 0...DI 3</b>	
Number of channels	4
Input type	P-switching, for Type 1 and Type 3 sensors as per IEC 61131-2
Current supply, sensor	max. 1 A per plug
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
<b>Digital inputs DI 4...DI 5</b>	
Number of channels	2
Input type	Input characteristics for sensor types 1 and 3 are according to EN 61131-2, P-switching
Suitable for incremental encoder	Yes
Input frequency, max.	100kHz
Mode of operation	AB mode with 4-times sampling
Current supply, sensor	max. 1 A per plug
Sensor connection	2-wire, 3-wire
<b>Digital outputs DO 0...DO 1</b>	
Number of channels	2
Response time low-high, max. / Response time high-low, max.	100µs / 250µs
Output current per channel, max.	0.5A
Actuator connection	2-wire
Short-circuit-proof / Reactionless	Yes / Yes
<b>General data</b>	
Weight / Dimensions H x W x D	173 g / 120 / 23 / 76 mm
<b>Note</b>	

#### Ordering data

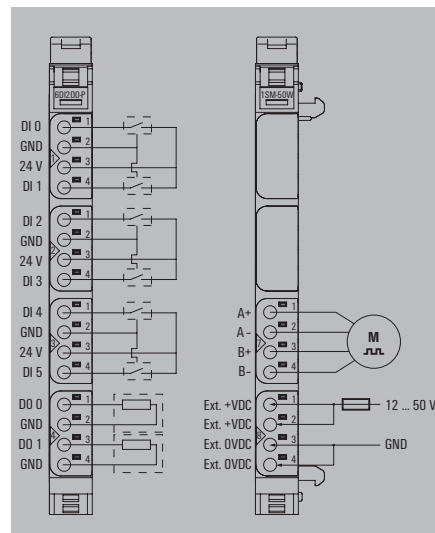
<b>Module variants</b>	
Stepper motor module, 6 digital inputs, 2 digital outputs	
<b>Note</b>	

Type	Qty.	Order No.
UR20-1SM-50W-6DI2DO-P	1	2489830000

#### 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	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
Plug-in connector unit	
<b>Note</b>	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-2489830000-SP	1	2585660000
UR20-BM-SP	5	1350930000
UR20-PK1-2489830000-SP	5	2573750000
UR20-PK2-2489830000-SP	5	2585650000





## Analogue input modules

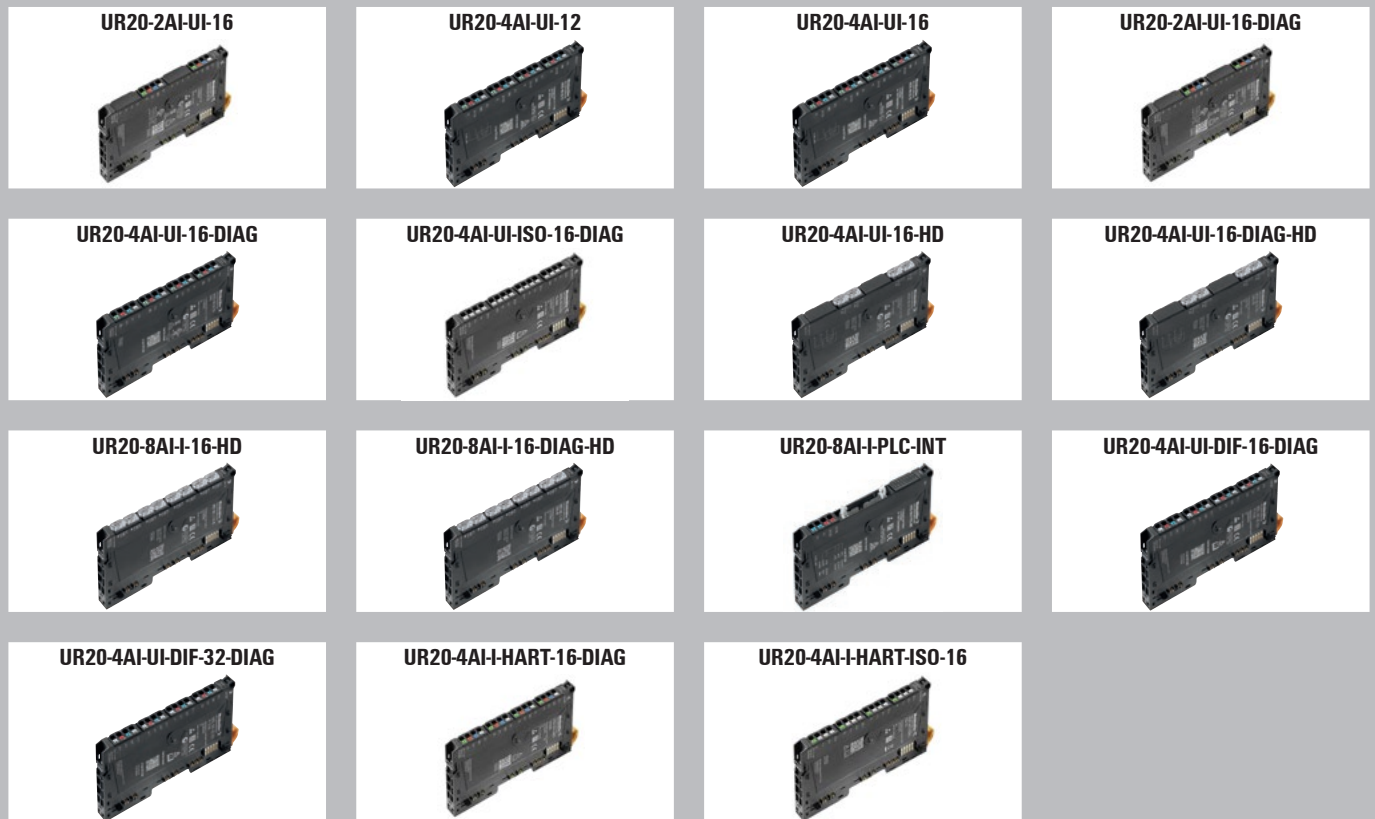
Input parameters can be set for current or voltage, up to 3-wire+FE, Accuracy 0.1% FSR

The analogue input modules can detect up to 2, 4 or 8 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. Variations are available in 12 and 16 bit resolution per channel. Sensors in a 2-wire, 3-wire or 3-wire connection + FE can be connected to each plug-in connector. The measurement range is defined using parametrisation. A status LED is assigned to each channel. The inputs are protected against voltage surges and overcurrent. The module electronics supply the connected sensors from the input current path  $I_{IN}$  (The "ISO" module is an exception: the module has no auxiliary voltage outputs. Connected sensors must be supplied with power from external sources).

"DIAG" module: the module provides individual channel diagnosis with channel-related fault messages.

"DIF" module: the input channels are differential inputs with a common-mode voltage range of +/-30 V.

"HART" module: the module can be used as a HART master, with each channel using a dedicated HART modem. HART devices can be connected to each channel in single connection (point-to-point, P2P) or multiple connection (multidrop).



### 2AI-UI-16

- 2 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	2
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	82.2 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Analogue input module, 2 channels, 16 bits
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

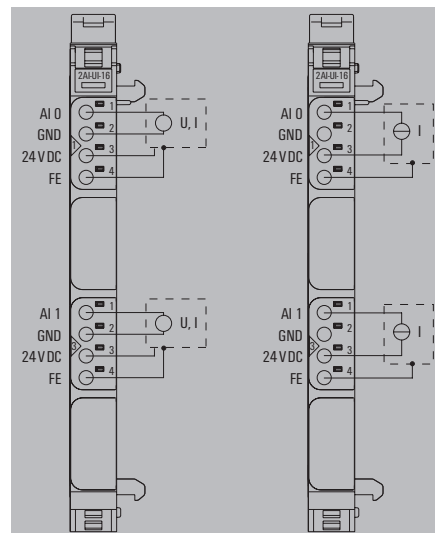
### UR20-2AI-UI-16



System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
Supply		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed	
Analogue inputs		
Number of analogue inputs	2	
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)	
Resolution	16 Bit	
Accuracy	0.1% FSR	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Conversion time	1 ms	
Internal resistance U	100 kΩ	
Internal resistance I	41.2 Ω	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Short-circuit-proof	Yes	
General data		
Weight	82.2 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

Type	Qty.	Order No.
UR20-2AI-UI-16	1	2705620000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
UR20-EM-2705620000-SP	1	2788700000
UR20-BM-SP	5	1350930000
UR20-PK-2705620000-SP	5	2788710000
Note		



C

### 4AI-UI-12

- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 12-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.25 % FSR

### UR20-4AI-UI-12



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA), Adjustable input for current or voltage
Resolution	12-bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

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

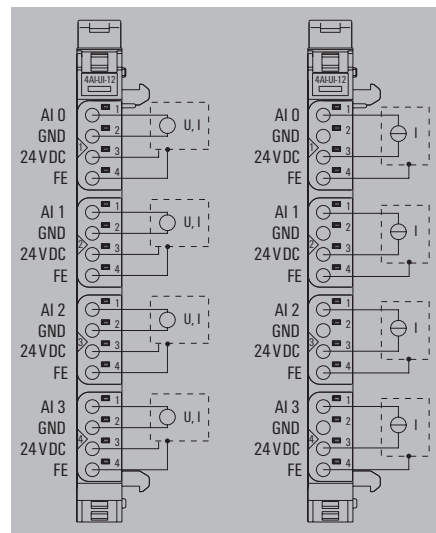
#### Ordering data

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

#### Accessories

Replacement parts	
Electronic module	UR20-EM-1394390000-SP
Basic module	UR20-BM-SP
Plug-in connector unit	UR20-PK-1394390000-SP
Note	
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000



### 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	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA), Adjustable input for current or voltage
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

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

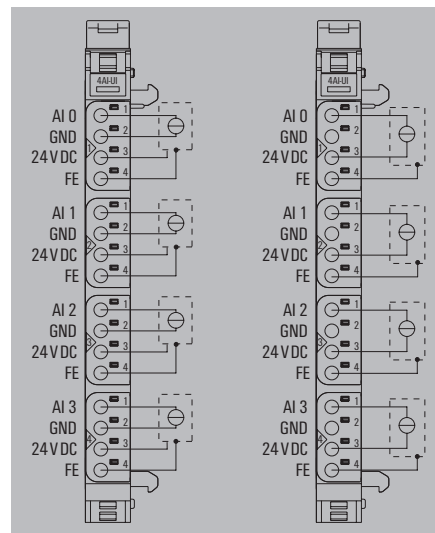
### Accessories

	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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4AI-UI-16



Type		
Type	Qty.	Order No.
UR20-4AI-UI-16	1	1315620000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Type		
Type	Qty.	Order No.
UR20-EM-1315620000-SP	1	1347200000
UR20-BM-SP	5	1350930000
UR20-PK-1315620000-SP	5	1484020000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Analogue input modules

### 2AI-UI-16-DIAG

- 2 analogue inputs
- Parameterisable inputs (voltage, current)
- Advanced diagnosis functions
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0,1 % FSR

### UR20-2AI-UI-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	2
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 k $\Omega$
Internal resistance I	41.2 $\Omega$
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	82.5 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	DC 500 V between current paths	
Supply		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	25 mA + sensor feed	
Analogue inputs		
Number of analogue inputs	2	
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0-20 mA or 4-20 mA)	
Resolution	16 Bit	
Accuracy	0.1% FSR	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Conversion time	1 ms	
Internal resistance U	100 k $\Omega$	
Internal resistance I	41.2 $\Omega$	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Short-circuit-proof	Yes	
General data		
Weight	82.5 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

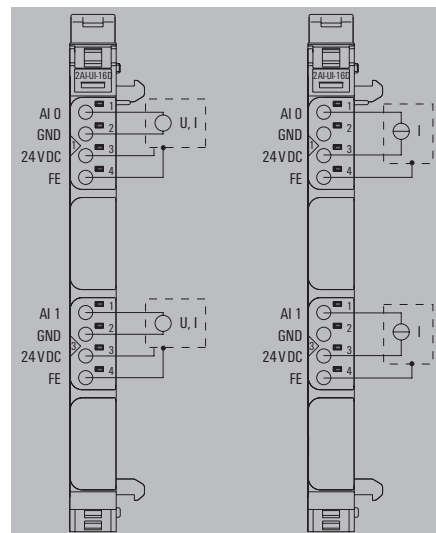
Module variants	
Analogue input module, 2 channels, 16 bits, diagnosis functions	
Note	

Type	Qty.	Order No.
UR20-2AI-UI-16-DIAG	1	2566090000

#### Accessories

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-2566090000-SP	1	2568080000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2566090000-SP	5	2568070000
Note			

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Replacement parts		
UR20-EM-2566090000-SP	1	2568080000
UR20-BM-SP	5	1350930000
UR20-PK-2566090000-SP	5	2568070000
Note		





### 4AI-UI-16-DIAG

- 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

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



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-16-DIAG	1	1315690000

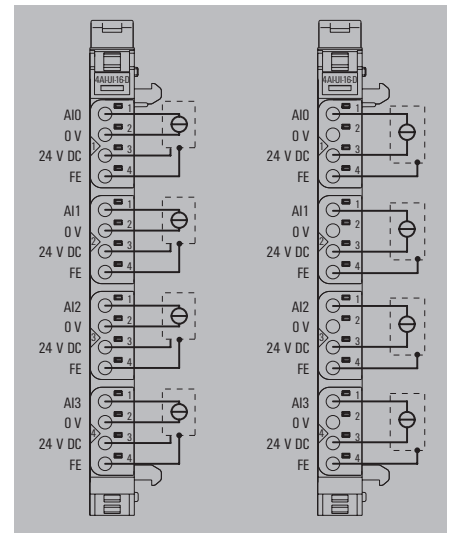
#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 bits, diagnosis functions	
Note	

#### Accessories

Replacement parts	
Electronic module	UR20-EM-1315690000-SP
Basic module	UR20-BM-SP
Plug-in connector unit	UR20-PK-1315690000-SP
Note	
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000



### 4AI-UI-ISO-16-DIAG

- 4 analogue inputs
- Extended diagnostic function
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire
- Accuracy 0.1 % FSR

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



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	31 mA
Analogue inputs	
Number of analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	No
Sensor connection	2-wire
Conversion time	1 ms
Internal resistance U	200 kΩ
Internal resistance I	70 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89.9 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-ISO-16-DIAG	1	2566960000

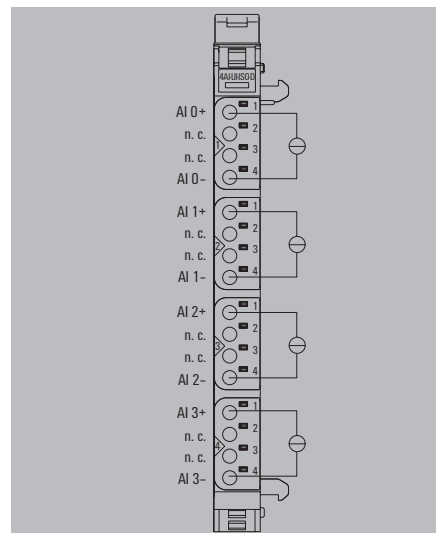
#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 bit, isolated	
Note	

#### 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	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2566960000-SP	1	2568360000
UR20-BM-SP	5	1350930000
UR20-PK-2566960000-SP	5	2568320000



### 4AI-UI-16-HD

- 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 speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 k $\Omega$
Internal resistance I	45 $\Omega$
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

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

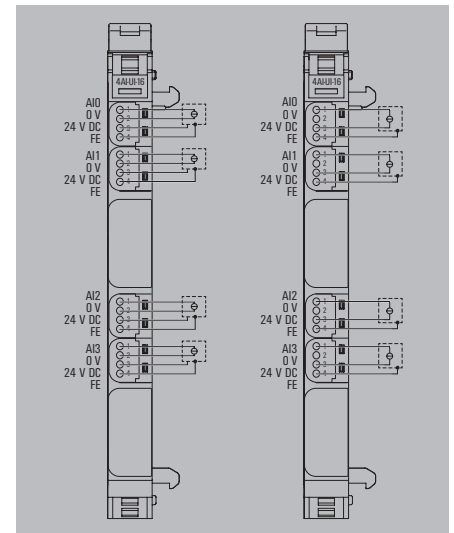
### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version for Laserprinter
Connector and tools	
	<sup>*)</sup> HD plug
	<sup>*)</sup> Stripping tool
	<sup>*)</sup> Pressing tool
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4AI-UI-16-HD



Note: Please order connector separately



Type	Qty.	Order No.
UR20-4AI-UI-16-HD	1	1506920000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1506920000-SP	1	1515420000
UR20-BM-SP	5	1350930000
UR20-PK-1506920000-SP	5	1518830000

Note: please order plug (1469340000) separately.

## I/O system IP20 – Analogue input modules

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

- 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 speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_{in}$ (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number of analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0–20 mA or 4–20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 k $\Omega$
Internal resistance I	45 $\Omega$
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
Analogue input module, 4 channels, diagnosis functions, HD-plug	
Note	

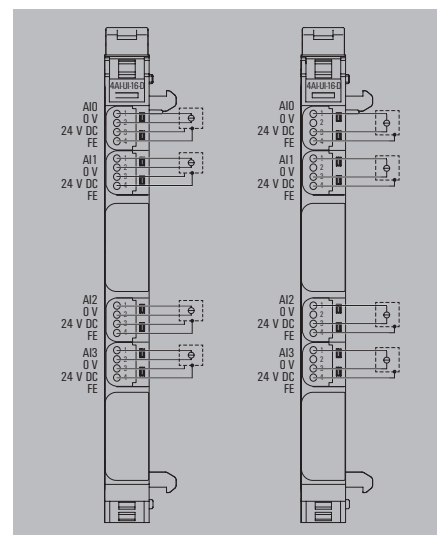
#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (Material: Polyester)	
Thermotransfer version (material: polyester)	
Paper version for Laserprinter	
Connector and tools	
<sup>*)</sup> HD plug	
<sup>*)</sup> Stripping tool	
<sup>*)</sup> Pressing tool	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

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



Note: Please order connector separately



Type	Qty.	Order No.
UR20-4AI-UI-16-DIAG-HD	1	1506910000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1506910000-SP	1	1515430000
UR20-BM-SP	5	1350930000
UR20-PK-1506910000-SP	5	1518820000

Note: please order plug (1469340000) separately.

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

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

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	20 mA + load
<b>Analogue inputs</b>	
Number of analogue inputs	8
Input value	Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance I	50 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
<b>General data</b>	
Weight	74 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Analogue input module, 8 channels, 16 Bits, HD-plug	
<b>Note</b>	

**Accessories**

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (Material: Polyester)	
Thermotransfer version (material: polyester)	
Paper version for Laserprinter	
<b>Connector and tools</b>	
<sup>*)</sup> HD plug	
<sup>*)</sup> Stripping tool	
<sup>*)</sup> Pressing tool	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

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



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	20 mA + load	
<b>Analogue inputs</b>		
Number of analogue inputs	8	
Input value	Current I (0...20 mA, 4...20 mA)	
Resolution	16 Bit	
Accuracy	0.1% FSR	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Conversion time	1 ms	
Internal resistance I	50 Ω	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Short-circuit-proof	Yes	
<b>General data</b>		
Weight	74 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

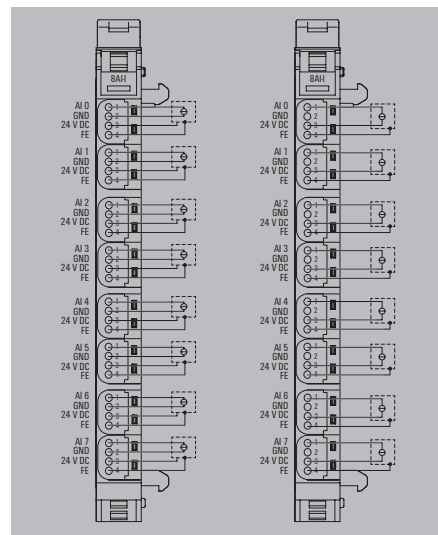
Type	Qty.	Order No.
UR20-8AI-I-16-HD	1	1315650000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	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
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1315650000-SP	1	1347240000
UR20-BM-SP	5	1350930000
UR20-PK-1315650000-SP	5	1559740000

Note: please order plug (1469340000) separately.



Note: Please order connector separately

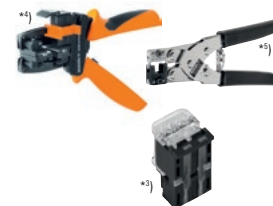


## I/O system IP20 – Analogue input modules

### 8AI-16-DIAG-HD

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

### UR20-8AI-16-DIAG-HD



Note: Please order connector separately

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	20 mA + load
Analogue inputs	
Number of analogue inputs	8
Input value	Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance I	50 $\Omega$
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	74 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
Supply		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	20 mA + load	
Analogue inputs		
Number of analogue inputs	8	
Input value	Current I (0...20 mA, 4...20 mA)	
Resolution	16 Bit	
Accuracy	0.1% FSR	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Conversion time	1 ms	
Internal resistance I	50 $\Omega$	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Short-circuit-proof	Yes	
General data		
Weight	74 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

Module variants	
Analogue input module, 4 channels, diagnosis functions, HD-plug	
Note	

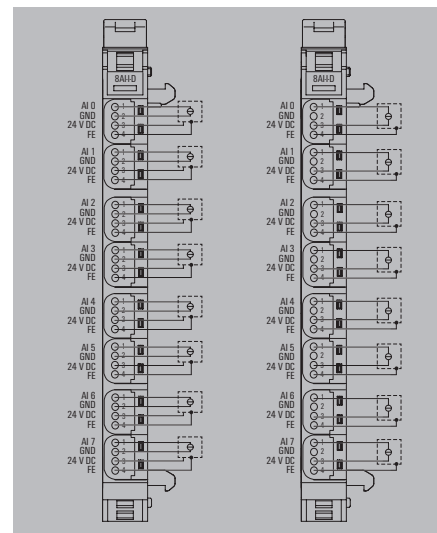
Type	Qty.	Order No.
UR20-8AI-16-DIAG-HD	1	1315720000

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (Material: Polyester)	
Thermotransfer version (material: polyester)	
Paper version for Laserprinter	
Connector and tools	
<sup>*)</sup> HD plug	
<sup>*)</sup> Stripping tool	
<sup>*)</sup> Pressing tool	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1315720000-SP	1	1347320000
UR20-BM-SP	5	1350930000
UR20-PK-1315720000-SP	5	1559750000

Note: please order plug (1469340000) separately.



### 8AI-PLC-INT

- 8 analogue inputs (current)
- 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)
- Accuracy 0,1 % FSR

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
Analogue inputs	
Number of analogue inputs	8
Type	Current input
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	external
Sensor connection	PLC interface unit
Conversion time	1 ms
Internal resistance I	50 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

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

### Accessories

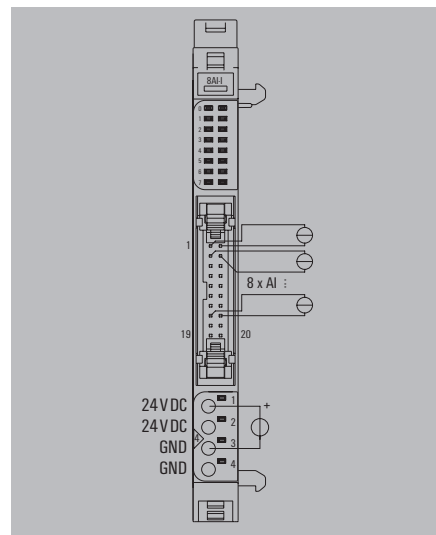
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher custom printing
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version for Laserprinter
Connector and cable	
	PLC interface element
	Pre-assembled cable, 1m
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-8AI-PLC-INT



Type		
Type	Qty.	Order No.
UR20-8AI-PLC-INT	1	1315670000

Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Type		
RS F20 LP2N 5/20	1	0224261001
PAC-UNIV-HE20-LCH-1M	1	7789306010
Type		
UR20-EM-1315670000-SP	1	1347250000
UR20-BM-SP	5	1350930000
UR20-PK-1315670000-SP	5	1483950000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4AI-UI-DIF-16-DIAG

- 4 differential analog inputs
- Advanced diagnosis functions
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 4-wire
- Accuracy 0.1% FSR

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



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	33 mA + load
Analogue inputs	
Number of analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor supply	500mA
Sensor connection	2-wire, 3-wire, 4-wire
Input type	Differential input
Common mode range	-30V...30V
Conversion time	1 ms
Internal resistance I	18 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-DIF-16-DIAG	1	1993880000

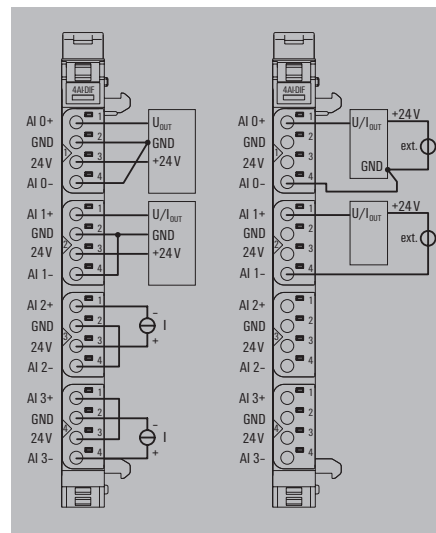
#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 Bits, Differential inputs	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-1993880000-SP	1	2446190000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1993880000-SP	5	2446200000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

Type	Qty.	Order No.
UR20-EM-1993880000-SP	1	2446190000
UR20-BM-SP	5	1350930000
UR20-PK-1993880000-SP	5	2446200000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





### 4AI-UI-DIF-32-DIAG

- 4 differential analog inputs
- Advanced diagnosis functions
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 4-wire
- Accuracy 0.1% FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	31 mA + load
Analogue inputs	
Number of analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor supply	500mA
Sensor connection	2-wire, 3-wire, 4-wire
Input type	Differential input
Common mode range	-30V...30V
Conversion time	1 ms
Internal resistance I	16 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 Bits, Differential inputs	
Note	

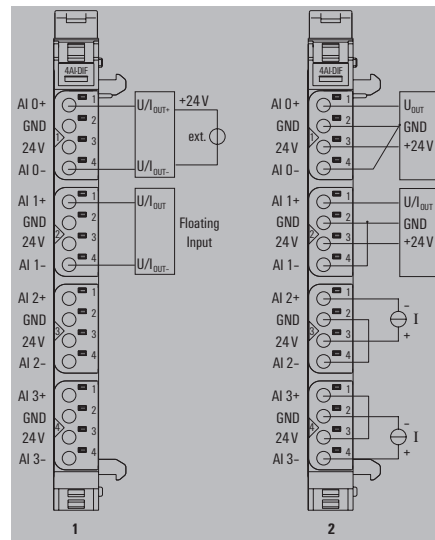
#### Accessories

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	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

### UR20-4AI-UI-DIF-32-DIAG



Type		
UR20-4AI-UI-DIF-32-DIAG	Qty. 1	Order No. 2544660000
Type		
KOSM BHZ5.00	Qty. 100	Order No. 1483050000
UR20-EBK-ACC	Qty. 5	Order No. 1346610000
UR20-SM-ACC	Qty. 20	Order No. 1339920000
PM 2.7/2.6 MC SDR	Qty. 192	Order No. 1323700000
PM 2.7/2.6 MC NE WS	Qty. 960	Order No. 1323710000
DEK 5/8-11.5 MC SDR	Qty. 100	Order No. 1341610000
DEK 5/8-11.5 MC NE WS	Qty. 500	Order No. 1341630000
THM UR20 GE	Qty. 1	Order No. 1429910000
THM UR20 WS	Qty. 1	Order No. 1429420000
ESD UR20 DIN A4 WS	Qty. 10	Order No. 1429430000
Type		
UR20-EM-2544660000-SP	Qty. 1	Order No. 2550610000
UR20-BM-SP	Qty. 5	Order No. 1350930000
UR20-PK-2544660000-SP	Qty. 5	Order No. 2550620000
Note		



C

### 4AI-HART-16-DIAG

- 4 HART inputs
- max. 1 ms conversion time
- 16-bit resolution
- Accuracy 0,1 % FSR
- Individual channel diagnosis

### UR20-4AI-HART-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	27 mA + Sensor feed
Analogue inputs	
Number of analogue inputs	4
Sensor connection	2-wire, 3-wire, 4-wire
Input value	Current I (0...20 mA, 4...20 mA)
Conversion time	1 ms
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Internal resistance I	250 Ω
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-HART-16-DIAG	1	2617520000
Note		

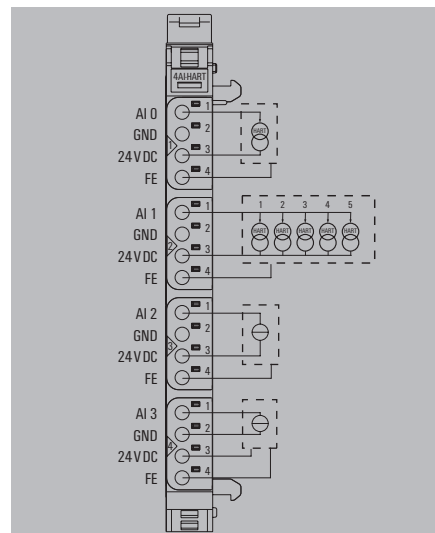
#### Ordering data

Module variants	
Analogue input module HART Master, 4 channels, 16 bits	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-2617520000-SP	1	2702570000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2617520000-SP	5	2702540000
Note			

Type	Qty.	Order No.
UR20-EM-2617520000-SP	1	2702570000
UR20-BM-SP	5	1350930000
UR20-PK-2617520000-SP	5	2702540000
Note		



**4AI-HART-ISO-16**

- 4 HART inputs
- Insulation up to 500 V
- max. 1 ms conversion time
- 16-bit resolution
- Accuracy 0,1 % FSR

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply

Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Analogue inputs**

Number of analogue inputs

Sensor connection

Input value

Conversion time

Resolution

Accuracy

Sensor supply

Internal resistance I

Voltage supply

Module diagnosis

Individual channel diagnosis

**General data**

Weight

Dimensions H x W x D

**Note****Ordering data****Module variants****Note****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**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4AI-HART-ISO-16**

u-remote system bus  
192 Mbit  
500 V DC between the current paths

24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)

8 mA

32 mA

4

2-wire, 2 wire + FE

Current I (0...20 mA, 4...20 mA)

1 ms

16 Bit

max. 0,1% FSR (at 25°C), ±50 ppm/K max.

No

250 Ω

24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)

Yes

Yes

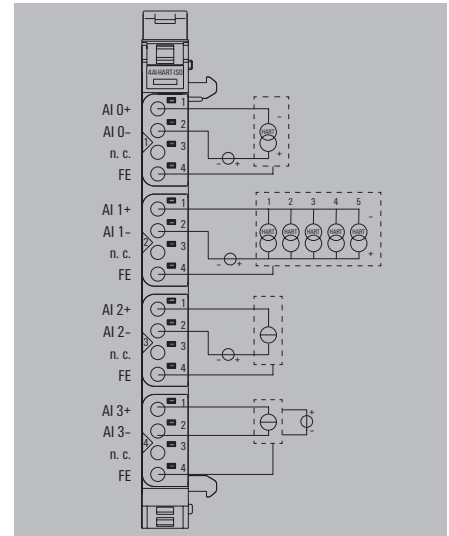
89 g

120 mm / 11,5 mm / 76 mm

Type	Qty.	Order No.
UR20-4AI-HART-ISO-16	1	2828350000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-2828350000-SP	1	2935070000
UR20-BM-SP	5	1350930000
UR20-PK-2828350000-SP	5	2935060000



## Temperature modules and potentiometer input module

### Available for TC and RTD, 16-bit resolution, 50/60 Hz suppression

The analogue temperature modules and potentiometer input module can acquire up to 4 or 8 analogue resistance thermocouplers, thermocouple sensors, potentiometers or voltages from  $\pm 15$  mV to  $\pm 2$  V. The resolution is 16 bits per channel. A sensor can be connected to each connector in a 2-wire, 3-wire or 4-wire connection. Sensor type and temperature range are set using parametrisation. A status LED is assigned to each channel.

The inputs are protected against voltage surges and overcurrent. In addition, the modules provide individual channel diagnosis with channel-related fault messages.

"HP" module: the module is intended for high-precision applications. A user calibration can be parametrised for the resistance measurement.

"TC" module: internal or external cold junction compensation (CJC) can be parametrised for each channel.

UR20-4AI-RTD-DIAG



UR20-4AI-RTD-HP-DIAG



UR20-8AI-RTD-DIAG-2W



UR20-4AI-TC-DIAG



UR20-4AI-R-HS-16-DIAG



### 4AI-RTD-DIAG

- 4 analogue inputs
- For 2-, 3- and 4-wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- Automatic 50 and 60 Hz suppression
- High accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
Analogue inputs	
Number of analogue inputs	4
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10
Sensor connection	2-wire, 3-wire, 4-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	adjustable, 36...240 ms
Internal resistance U	1 MΩ
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

### Ordering data

Module variants	
	Analogue input module, 4 channels, RTD
Note	

### Accessories

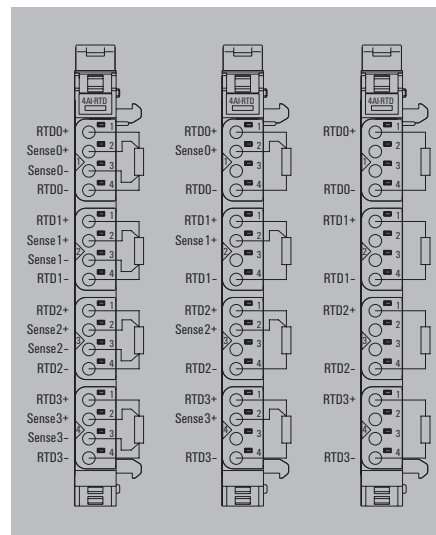
	Coding elements
	Termination kit
	Swivel marker
Connection marker for pusher custom printing	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (Material: Polyester)	
Thermotransfer version (material: polyester)	
Paper version for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

### UR20-4AI-RTD-DIAG



Type		
Type	Qty.	Order No.
UR20-4AI-RTD-DIAG	1	1315700000
Note		

Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Note		
	UR20-EM-1315700000-SP	1 1347290000
	UR20-BM-SP	5 1350930000
	UR20-PK-1315700000-SP	5 1484040000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4AI-RTD-HP-DIAG

- 4 analogue inputs
- For 2-,3- and 4wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- Increased accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

### UR20-4AI-RTD-HP-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
Analogue inputs	
Number of analogue inputs	4
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	max. 0,6 K for Measurement range Pt100 (-200 ... +250 °C), max. 0,2 % FSR for Pt sensors and resistance measurement (-200 ... +250 °C), max. 0,3 % FSR for Ni sensors, max. 0,6 % FSR for Cu10
Sensor connection	2-wire, 3-wire, 4-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	adjustable, 36...240 ms
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-RTD-HP-DIAG	1	2456540000

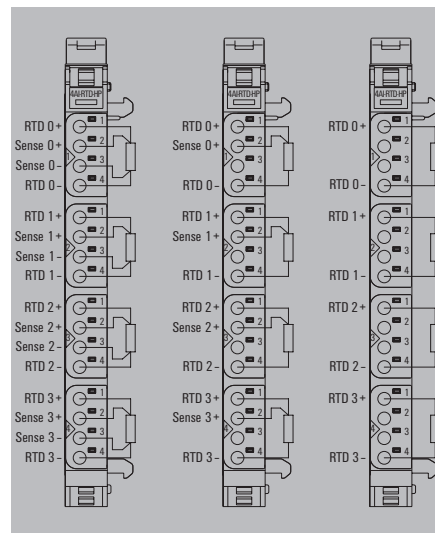
#### Ordering data

Module variants	
	Analogue input module, 4 channels, RTD
Note	

#### Accessories

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Replacement parts		
Electronic module	UR20-EM-2456540000-SP	1 2545620000
Basic module	UR20-BM-SP	5 1350930000
Plug-in connector unit	UR20-PK-2456540000-SP	5 2545610000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Replacement parts		
Electronic module	UR20-EM-2456540000-SP	1 2545620000
Basic module	UR20-BM-SP	5 1350930000
Plug-in connector unit	UR20-PK-2456540000-SP	5 2545610000
Note		



### 8AI-RTD-DIAG-2W

- 4 analogue inputs
- For 2-wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- High accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
Analogue inputs	
Number of analogue inputs	8
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10
Sensor connection	2-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	80 ms
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Analogue input module, 8 channels, RTD
Note	

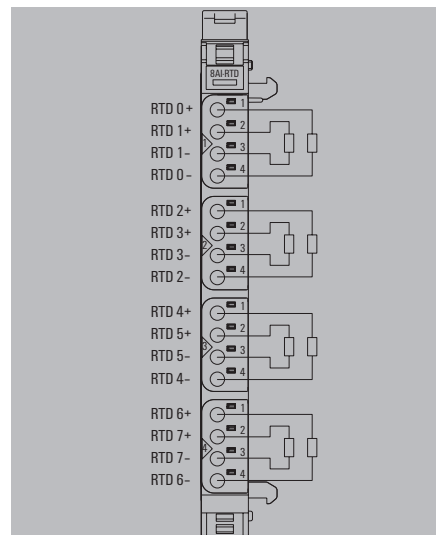
#### Accessories

	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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-8AI-RTD-DIAG-2W



Type		
	Qty.	Order No.
UR20-8AI-RTD-DIAG-2W	1	2555940000
Type		
	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Type		
	Qty.	Order No.
UR20-EM-2555940000-SP	1	2593310000
UR20-BM-SP	5	1350930000
UR20-PK-2555940000-SP	5	2593300000
Note		



## I/O system IP20 – Temperature modules and potentiometer input module

### 4AI-TC-DIAG

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

### UR20-4AI-TC-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
Analogue inputs	
Number of analogue inputs	4
Type	J, K, T, B, N, E, R, S, L, U, C, mV
Resolution	16 Bit
Accuracy	0.2% FSR
Sensor connection	2-wire
cold junction compensation	Internal and external (int. accuracy ≤ 3 K)
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...2315 °C
Conversion time	adjustable, 36...240 ms
Internal resistance U	1 MΩ
Module diagnosis	Yes
Individual channel diagnosis	Yes
Reverse polarity protection	Yes
General data	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-TC-DIAG	1	1315710000

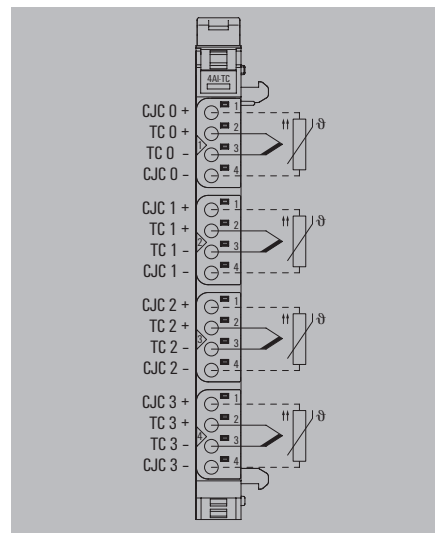
#### Ordering data

Module variants	
Analogue input module, 4 channels, thermocouple	
Note	

#### 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	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1315710000-SP	1	1435740000
UR20-BM-SP	5	1350930000
UR20-PK-1315710000-SP	5	1484050000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





**4AI-R-HS-16-DIAG**

- 4 potentiometer inputs
- Measuring range from 300 Ω ... 50 kΩ
- 16 Bit resolution
- 500 μs conversion time
- Accuracy < ± 0.25 % FSR
- Individual calibration and scaling

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	26 mA
<b>Analogue inputs</b>	
Number of analogue inputs	4
Sensor connection	3-wire, 3-wire + FE
Input value	Ratiometric potentiometer evaluation with own power supply
Measurement range	300 Ω ... 50 kΩ
Conversion time	typ. 500 μs (typ. 625 μs at 50 Hz / typ. 521 μs at 60 Hz frequency suppression)
Resolution	16 Bit
Accuracy	< ± 0.25 % FSR at 25 °C
Temperature coefficient	≤ 50 ppm/K
Input resistance	typ. 500 kΩ against the wiper connection
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current of supply voltage output	max. 0.05 A per channel, total 0.2 A
Wire-break recognition	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
<b>General data</b>	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Analogue input module for potentiometer, 4 channels, 16 bits	
<b>Note</b>	

**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	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

**UR20-4AI-R-HS-16-DIAG**

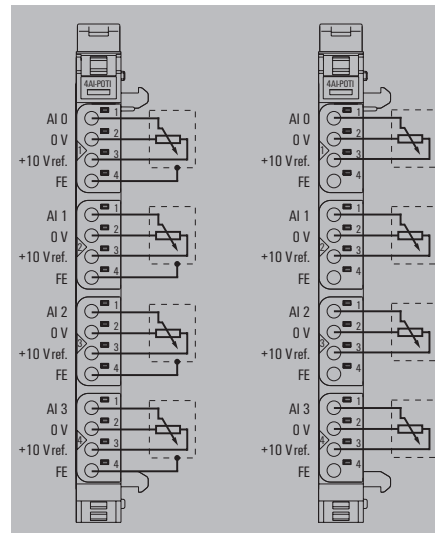


<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	26 mA	
<b>Analogue inputs</b>		
Number of analogue inputs	4	
Sensor connection	3-wire, 3-wire + FE	
Input value	Ratiometric potentiometer evaluation with own power supply	
Measurement range	300 Ω ... 50 kΩ	
Conversion time	typ. 500 μs (typ. 625 μs at 50 Hz / typ. 521 μs at 60 Hz frequency suppression)	
Resolution	16 Bit	
Accuracy	< ± 0.25 % FSR at 25 °C	
Temperature coefficient	≤ 50 ppm/K	
Input resistance	typ. 500 kΩ against the wiper connection	
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current of supply voltage output	max. 0.05 A per channel, total 0.2 A	
Wire-break recognition	Yes	
Short-circuit-proof	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
<b>General data</b>		
Weight	89 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

Type	Qty.	Order No.
UR20-4AI-R-HS-16-DIAG	1	2001670000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-2001670000-SP	1	2068640000
UR20-BM-SP	5	1350930000
UR20-PK-2001670000-SP	5	2068610000

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



## Strain gauge module

### 2-channel module for u-remote load cell analysis

The UR20-2AI-SG-24-DIAG strain gauge module is an analogue input module designed for the connection of force sensors that use strain gauges. In this way, weights, torques or vibrations can be precisely recorded. The module can be calibrated via parametrisation. The web server can be used to calibrate the module with password protection, and the calibration settings are then documented.

#### C

The tare function can be triggered individually for each channel via a digital input or via software. Several sensors can be connected in parallel to each of the two channels in a 4- or 6-wire connection, as long as their input impedance is within the permissible sensor load. The resolution per channel is 24 bits with an accuracy of 0.01% of full scale. A status LED is assigned to each channel. The module electronic supplies the connected sensors from a potential electrogalvanised from the input current path ( $I_{IN}$ ). The inputs are protected against voltage surges and overcurrent.

The u-remote strain gauge module enables the parallel analysis of measurement data from up to four load cells on a single channel.

UR20-2AI-SG-24-DIAG



### 2AI-SG-24-DIAG

- 2 differential inputs for DMS
- 24-bit resolution
- Individual channel diagnosis
- 4- or 6-wire connection
- Accuracy ±0.01% FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA
Analogue inputs	
Number of analogue inputs	2
Input value	Differential, to evaluate a strain gauge full-bridge
Resolution	24 bit per channel
Accuracy	Customer calibration: ±0.01% FSR (100 ppm), ±1% FSR (with interference)
Supported sensor sensitivity	0.5 mV - 30 V, parameterisable
Temperature coefficient	< 10 ppm/K
Permissible sensor load	85 ... 5000 Ω
Conversion time	5 - 800 ms, parameterisable
Measurement range	± 150 mV
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
Digital inputs	
Input filter	10 ms
Input voltage, high	> 11 V
Input voltage, low	< 5 V
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Strain gauge module, 2 channels
Note	

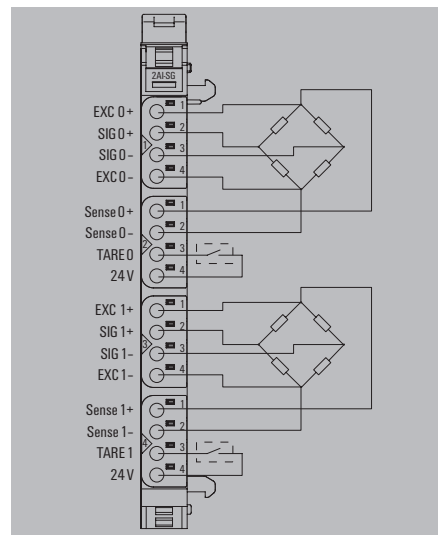
#### Accessories

	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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-2AI-SG-24-DIAG



Type		
Type	Qty.	Order No.
UR20-2AI-SG-24-DIAG	1	1990070000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Type		
Type	Qty.	Order No.
UR20-EM-1990070000-SP	1	1562260000
UR20-BM-SP	5	1350930000
UR20-PK-1990070000-SP	5	2068620000



## Power measurement module

Power measurement via 1- or 3-phase, rated voltage to 300 V<sub>eff</sub>

The UR20-3EM-230V-AC power measurement module is used to acquire and process all relevant measured variables of a single-phase or three-phase power consumer (up to 500 V AC phase-to-phase voltage): current (effective, average, peak), voltage (effective, average), reactive, apparent and active power, energy consumption, power factor, frequency, overvoltage and undervoltage alarm, overcurrent and undercurrent alarm.

### C

Currents up to 5 A can be measured directly with the module. The measurement in the outer conductor allows currents to be measured in star or delta connection without further external components. The module supplies data to the field bus via eight channels (16 bits each). The content of each individual data channel can be selected from 55 registers (currents, voltages, power factor, frequency as well as power and energy measurement). In addition, parameters for limit monitoring can be set so that exceeding or falling below limit values triggers a process alarm.

A status LED is assigned to each channel.

UR20-3EM-230V-AC



UR20-3EM-400V-AC-CT1A



UR20-3EM-400V-AC-CT5A



**3EM-230V-AC**

- 1- or 3-phase power measurement for 1 A or 5 A (with or without transformer)
- Measurement in the phase conductor
- 16 bit resolution
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 31 harmonics

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Voltage supply  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Analogue inputs**

Number  
Rated voltage  
Resolution  
Sampling rate of current measurement  
Frequency of the supply system  
Analysis of harmonic  
Power rating  
Insulation  
Nominal peak voltage  
Category for voltage measurements  
Measurement method  
Measurement accuracy  
Connectable converter ratios  
Input impedance voltage  
Measurement resistance (shunt)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Power measurement module, 3 channels

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

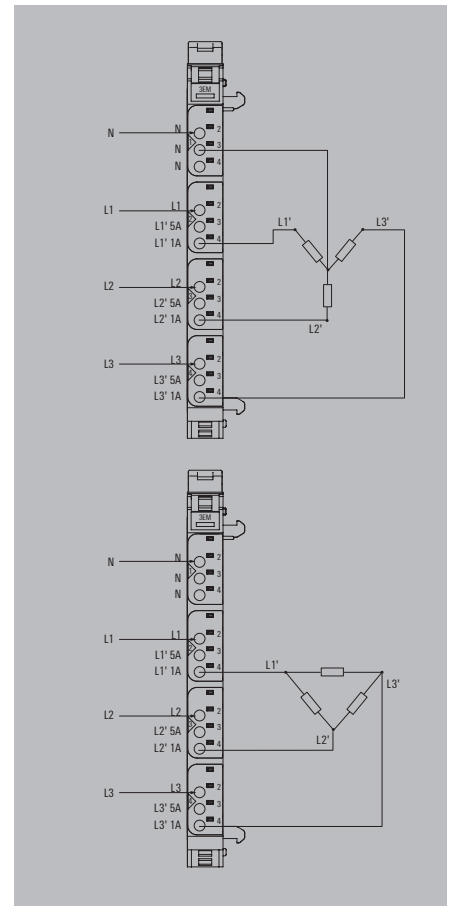
**Note****UR20-3EM-230V-AC**

u-remote system bus  
48 Mbit  
500 V DC between the current paths  
24 V DC +20 %/- 15 %, via the system bus  
8 mA  
12 mA  
3  
300  $V_{eff}$  (L-N), 520  $V_{eff}$  (L-L)  
16 bit per channel (internal 24 bit)  
3,300 samples/s  
45...65 Hz  
31 (Blackmann-Harris Window)  
0...1 A / 0...5 A AC  
1.5  $kV_{eff}$  (input / system)  
4  
CAT II (IEC 61010 Part 1)  
High Resolution Delta Sigma (current measurement in outer conductor)  
0.5% in relation to final value (U / I), 1% for the calculated values  
1 ... 1000  
2.4 M $\Omega$  per channel  
4 m $\Omega$  (at 5 A), 20 m $\Omega$  (at 1 A)  
90 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-3EM-230V-AC	1	2007420000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-2007420000-SP	1	1562270000
UR20-BM-SP	5	1350930000
UR20-PK-2007420000-SP	5	2068630000



## I/O system IP20 – Power measurement module

### 3EM-400V-AC-CT1A

- 1-phase power measurement for 1 A converter (with or without transformer)
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactiv power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Power rating	0...1 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	1:1
Input impedance voltage	1.881 MΩ
Input impedance current (differential)	40 mΩ
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Power measurement module, 3 channels
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

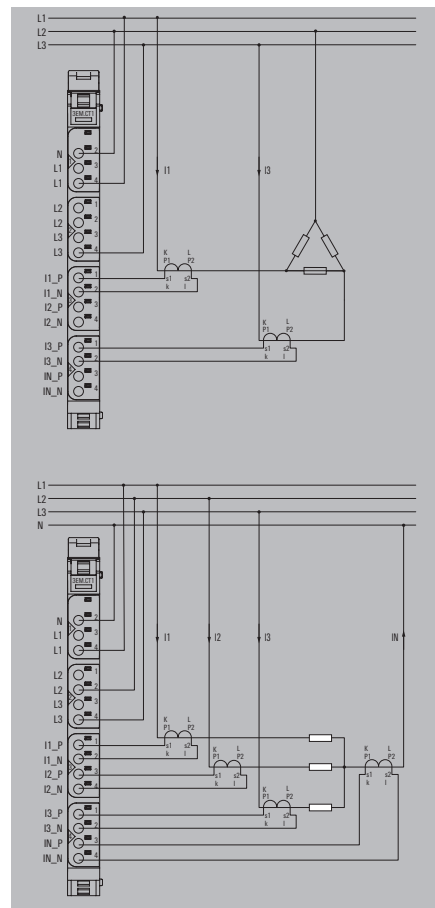
### UR20-3EM-400V-AC-CT1A



u-remote system bus	192 Mbit
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)	
8 mA	
<35 mA	
3	
300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019	
16 bit per channel (internal 24 bit), 32 bit for energy counter	
Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)	
45...65 Hz	
up to 43rd	
0...1 A AC	
reinforced insulation	
CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V	
High Resolution Delta Sigma (current measurement in outer conductor)	
0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics	
1:1	
1.881 MΩ	
40 mΩ	
91 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-3EM-400V-AC-CT1A	1	2920830000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2920830000-SP	1	3052120000
UR20-BM-SP	5	1350930000
UR20-PK-2920830000-SP	5	3052170000



**3EM-400V-AC-CT5A**

- 1-phase power measurement for 5 A converter (with or without transformer)
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Power rating	0...5 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	5:5
Input impedance voltage	1.881 MΩ
Input impedance current (differential)	5 mΩ
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Power measurement module, 3 channels
Note	

**Accessories**

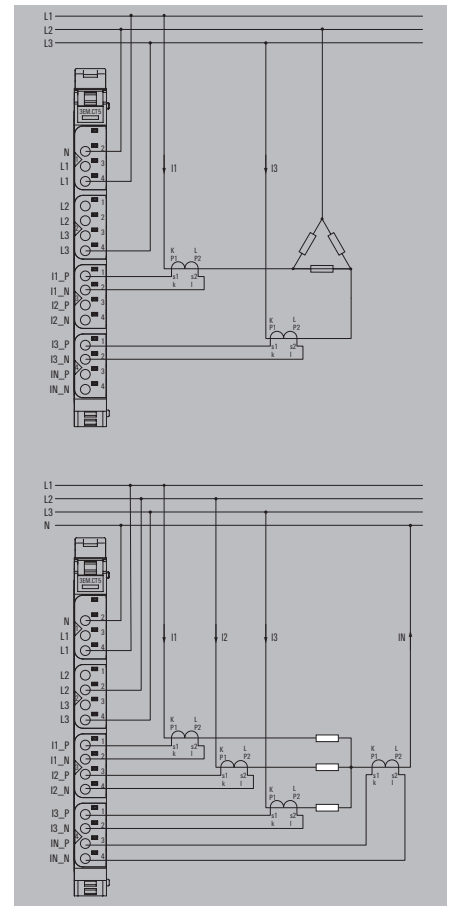
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher custom printing
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version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

**UR20-3EM-400V-AC-CT5A**

u-remote system bus	500 V DC between the current paths
24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)	
8 mA	
<35 mA	
3	
300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019	
16 bit per channel (internal 24 bit), 32 bit for energy counter	
Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)	
45...65 Hz	
up to 43rd	
0...5 A AC	
reinforced insulation	
CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V	
High Resolution Delta Sigma (current measurement in outer conductor)	
0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics	
5:5	
1.881 MΩ	
5 mΩ	
91 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-3EM-400V-AC-CT5A	1	2920840000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2920840000-SP	1	3052130000
UR20-BM-SP	5	1350930000
UR20-PK-2920840000-SP	5	3052180000



## Analogue output modules

### 2- or 4-wire connection, 16-bit resolution, 4 outputs

The analogue output modules can control up to 2 or 4 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. The resolution is 16 bits per channel. An actuator can be connected to each connector in a 2-wire or 4-wire connection. The internal switching is automatic. The output range is defined using parametrisation. A status LED is assigned to each channel. The outputs are supplied from the output current path ( $I_{OUT}$ ) and are decoupled from the system bus ( $I_{SYS}$ ).

"DIAG" module: the module provides individual channel diagnosis with channel-related fault messages.

"M" module: the module is approved for usage in industrial, marine and offshore applications.

"ISO" module: actuators can only be connected in a 2-wire connection. The outputs are not only decoupled from the system bus ( $I_{SYS}$ ), but also from the output current path ( $I_{OUT}$ ) and from each other.

The outputs are supplied from the output current path ( $U_{OUT}$ ).

UR20-2A0-UI-16



UR20-4A0-UI-16



UR20-4A0-UI-16-M



UR20-2A0-UI-16-DIAG



UR20-2A0-UI-ISO-16-DIAG



UR20-4A0-UI-16-DIAG



UR20-4A0-UI-16-M-DIAG



UR20-4A0-UI-16-HD





**2A0-UI-16**

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Short-circuit-proof

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	110 mA
<b>Analogue outputs</b>	
Number of analogue outputs	2
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, ±10 V, ±5 V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0.24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
<b>General data</b>	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Analogue output module, 2 channels, 16 bits	
<b>Note</b>	

**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	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

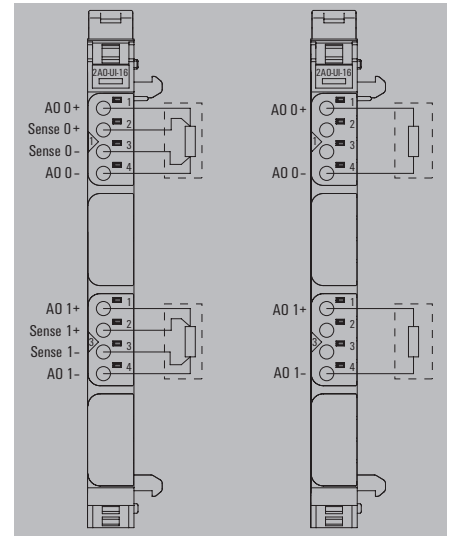
**UR20-2A0-UI-16**



<b>u-remote system bus</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	110 mA
<b>Analogue outputs</b>	
Number of analogue outputs	2
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, ±10 V, ±5 V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0.24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
<b>General data</b>	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

Type	Qty.	Order No.
UR20-2A0-UI-16	1	2705630000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2705630000-SP	1	2777420000
UR20-BM-SP	5	1350930000
UR20-PK-2705630000-SP	5	2777410000



## I/O system IP20 – Analogue output modules

### 4A0-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
- Reactionless
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

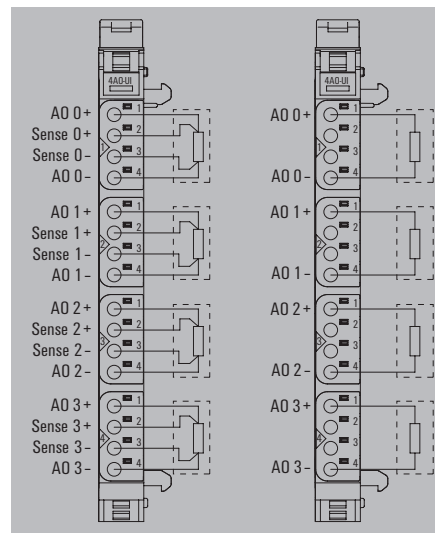
### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bit	UR20-4A0-UI-16
Note	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-1315680000-SP	1	1347270000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315680000-SP	5	1484070000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

### UR20-4A0-UI-16



### 4AO-UI-16-M

- 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
- Reactionless
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	85 mA
Analogue outputs	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bit	UR20-4AO-UI-16-M
Note	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-2453880000-SP	1	2508790000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2453880000-SP	5	2508770000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

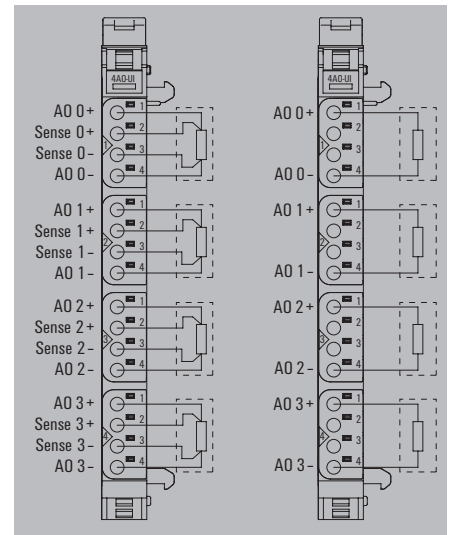
### UR20-4AO-UI-16-M



u-remote system bus	48 Mbit
DC 500 V between current paths	
24 V DC +30 %/ -25 %, via the system bus	8 mA
8 mA	85 mA
4	
Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)	1 ms / 4 channels
1 ms / 4 channels	16 Bit
16 Bit	±0,1 % FSR max., 0,05 % FSR typ.
±0,1 % FSR max., 0,05 % FSR typ.	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)	< 600 Ω
< 600 Ω	2-wire (automatic detection), 4-wire
2-wire (automatic detection), 4-wire	20 ppm voltage / 31 ppm current measurement / °K
20 ppm voltage / 31 ppm current measurement / °K	220 %
220 %	Yes
Yes	0.001 %
0.001 %	< 1 mV eff.
< 1 mV eff.	Yes
Yes	Yes
Yes	
	94 g
	120 mm / 11.5 / 76 mm

Type	Qty.	Order No.
UR20-4AO-UI-16-M	1	2453880000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2453880000-SP	1	2508790000
UR20-BM-SP	5	1350930000
UR20-PK-2453880000-SP	5	2508770000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Analogue output modules

### 2AO-UI-16-DIAG

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Short-circuit-proof

### UR20-2AO-UI-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +20 % / -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	110 mA
Analogue outputs	
Number of analogue outputs	2
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0.24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2AO-UI-16-DIAG	1	2566100000

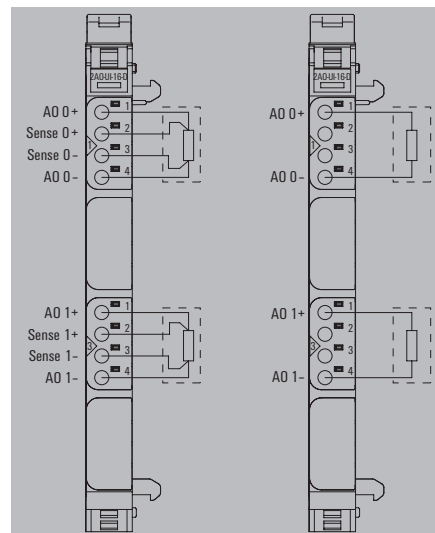
#### Ordering data

Module variants	
Analogue output module, 2 channels, 16 bits, diagnosis functions	
Note	

#### 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	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2566100000-SP	1	2568380000
UR20-BM-SP	5	1350930000
UR20-PK-2566100000-SP	5	2568340000



**2A0-UI-HSO-16-DIAG**

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- Insulation up to 500 V
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Short-circuit-proof

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

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

**Analogue outputs**

Number of analogue outputs  
Output variable

Response time  
Resolution  
Accuracy  
load impedance voltage  
Load impedance current  
Actuator connection  
Temperature coefficient  
Max. error between T min. and T max. in FSR  
Monotonicity  
Cross-talk between the channels in FSR  
Repeat accuracy  
Module diagnosis  
Substitute values

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Analogue output module, 2 channels, 16 bits, diagnosis functions

**Note****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**

Electronic module  
Basic module  
Plug-in connector unit

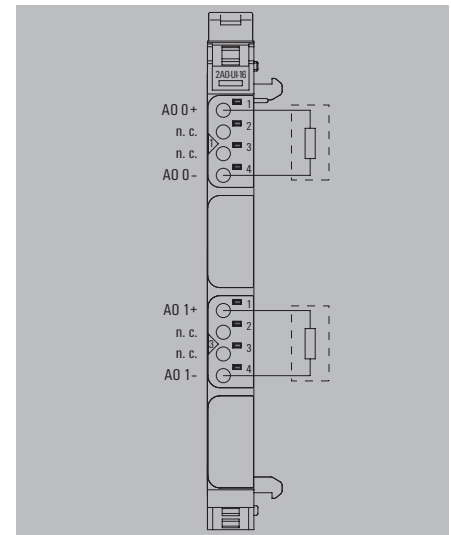
**Note****UR20-2A0-UI-HSO-16-DIAG**

u-remote system bus	48 Mbit
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	8 mA
	110 mA
2	
Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)	1 ms / 2 channels
	16 Bit
	±0,1 % FSR max., 0,05 % FSR typ.
	≥ 1 kΩ
	< 600 Ω
	2-wire
	30 ppm/K
	0,24 %
	Yes
	0,001 %
	< 1 mV eff.
	Yes
	Yes
	85 g
	120 mm / 11,5 mm / 76 mm

Type	Qty.	Order No.
UR20-2A0-UI-HSO-16-DIAG	1	2566970000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-EM-2566970000-SP	1	2568370000
UR20-BM-SP	5	1350930000
UR20-PK-2566970000-SP	5	2568330000



## I/O system IP20 – Analogue output modules

### 4A0-UI-16-DIAG

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

#### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	85 mA
<b>Analogue outputs</b>	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V, $\pm 5$ V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	$\pm 0,1$ % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 k $\Omega$ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 $\Omega$
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
<b>General data</b>	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
<b>Note</b>	

#### Ordering data

<b>Module variants</b>	
Analogue output module, 4 channels, 16 Bits, diagnosis functions	
<b>Note</b>	

#### 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	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

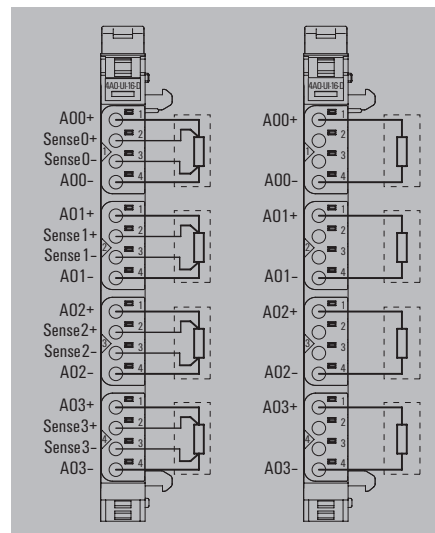
### UR20-4A0-UI-16-DIAG



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 % / -15 %, via the system bus	
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption from $I_{out}$ (the respective power segment)	85 mA	
<b>Analogue outputs</b>		
Number of analogue outputs	4	
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V, $\pm 5$ V), Current (0...20 mA or 4...20 mA)	
Response time	1 ms / 4 channels	
Resolution	16 Bit	
Accuracy	$\pm 0,1$ % FSR max., 0,05 % FSR typ.	
load impedance voltage	> 1 k $\Omega$ (at >50 °C ambient temperature, max. total sensor current = 25 mA)	
Load impedance current	< 600 $\Omega$	
Actuator connection	2-wire (automatic detection), 4-wire	
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K	
Max. error between T min. and T max. in FSR	220 %	
Monotonicity	Yes	
Cross-talk between the channels in FSR	0.001 %	
Repeat accuracy	< 1 mV eff.	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Substitute values	Yes	
<b>General data</b>		
Weight	86 g	
Dimensions H x W x D	120 mm / 11.5 / 76 mm	
<b>Note</b>		

Type	Qty.	Order No.
UR20-4A0-UI-16-DIAG	1	1315730000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
<b>Replacement parts</b>		
UR20-EM-1315730000-SP	1	1347330000
UR20-BM-SP	5	1350930000
UR20-PK-1315730000-SP	5	1518880000
<b>Note</b>		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		



### 4AO-UI-16-M-DIAG

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

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

### Ordering data

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

### 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	
Electronic module	
Basic module	
Plug-in connector unit	

**Note**

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



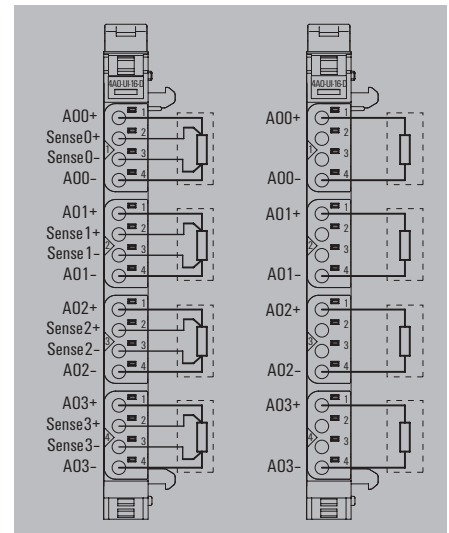
System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	DC 500 V between current paths
Supply	
Voltage supply	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AO-UI-16-M-DIAG	1	2453870000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000

UR20-EM-2453870000-SP	1	2508800000
UR20-BM-SP	5	1350930000
UR20-PK-2453870000-SP	5	2508780000

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



## I/O system IP20 – Analogue output modules

### 4AO-UI-16-HD

- 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

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	85 mA
Analogue outputs	
Number of analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	< 600 Ω
Actuator connection	2-wire (current and voltage), 3- and 4-wire (voltage), 2-wire (automatic detection)
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	< 1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	No
Substitute values	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

### Ordering data

Module variants	
	Analogue output module, 4 channels, 16 Bits, HD-plug
Note	

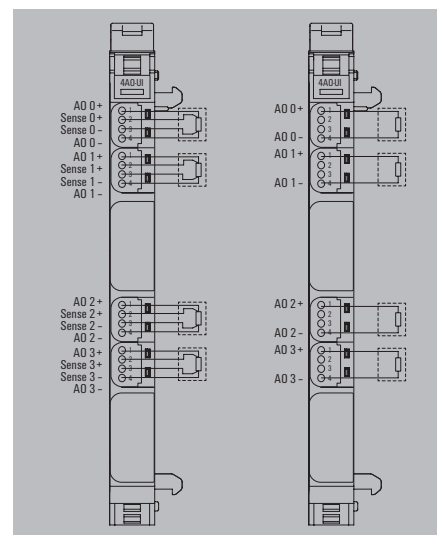
### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (Material: Polyester)
	Thermotransfer version (material: polyester)
	Paper version for Laserprinter
Connector and tools	
	<sup>*)</sup> HD plug
	<sup>*)</sup> Stripping tool
	<sup>*)</sup> Pressing tool
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4AO-UI-16-HD



Note: Please order connector separately



Type	Qty.	Order No.
UR20-4AO-UI-16-HD	1	1510690000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	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
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1510690000-SP	1	1515470000
UR20-BM-SP	5	1350930000
UR20-PK-1510690000-SP	5	1531830000

Note: please order plug (1469340000) separately.





## Digital counter and communication modules

### 100/ 500 kHz; 32-Bit Counter data width, CANopen<sup>®</sup> and IO-Link communication

In automated systems, it is impossible to imagine industry without the collection of incremental- and absolut encoder values. Developed specifically for these applications Weidmüller now offers several counter modules that can take values with an input frequency of up to 500 kHz. By the synchronous-serial Interface module (SSI) high-precision positioning can be realized with absolute encoders. For the frequency measurement up to 100 kHz a module with pulse input is available, the UR20-1CNT-500 module has an input that can detect frequencies up to 500 kHz. The UR20-2CNT-100 module has two independent counter inputs and is supplemented by the module UR20-1CNT-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 modules UR20-1COM-232-485-422 and UR20-1COM-232-485-422-V2 with Modbus RTU Master functionality offer expanded communication possibilities, devices with RS232, RS485 or RS422 interface can be operated efficiently on u-remote. A solution for the connection from the cabinet to the field represents the module UR20-1COM-SAI-PRO. At this gateway up to 15 decentralised IP67 SAI-PRO sub-bus modules can be integrated per u-remote module.

The digital communication module UR20-4COM-IO-LINK is an IO-Link master in compliance with IO-Link specification V1.1.2. An IO-Link device can be connected to each of the plug connectors.

The CANopen<sup>®</sup> manager module with web-based configurator offers simple integration of up to 16 CANopen<sup>®</sup> devices. The module has an galvanically isolated CAN interface and can work in the 4 operating modes Manager, Device, Transparent and Listen-Only.

#### Digital counter modules

UR20-1CNT-100-1DO



UR20-2CNT-100



UR20-1CNT-500



UR20-2FCNT-100



#### Communication modules

UR20-1SSI



UR20-1COM-232-485-422



UR20-1COM-232-485-422-V2



UR20-1COM-SAI-PRO



UR20-4COM-IO-LINK



UR20-1COM-CANOPEN



### 1CNT-100-1D0

- Removable terminals Latch-, Gate- and Reset input
- Maximum input frequency 100 kHz
- One digital output
- Counter data width 32-Bit
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA (plus output current)
<b>Digital inputs</b>	
Number	1
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Input filter	configurable
Input voltage, low	< 5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Max. input current per channel	3.5
Counter width	32
Max. input frequency	100 kHz
Latch, gate, reset input	Yes
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
<b>General data</b>	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

### Ordering data

<b>Module variants</b>	
	Digital counter module, 1 channel, 100 kHz
<b>Note</b>	

### 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
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

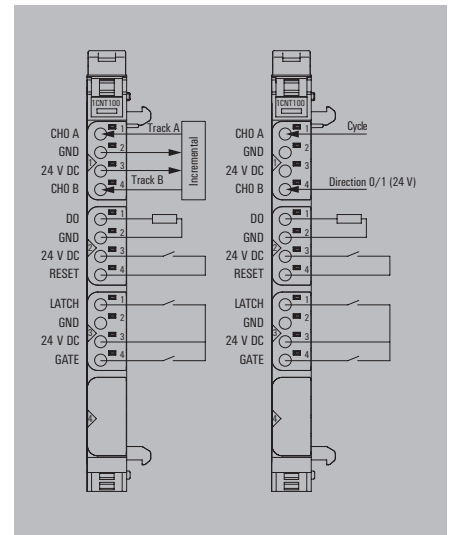
### UR20-1CNT-100-1D0



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	35 mA (plus output current)	
<b>Digital inputs</b>		
Number	1	
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2	
Input filter	configurable	
Input voltage, low	< 5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Max. input current per channel	3.5	
Counter width	32	
Max. input frequency	100 kHz	
Latch, gate, reset input	Yes	
Mode of operation	Pulse, Direction, 1-, 2-, 4-times	
<b>General data</b>		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

Type	Qty.	Order No.
UR20-1CNT-100-1D0	1	1315570000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
<b>Replacement parts</b>		
UR20-EM-1315570000-SP	1	1347140000
UR20-BM-SP	5	1350930000
UR20-PK-1315570000-SP	5	1346520000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 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

### UR20-2CNT-100



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	2
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Input filter	configurable
Input voltage, low	< 5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Max. input current per channel	3.5
Counter width	32
Max. input frequency	100 kHz
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2CNT-100	1	1315590000

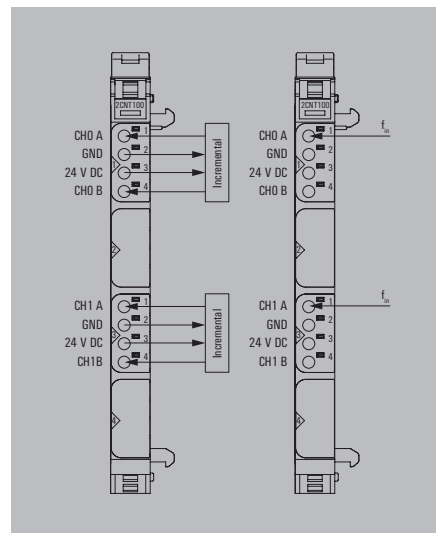
#### Ordering data

Module variants	
Digital counter module, 2 channel, 100 kHz	
Note	

#### Accessories

Replacement parts	
Electronic module	UR20-EM-1315590000-SP
Basic module	UR20-BM-SP
Plug-in connector unit	UR20-PK-1315590000-SP
Note	
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000



**1CNT-500**

- Counter data width 32-Bit
- Maximum input frequency 500 kHz
- One digital output
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

**UR20-1CNT-500**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA
<b>Digital inputs</b>	
Number	1
Input filter	configurable
Sensor supply	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Counter width	32 Bit
Max. input frequency	500 kHz
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
<b>General data</b>	
Weight	87.6 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	< 20 mA	
<b>Digital inputs</b>		
Number	1	
Input filter	configurable	
Sensor supply	Yes	
Short-circuit-proof	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Counter width	32 Bit	
Max. input frequency	500 kHz	
Mode of operation	Pulse, Direction, 1-, 2-, 4-times	
<b>General data</b>		
Weight	87.6 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

<b>Module variants</b>	
	Digital counter module, 1 channel, 500 kHz
<b>Note</b>	

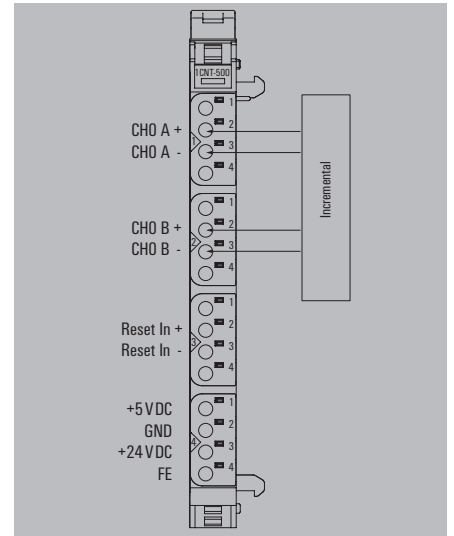
Type	Qty.	Order No.
UR20-1CNT-500	1	1315580000

**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	
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1315580000-SP	1	1347170000
UR20-BM-SP	5	1350930000
UR20-PK-1315580000-SP	5	1346530000

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



### 2FCNT-100

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

### UR20-2FCNT-100



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	2
Input filter	configurable
Input voltage, low	< 5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Max. input current per channel	3.5 mA
Counter width	32 Bit
Max. input frequency	100 kHz
Mode of operation	Pulse
General data	
Weight	65 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2FCNT-100	1	1508080000

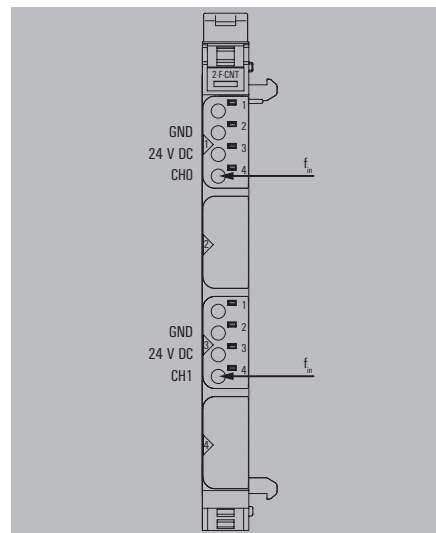
#### Ordering data

Module variants	
	Digital frequency counter module, 2 channel, 100 kHz
Note	

#### 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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1508080000-SP	1	1515440000
UR20-BM-SP	5	1350930000
UR20-PK-1508080000-SP	5	1518840000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



1SSI

- Parameterised transfer rate
- Listening- or Master-Mode
- Data width 8 ... 32 bits
- Adjustable delay time

UR20-1SSI



Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	25 mA + sensor feed
Serial inputs	
Number of serial interfaces	1
Data format	Binary, Gray-Code
SSI mode	Listening, Master
Sensor supply	Yes
Reverse polarity protection	Yes
Module diagnosis of serial interfaces available	Yes
Individual channel diagnosis of serial interfaces available	No
Cable length	max. 320 m at 125 kHz
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-1SSI	1	1508090000

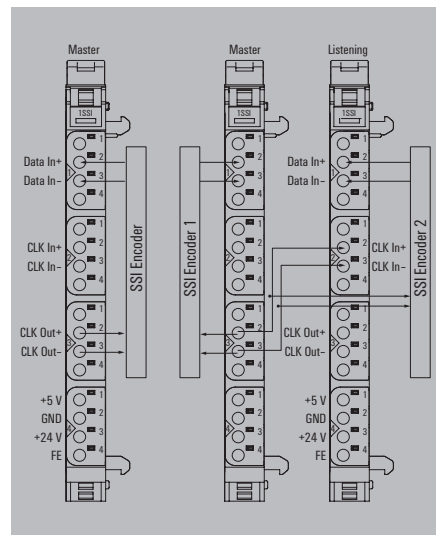
Ordering data

Module variants	
	SSI Module 1 channel, 8 - 32 Bit
Note	

Accessories

Replacement parts			
Electronic module	UR20-EM-1508090000-SP	1	1515490000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1508090000-SP	5	1559870000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000



**1COM-232-485-422**

- Interface for RS232, RS485 and RS422 peripherals
- Adjustable transfer rate
- Galvanic isolation of the signals in the module
- Separate power supply for external peripheral to the module

**UR20-1COM-232-485-422**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	16 mA + load
<b>RS interface</b>	
Number of RS interfaces	1
Connection type of RS interfaces	RS232, RS422, RS485
Transmission rate of RS interfaces, min./max.	300...115200 bit/s
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	max. 500 mA
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11
Short-circuit-proof of RS interfaces	Yes
Module diagnosis of RS interfaces available	Yes
Individual channel diagnosis of RS interfaces available	Yes
<b>General data</b>	
Weight	87.03 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

<b>u-remote system bus</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	16 mA + load	
<b>RS interface</b>		
Number of RS interfaces	1	
Connection type of RS interfaces	RS232, RS422, RS485	
Transmission rate of RS interfaces, min./max.	300...115200 bit/s	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	
Output current, supply voltage	max. 500 mA	
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28	
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11	
Short-circuit-proof of RS interfaces	Yes	
Module diagnosis of RS interfaces available	Yes	
Individual channel diagnosis of RS interfaces available	Yes	
<b>General data</b>		
Weight	87.03 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

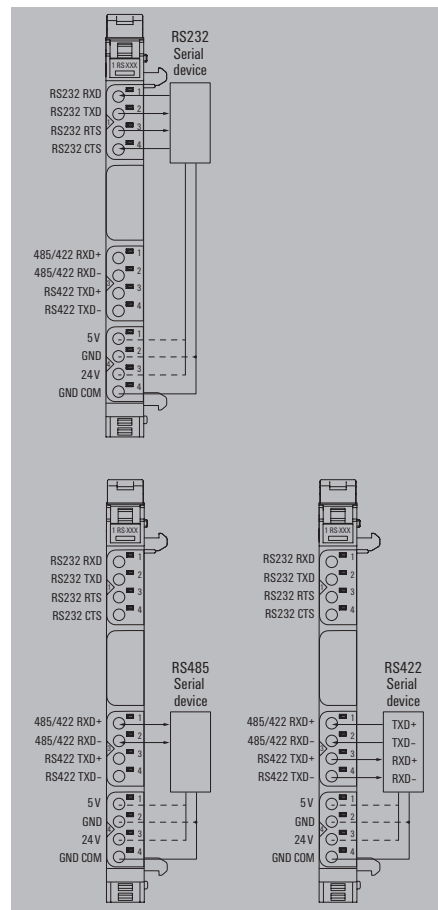
<b>Module variants</b>	
RS232/RS485/RS422 communication module	
<b>Note</b>	

Type	Qty.	Order No.
UR20-1COM-232-485-422	1	1315750000

**Accessories**

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESD UR20 DIN A4 WS	10	1429430000

<b>Replacement parts</b>			
Electronic module	UR20-EM-1315750000-SP	1	1347350000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315750000-SP	5	2425150000
<b>Note</b>			





**1COM-232-485-422-V2**

- Interface for RS232, RS485 and RS422 peripherals
- Adjustable transfer rate
- Galvanic isolation of the signals in the module
- Separate power supply for external peripheral to the module
- Modbus RTU Master
- DMX512

**UR20-1COM-232-485-422-V2**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	16 mA + load
<b>RS interface</b>	
Number of RS interfaces	1
Connection type of RS interfaces	RS232, RS422, RS485
Transmission rate of RS interfaces, min./max.	300...230400 Bit/s
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	max. 400 mA
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11
Short-circuit-proof of RS interfaces	Yes
Module diagnosis of RS interfaces available	Yes
Individual channel diagnosis of RS interfaces available	Yes
<b>General data</b>	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
	RS232/RS485/RS422 communication module
<b>Note</b>	

**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	

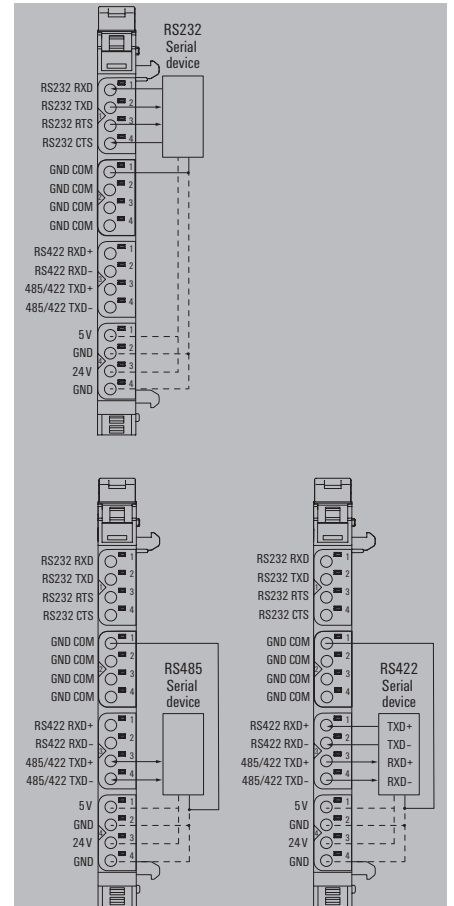
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

<b>u-remote system bus</b>		
		48 Mbit
		500 V DC between the current paths
<b>Supply</b>		
		24 V DC +20 %/ -15 %, via the system bus
		8 mA
		16 mA + load
<b>RS interface</b>		
		1
		RS232, RS422, RS485
		300...230400 Bit/s
		24 V DC +20 %/ -15 %, via the system bus
		max. 400 mA
		DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28
		DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11
		Yes
		Yes
		Yes
<b>General data</b>		
		89 g
		120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-1COM-232-485-422-V2	1	2826800000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-2826800000-SP	1	2826860000
UR20-BM-SP	5	1350930000
UR20-PK-2826800000-SP	5	2826870000



## I/O system IP20 – Digital counter and communication modules

### 1COM-SAI-PRO

- 15 SAI-PRO modules connectable
- Max. 50 m Subbus wire length
- Continuous diagnostics IP20-IP67
- Representation of SAI-PRO modules in web server

### UR20-1COM-SAI-PRO



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	17 mA + SAI supply current
IP67 interface	
Number of data interfaces to IP67 modules	1
Transmission rate of data interfaces to IP67 module configurable	Yes
Transmission rate of data interfaces to IP67 modules	250
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	2.5 A
Short-circuit-proof of data interfaces to IP67 modules	Yes
Module diagnosis of data interfaces to IP67 modules available	Yes
Individual channel diagnosis of data interfaces to IP67 modules available	Yes
General data	
Weight	80.97 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-1COM-SAI-PRO	1	2007430000

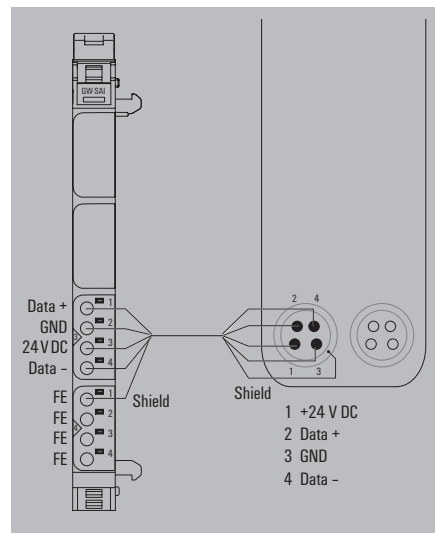
#### Ordering data

Module variants	
	IP20-IP67 communication module
Note	

#### 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		
	Electronic module	
	Basic module	
	Plug-in connector unit	
Note		

Type	Qty.	Order No.
KOSM BH25.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-2007430000-SP	1	2425350000
UR20-BM-SP	5	1350930000
UR20-PK-2007430000-SP	5	2425160000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4COM-IO-LINK

- Connection for 4 IO-Link devices
- IO-Link standard according to IEC 61131-9
- Protocol support IO-Link specification V1.1.2
- Automatic communication via COM 1, COM 2 and COM 3
- Max. 20 m wire length
- Internal data width 4-32 bytes, configurable
- u-mation configurator software for configuration and monitoring

### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
<b>IO-Link interface</b>	
Number of IO-Link interfaces	4
Connection type	IO-Link
Output current	0.1 A C/Q (DO MODE), 0.5 A L+
IO link standard	IO-Link V1.1.2
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Class	A
<b>Digital inputs</b>	
Type	Types 1 and 3, EN 61131-2
Input voltage, low	<5 V
Input voltage, high	> 11 V
<b>General data</b>	
Weight	87.62 g
Dimensions H x W x D	120 / 11.5 / 76 mm
<b>Note</b>	

### Ordering data

<b>Module variants</b>	
Digital communication module, 4 channels	
<b>Note</b>	

### 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	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

### UR20-4COM-IO-LINK

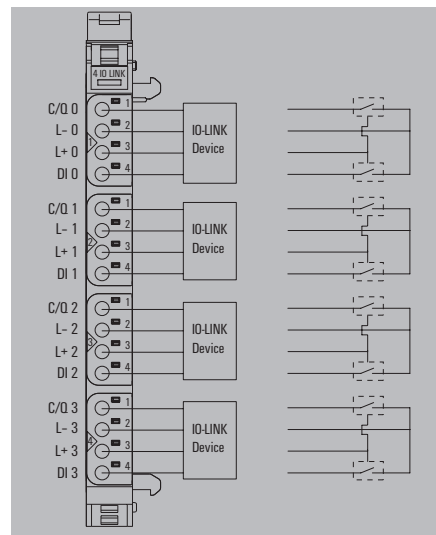


u-remote system bus	48
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	
8 mA	
25 mA + sensor feed	
4	
IO-Link	
0.1 A C/Q (DO MODE), 0.5 A L+	
IO-Link V1.1.2	
Yes	
Yes	
Yes	
A	
Types 1 and 3, EN 61131-2	
<5 V	
> 11 V	
87.62 g	
120 / 11.5 / 76 mm	

Type	Qty.	Order No.
UR20-4COM-IO-LINK	1	1315740000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1315740000-SP	1	1347340000
UR20-BM-SP	5	1350930000
UR20-PK-1315740000-SP	5	2508760000

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



C

### 1COM-CANOPEN

- NMT master for up to 16 CANopen devices
- CANopen standard according to CiA DS-301 based on ISO 11898
- Selectable operating modes: CANopen Manager, CANopen Device, Transparent, Listen-Only
- u-mation configurator software for network configuration and monitoring
- Switchable terminating resistor (120 Ω) for flexible network architecture

### UR20-1COM-CANOPEN



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Supply	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	30 mA
CANopen interface	
Number	1
Transmission rate	10 / 20 / 50 / 100 / 125 / 250 / 500 / 800 / 1000 kBit/s / Auto baud rate (only device mode)
Type	1x CANopen, CANopen according to CiA DS-301 on the basis of ISO 11898, parametrisable
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-1COM-CANOPEN	1	2489840000

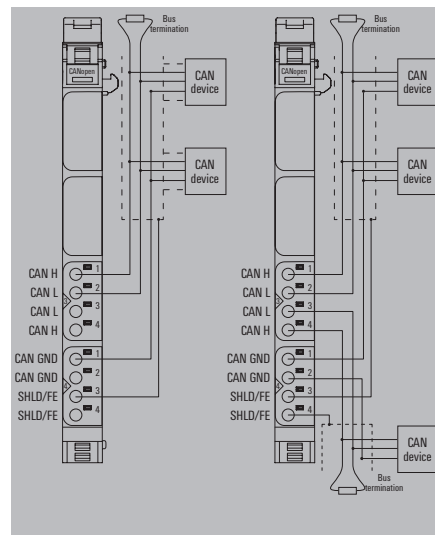
#### Ordering data

Module variants	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher custom printing	PM 2.7/2.6 MC SDR	192	1323700000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (Material: Polyester)	THM UR20 GE	1	1429910000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Paper version for Laserprinter	ESO UR20 DIN A4 WS	10	1429430000
Replacement parts			
Electronic module	UR20-EM-2489840000-SP	1	2702550000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2489840000-SP	5	2702530000
Note			

Type	Qty.	Order No.
UR20-EM-2489840000-SP	1	2702550000
UR20-BM-SP	5	1350930000
UR20-PK-2489840000-SP	5	2702530000





## Safe I/O modules and safe power-feed modules

### PROFIsafe/FSoE, PLe, Kat. 4/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 machine in danger, you need solutions which satisfy stringent requirements and statutory specifications.

Weidmüller PROFIsafe and Fail-Safe-over-EtherCAT modules (IEC 61784-3 respectively IEC 61784-3-3) are providing variable parameterization possibilities and because of this a very high flexibility and adaptability to your application. Due to the standards a use in existing systems is straightforward. The safe I/O-modules with PROFIsafe or FSoE are available with digital in- and outputs.

The safe power-feed 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, PLe 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.

Safe I/O- and safe power-feed 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 ( $U_{OUT}$ ).

UR20-4DI-4DO-PN-FSOE-V2



UR20-8DI-PN-FSOE-V2



UR20-4DI-4DO-PN-FSPS-V2



UR20-8DI-PN-FSPS-V2



UR20-PF-0-1DI-SIL



UR20-PF-0-2DI-SIL



UR20-PF-0-2DI-DELAY-SIL



**4DI-4DO-PN-FSOE-V2**

- FailSafe over EtherCAT
- 4 digital inputs, two of them are parametrisable P- or N-switching
- 4 digital outputs, two of them are parametrisable P- or N-switching
- Constant current with thermal switch-off

**UR20-4DI-4DO-PN-FSOE-V2**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Voltage supply	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA
<b>Safety related data</b>	
Achievable safety level, inputs / outputs	SIL 3 (IEC 61508), SILCL 3 (IEC 62061), Ple, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)
Level of diagnostic coverage DC <sub>avg</sub> (IEC 62061)	Input: 0.921, output: 0.969
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1
HFT (hardware fault tolerance), outputs	1
<b>Inputs</b>	
Number	4
Input filter	configurable
Input voltage, low / high	< 5 V / > 11 V
Reverse polarity protection	Yes
<b>Outputs</b>	
Number	4
Output current per channel, max. / Output current per module, max.	0,5 A / 2 A
Actuator connection	2-wire
Short-circuit-proof	Yes
Response time of the protective circuit (current limiting)	< 100µs
<b>General data</b>	
Weight	90,2 g
Dimensions H x W x D	120 mm / 11,5 mm / 76 mm
<b>Note</b>	

<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA	
<b>Safety related data</b>		
Achievable safety level, inputs / outputs	SIL 3 (IEC 61508), SILCL 3 (IEC 62061), Ple, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)	
Level of diagnostic coverage DC <sub>avg</sub> (IEC 62061)	Input: 0.921, output: 0.969	
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%	
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1	
HFT (hardware fault tolerance), outputs	1	
<b>Inputs</b>		
Number	4	
Input filter	configurable	
Input voltage, low / high	< 5 V / > 11 V	
Reverse polarity protection	Yes	
<b>Outputs</b>		
Number	4	
Output current per channel, max. / Output current per module, max.	0,5 A / 2 A	
Actuator connection	2-wire	
Short-circuit-proof	Yes	
Response time of the protective circuit (current limiting)	< 100µs	
<b>General data</b>		
Weight	90,2 g	
Dimensions H x W x D	120 mm / 11,5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

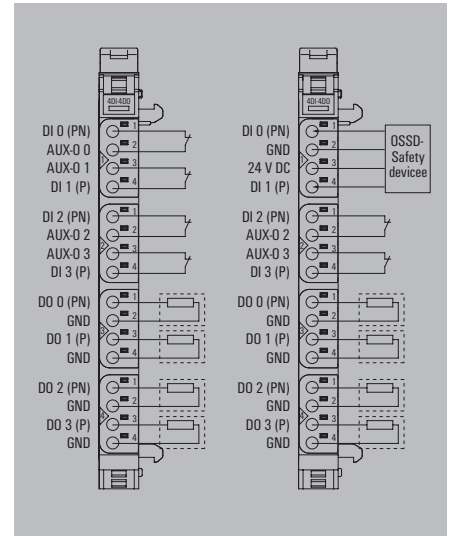
<b>Module variants</b>	
	Safety module FSOE, 4 digital inputs/outputs
<b>Note</b>	

Type	Qty.	Order No.
UR20-4DI-4DO-PN-FSOE-V2	1	2464580000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</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
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-2464580000-SP	1	2466020000
UR20-BM-SP	5	1350930000
UR20-PK-2464580000-SP	5	2465990000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 8DI-PN-FSOE-V2

- FailSafe over EtherCAT
- 8 digital inputs, four of them are parametrisable P- or N-switching
- 2-wire, 3-wire, 4-wire connection

### UR20-8DI-PN-FSOE-V2



#### Technical data

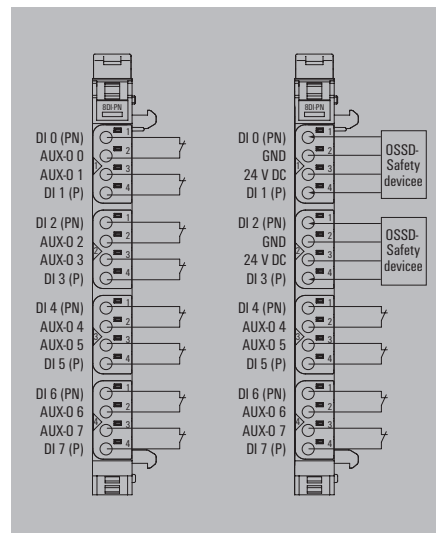
System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Safety related data	
Achievable safety level, inputs / Achievable safety level, inputs	Single-channel circuit 1oo1: SILCL 2, Dual-channel circuit 1oo2: SILCL 3 / PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel), Plc, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>
Proportion of safety-related outages (SFF)	98 %
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
Inputs	
Number	8
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 4-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89.69 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Ordering data		
Module variants		
	Safety module FSOE, 8 digital inputs	
Note		
Type	Qty.	Order No.
UR20-8DI-PN-FSOE-V2	1	2464600000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</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		
	Electronic module	
	Basic module	
	Plug-in connector unit	
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
UR20-EM-2464600000-SP	1	2465960000
UR20-BM-SP	5	1350930000
UR20-PK-2464600000-SP	5	2465940000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





### 4DI-4DO-PN-FSPS-V2

- PROFIsafe
- 4 digital inputs, two of them are parametrisable P- or N-switching
- 4 digital outputs, two of them are parametrisable P- or N-switching
- Constant current with thermal switch-off

#### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
<b>Safety related data</b>	
Achievable safety level, inputs / outputs	SIL 3 (IEC 61508), SILCL 3 (IEC 62061), Ple, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)
Level of diagnostic coverage DC <sub>AVE</sub> (IEC 62061)	Input: 0.921, output: 0.969
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>8</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1
HFT (hardware fault tolerance), outputs	1
<b>Supply</b>	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
<b>Inputs</b>	
Number	4
Input filter	configurable
Input voltage, low / high	< 5 V / > 11 V
Reverse polarity protection	Yes
<b>Outputs</b>	
Number	4
Output current per channel, max. / Output current per module, max.	0,5 A / 2 A
Actuator connection	2-wire
Short-circuit-proof	Yes
Response time of the protective circuit (current limiting)	< 100µs
<b>General data</b>	
Weight	89,7 g
Dimensions H x W x D	120 mm / 11,5 mm / 76 mm
<b>Note</b>	

#### Ordering data

<b>Module variants</b>	
	Safety module PROFIsafe, 4 digital inputs/outputs
<b>Note</b>	

#### 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
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

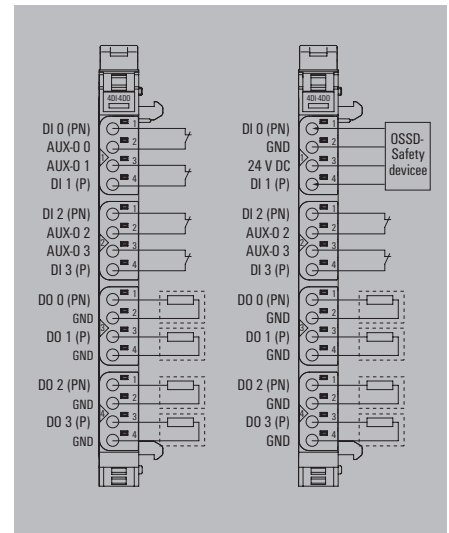
### UR20-4DI-4DO-PN-FSPS-V2



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Galvanic isolation	500 V DC between the current paths	
<b>Safety related data</b>		
Achievable safety level, inputs / outputs	SIL 3 (IEC 61508), SILCL 3 (IEC 62061), Ple, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)	
Level of diagnostic coverage DC <sub>AVE</sub> (IEC 62061)	Input: 0.921, output: 0.969	
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%	
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>8</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1	
HFT (hardware fault tolerance), outputs	1	
<b>Supply</b>		
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA	
<b>Inputs</b>		
Number	4	
Input filter	configurable	
Input voltage, low / high	< 5 V / > 11 V	
Reverse polarity protection	Yes	
<b>Outputs</b>		
Number	4	
Output current per channel, max. / Output current per module, max.	0,5 A / 2 A	
Actuator connection	2-wire	
Short-circuit-proof	Yes	
Response time of the protective circuit (current limiting)	< 100µs	
<b>General data</b>		
Weight	89,7 g	
Dimensions H x W x D	120 mm / 11,5 mm / 76 mm	
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UR20-4DI-4DO-PN-FSPS-V2	1	2464570000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</a> .		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
<b>Replacement parts</b>		
UR20-EM-2464570000-SP	1	2466030000
UR20-BM-SP	5	1350930000
UR20-PK-2464570000-SP	5	2466000000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 8DI-PN-FSPS-V2

- PROFIsafe
- 8 digital inputs, four of them are parametrisable P- or N-switching
- 2-wire, 3-wire, 4-wire connection

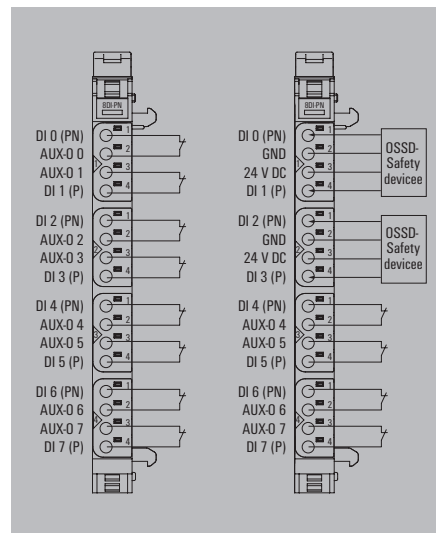
### UR20-8DI-PN-FSPS-V2



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Galvanic isolation	500 V DC between the current paths
Safety related data	
Achievable safety level, inputs / Achievable safety level, inputs	Single-channel circuit 1oo1: SILCL 2, Dual-channel circuit 1oo2: SILCL 3 / PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel), Ple, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>-10</sup>
Proportion of safety-related outages (SFF)	98 %
Supply	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
Inputs	
Number	8
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 4-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88.82 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Ordering data		
Module variants		
	Safety module PROFIsafe, 8 digital inputs	
Note		
Type	Qty.	Order No.
UR20-8DI-PN-FSPS-V2	1	2464590000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</a> .		
Accessories		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
Replacement parts		
Electronic module	UR20-EM-2464590000-SP	1 2466010000
Basic module	UR20-BM-SP	5 1350930000
Plug-in connector unit	UR20-PK-2464590000-SP	5 2465950000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**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**

<b>System data</b>
Interface
Transmission speed of system bus, max.
<b>Safety related data</b>
Achievable safety level, inputs
Proportion of safety-related outages (SFF)
HFT (hardware fault tolerance), inputs
<b>Supply</b>
Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.
<b>Digital inputs</b>
Wire break detection
Short-circuit detection
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

**Ordering data**

<b>Module variants</b>	Safety module, 1 digital input
<b>Note</b>	

**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
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

**UR20-PF-O-1DI-SIL**

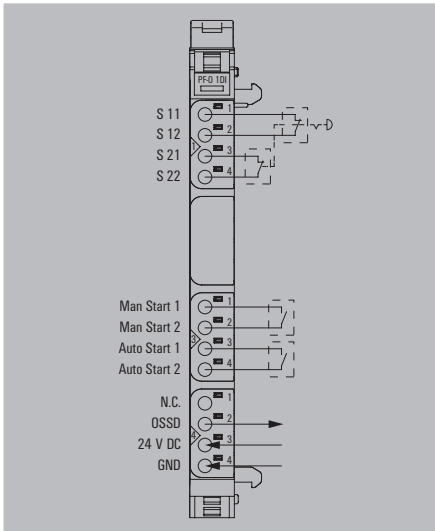


u-remote system bus	
48 Mbit	
SIL 3 (IEC 61508)	
98 %	
1	
24 V DC +20 %/ -15 %	
24 V DC +20 %/ -15 %	
8050 mA	
8 mA	
Yes	
Yes	
108 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-PF-O-1DI-SIL	1	1335030000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
UR20-EM-1335030000-SP	1	1347520000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335030000-SP	5	1346560000

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



C

## I/O system IP20 – Safe I/O modules and safe power-feed modules

### 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

### UR20-PF-O-2DI-SIL



### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit
Safety related data	
Achievable safety level, inputs	SIL 3 (IEC 61508)
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	1
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>OUT</sub> (output current path) , max.	8050
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA
Digital inputs	
Wire break detection	Yes
Short-circuit detection	Yes
General data	
Weight	82 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit	
Safety related data		
Achievable safety level, inputs	SIL 3 (IEC 61508)	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	1	
Supply		
Supply voltage for inputs	24 V DC +20 %/ -15 %	
Supply voltage for outputs	24 V DC +20 %/ -15 %	
Feed current for I <sub>OUT</sub> (output current path) , max.	8050	
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA	
Digital inputs		
Wire break detection	Yes	
Short-circuit detection	Yes	
General data		
Weight	82 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

### Ordering data

Module variants	
	Safety module, 2 digital inputs
Note	

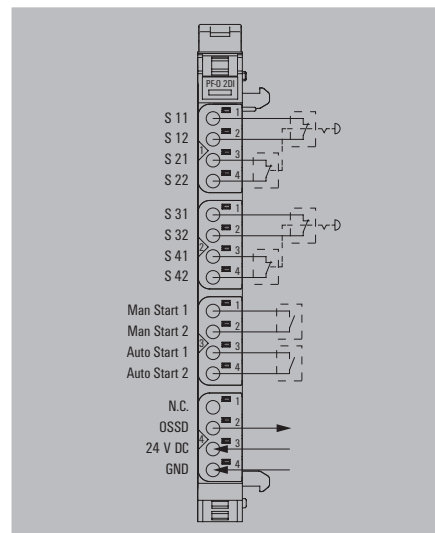
Type	Qty.	Order No.
UR20-PF-O-2DI-SIL	1	1335050000

### Accessories

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1335050000-SP	1	1347540000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335050000-SP	5	1346570000

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



**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**

<b>System data</b>
Interface
Transmission speed of system bus, max.
<b>Safety related data</b>
Achievable safety level, inputs
Proportion of safety-related outages (SFF)
HFT (hardware fault tolerance), inputs
<b>Supply</b>
Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.
<b>Digital inputs</b>
Wire break detection
Short-circuit detection
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

**Ordering data**

<b>Module variants</b>	Safety module, 2 digital inputs, delayed
<b>Note</b>	

**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
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

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

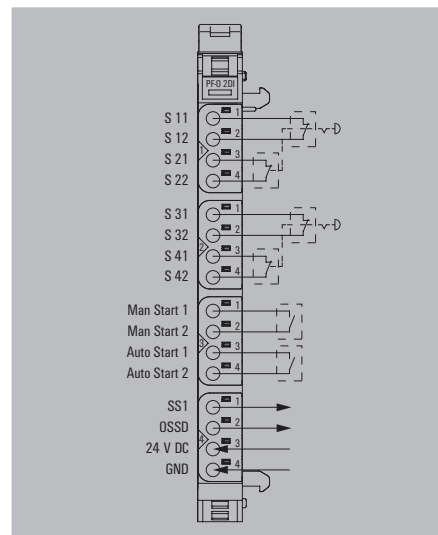


	u-remote system bus
	48 Mbit
	SIL 3 (IEC 61508)
	98 %
	1
	24 V DC +20 %/ -15 %
	24 V DC +20 %/ -15 %
	8050
	8 mA
	Yes
	Yes
	101 g
	120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-PF-O-2DI-DELAY-SIL	1	1335040000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 GE	1	1429910000
THM UR20 WS	1	1429420000
ESD UR20 DIN A4 WS	10	1429430000
UR20-EM-1335040000-SP	1	1347530000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335040000-SP	5	1484100000

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



C

## 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.

C

UR20-PF-I



UR20-PF-O



**PF-I**

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

**UR20-PF-I****Technical data****Supply**

Supply voltage for inputs  
 Feed current for  $I_{in}$  (input current path) , max.  
 Current consumption  $I_{in}$  (the respective power segment)

**General data**

Weight  
 Dimensions H x W x D

**Note**

24 V DC +20 %/ -15 %  
 10000 mA  
 < 10 mA

76 g  
 120 mm / 11.5 / 76 mm

**Ordering data****Module variants**

Power supply module, 10 A

**Note**

Type	Qty.	Order No.
UR20-PF-I	1	1334710000

**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

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

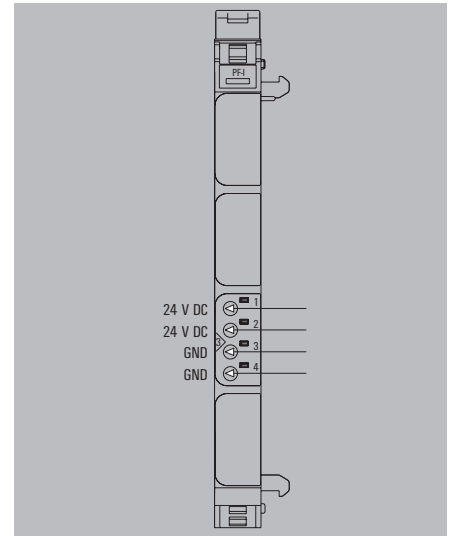
**Replacement parts**

Electronic module  
 Basic module  
 Plug-in connector unit

UR20-EM-1334710000-SP	1	1347380000
UR20-BM-PF-I-SP	5	1350940000
UR20-PK-1334710000-SP	5	1346460000

**Note**

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



## I/O system IP20 – Power-feed modules

## PF-0

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

## UR20-PF-0



## Technical data

Supply	
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>OUT</sub> (output current path) , max.	10000 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	< 10 mA
General data	
Weight	76 g
Dimensions H x W x D	120 mm / 11.5 / 76 mm
Note	

## Ordering data

Module variants	
	Power supply module, 10 A
Note	

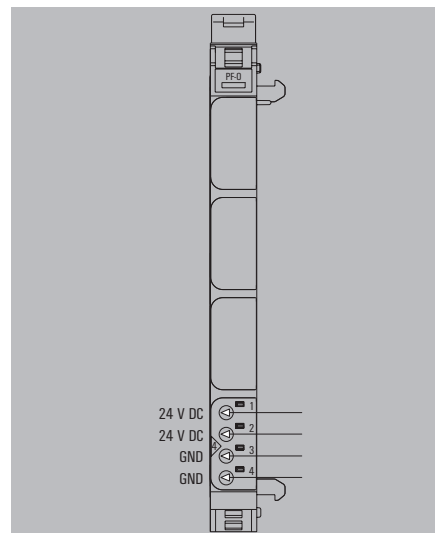
## Accessories

	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	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

	24 V DC +20 %/ -15 %
	10000 mA
	< 10 mA
	76 g
	120 mm / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-PF-0	1	1334740000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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
Note		
	1 roll = 1000 label = 1 Qty.	
	1 sheet = 60 label = 1 Qty.	







## Accessories

### Potential distribution modules, system accessories

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-ES



UR20-16AUX-I



UR20-16AUX-O



UR20-16AUX-FE



UR20-16AUX-GND-I



UR20-16AUX-GND-O



UR20-AUX-VSYS



## 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 x W x D

## Note

## Ordering data

## Module variants

Potential distribution module

## Note

## 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

Electronic module
Basic module
Plug-in connector unit

## Note

## UR20-16AUX



24 V DC +20 %/ -15 %, from input or output current path / FE

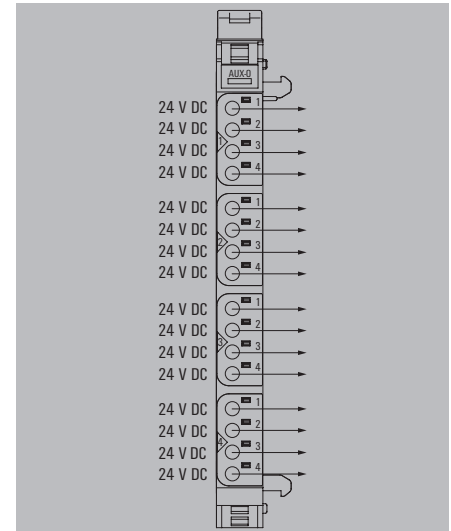
84 g

120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-16AUX-I	1	1334770000
UR20-16AUX-O	1	1334780000
UR20-16AUX-FE	1	1334790000
UR20-16AUX-GND-I	1	1334800000
UR20-16AUX-GND-O	1	1334810000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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-USB-A-MICRO-1.8M	1	1487980000

UR20-EM-1334770000-SP	1	1347450000
UR20-EM-1334780000-SP	1	1347470000
UR20-EM-1334790000-SP	1	1347480000
UR20-EM-1334800000-SP	1	1347490000
UR20-EM-1334810000-SP	1	1347500000
UR20-BM-SP	5	1350930000
UR20-PK-1334770000-SP	5	1346450000
UR20-PK-1334790000-SP	5	1346490000
UR20-PK-1334800000-SP	5	1346470000
UR20-PK-1334780000-SP	5	1484080000
UR20-PK-1334810000-SP	5	1484090000

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

**AUX-VSYS**

- Optimized hot-swap behaviour by maintaining all output states even if the backplane bus connection is briefly interrupted
- Forwarding of the system bus and the voltage paths
- Passive auxiliary module without fieldbus communication, does not reduce the number of stackable active I/O modules

**UR20-AUX-VSYS**



**Technical data**

<b>Supply</b>
Voltage supply
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

0 V (from output current path)
70 g
120 mm / 11.5 mm / 76 mm

**Ordering data**

<b>Module variants</b>
<b>Note</b>

Type	Qty.	Order No.
UR20-AUX-VSYS	1	2919660000

## Empty slot module

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

### Technical data

#### General data

Weight  
Dimensions H x W x D

70 g  
120 mm / 11.5 / 76 mm

#### Note

### Ordering data

#### Module variants

Empty module

#### Note

### 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

Electronic module  
Basic module  
Plug-in connector unit

#### Note

## UR20-ES



Type	Qty.	Order No.
UR20-ES	1	1315770000

Type	Qty.	Order No.
KOSM BHZ.00	100	1483050000
UR20-EBK-ACC	5	1346610000
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 5/8-11.5 MC SDR	100	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

UR20-EM-1315770000-SP	1	1347370000
UR20-BM-SP	5	1350930000
UR20-PK-1315770000-SP	5	1346510000

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

## Termination kit

- Includes an end plate and two end brackets

### Ordering data

#### Module variants

Termination kit

#### Note

## UR20-EBK



Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000





# System overview

## Support for component selection

The following tables will help you to assemble your systems. The exact technical data and descriptions of the products can be found on the respective page here in the catalogue. When selecting, please note the maximum number of 64 active modules and the packaging units for the accessories.

For help in refreshing the power paths, see the calculation example at the bottom right.

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

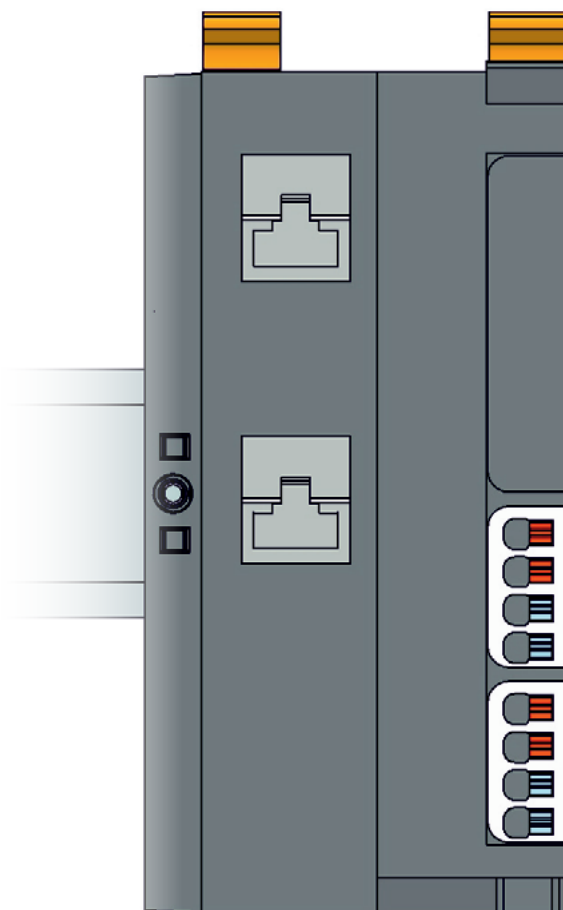
Bus	Type	Order No.	Page
PROFIBUS	UR20-FBC-PB-DP-V2	2614380000	C.5
PROFINET	UR20-FBC-PN-IRT-V2	2566380000	C.7
PROFINET	UR20-FBC-PN-ECO	2659680000	C.9
EtherCAT	UR20-FBC-EC	1334910000	C.11
EtherCAT	UR20-FBC-EC-ECO	2659690000	C.13
Modbus	UR20-FBC-MOD-TCP-V2	2476450000	C.15
Modbus	UR20-FBC-MOD-TCP-ECO	2659700000	C.17
EtherNet/IP	UR20-FBC-EIP	1334920000	C.19
EtherNet/IP	UR20-FBC-EIP-V2	1550550000	C.20
EtherNet/IP	UR20-FBC-EIP-ECO	2799510000	C.23
DeviceNet	UR20-FBC-DN	1334900000	C.25
CANopen	UR20-FBC-CAN	1334890000	C.27
POWERLINK	UR20-FBC-PL	1334940000	C.29
CC-Link V2	UR20-FBC-CC	2625010000	C.31
CC-Link IE TSN	UR20-FBC-CC-TSN	2680260000	C.33
IEC 61162-450	UR20-FBC-IEC61162-450	2661310000	C.35

### 2. What signals do you want to process?

Digital inputs	Order No.	Page
UR20-4DI-P	1315170000	C.37
UR20-4DI-P-3W	2009360000	C.38
UR20-8DI-P-2W	1315180000	C.39
UR20-8DI-P-3W	1394400000	C.40
UR20-8DI-P-3W-HD	1315190000	C.41
UR20-16DI-P	1315200000	C.42
UR20-16DI-P-PLC-INT	1315210000	C.43
UR20-2DI-P-TS	1460140000	C.44
UR20-4DI-P-TS	1460150000	C.45
UR20-4DI-N	1315350000	C.46
UR20-8DI-N-3W	1315370000	C.47
UR20-16DI-N	1315390000	C.48
UR20-16DI-N-PLC-INT	1315400000	C.49
UR20-4DI-2W-230V-AC	1550070000	C.51
UR20-8DHSO-2W	2457240000	C.50
Digital outputs	Order No.	Page
UR20-4DO-P	1315220000	C.53
UR20-4DO-P-2A	1315230000	C.54
UR20-4DO-PN-2A	1394420000	C.55
UR20-8DO-P	1315240000	C.56
UR20-8DO-P-2W-HD	1509830000	C.57
UR20-16DO-P	1315250000	C.58
UR20-16DO-P-PLC-INT	1315270000	C.59
UR20-4DO-N	1315410000	C.60
UR20-4DO-N-2A	1315420000	C.61
UR20-8DO-N	1315430000	C.62
UR20-16DO-N	1315440000	C.63
UR20-16DO-N-PLC-INT	1315450000	C.64
UR20-4DO-ISO-4A	2457250000	C.65
UR20-8DI-P-3W-DIAG	2456530000	C.69
UR20-4RO-SSR-255	1315540000	C.66
UR20-4RO-CO-255	1315550000	C.67

### 2. What signals do you want to process?

Digital outputs	Order No.	Page
UR20-2PWM-PN-0.5A-V2	3036960000	C.71
UR20-2PWM-PN-2A-V2	3036950000	C.72
UR20-2PWM+2.5A-2DI-P	2697910000	C.73
UR20-1SM-50W-6DI2DO-P	2489830000	C.74
Analogue inputs	Order No.	Page
UR20-2AI-UI-16	2705620000	C.77
UR20-4AI-UI-12	1394390000	C.78
UR20-4AI-UI-16	1315620000	C.79
UR20-2AI-UI-16-DIAG	2566090000	C.80
UR20-4AI-UI-16-DIAG	1315690000	C.81
UR20-4AI-UHSO-16-DIAG	2566960000	C.82
UR20-4AI-UI-16-HD	1506920000	C.83
UR20-4AI-UI-16-DIAG-HD	1506910000	C.84
UR20-8AI-16-HD	1315650000	C.85
UR20-8AI-16-DIAG-HD	1315720000	C.86
UR20-8AI-PLC-INT	1315670000	C.87
UR20-4AI-UI-DIF-16-DIAG	1993880000	C.88
UR20-4AI-TC-DIAG	1315710000	C.96
UR20-4AI-RTD-DIAG	1315700000	C.93
UR20-4AI-RTD-HP-DIAG	2456540000	C.94
UR20-4AI-RHS-16-DIAG	2001670000	C.97
UR20-4AI-HART-16-DIAG	2617520000	C.90
UR20-4AI-HART-ISO-16	2828350000	C.91
UR20-8AI-RTD-DIAG-2W	2555940000	C.95
UR20-2AI-SG-24-DIAG	1990070000	C.99
UR20-3EM-230V-AC	2007420000	C.101
UR20-3EM-400V-AC-CT1A	2920830000	C.102
UR20-3EM-400V-AC-CT5A	2920840000	C.103
Analogue outputs	Order No.	Page
UR20-2AO-UI-16	2705630000	C.105
UR20-4AO-UI-16	1315680000	C.106
UR20-4AO-UI-16-M	2453880000	C.107
UR20-2AO-UI-16-DIAG	2566100000	C.108
UR20-2AO-UHSO-16-DIAG	2566970000	C.109
UR20-4AO-UI-16-DIAG	1315730000	C.110
UR20-4AO-UI-16-M-DIAG	2453870000	C.111
UR20-4AO-UI-16-HD	1510690000	C.112
Digital counter- and communication modules	Order No.	Page
UR20-1CNT-100-1DO	1315570000	C.115
UR20-2CNT-100	1315590000	C.116
UR20-1CNT-500	1315580000	C.117
UR20-2FCNT-100	1508080000	C.118
UR20-1SSI	1508090000	C.119
UR20-1COM-232-485-422	1315750000	C.120
UR20-1COM-232-485-422-V2	2826800000	C.121
UR20-1COM-SAI-PRO	2007430000	C.122
UR20-4COM-IO-LINK	1315740000	C.123
UR20-1COM-CANOPEN	2489840000	C.124
Further functional modules	Order No.	Page
UR20-4DI-4DO-PN-FSOE-V2	2464580000	C.127
UR20-8DI-PN-FSOE-V2	2464600000	C.128
UR20-4DI-4DO-PN-FSPS-V2	2464570000	C.129
UR20-8DI-PN-FSPS-V2	2464590000	C.130



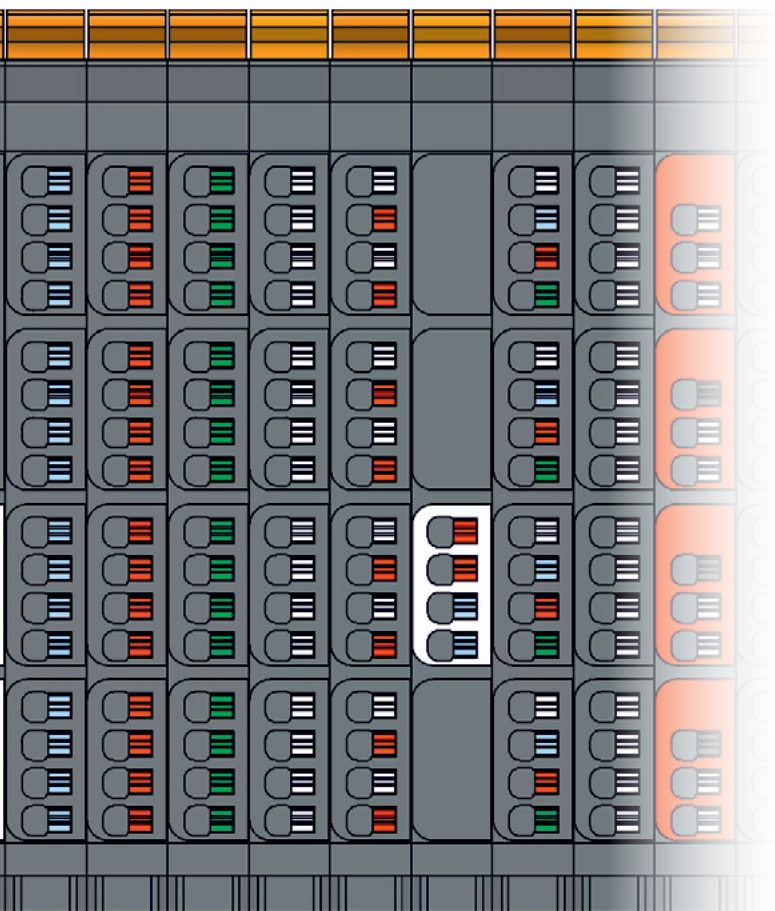


**3. Do you need more than 10 A on the input or output path? Then you will need an additional supply! There is a sample calculation at the bottom of this page.**

	Order No.	Page
UR20-PF-O-1DI-SIL	1335030000	C.131
UR20-PF-O-2DI-SIL	1335050000	C.132
UR20-PF-O-2DI-DELAY-SIL	1335040000	C.133
UR20-PF-I	1334710000	C.135
UR20-PF-O	1334740000	C.136

#### 4. AUX and accessories

AUX	Order No.	Page
UR20-16AUX-I	1334770000	C.139
UR20-16AUX-O	1334780000	C.139
UR20-16AUX-FE	1334790000	C.139
UR20-16AUX-GND-I	1334800000	C.139
UR20-16AUX-GND-O	1334810000	C.139
UR20-AUX-VSYS	2919660000	C.140
Accessories		Page
Termination kit	1346610000	C.141
Swivel marker	1339920000	C.141
Connection marker for pusher custom printing	1323700000	C.141
Connection marker for pusher neutral	1323710000	C.141
Module marker for custom printing	1341610000	C.141
Module marker for neutral	1341630000	C.141
Empty module	1315770000	C.141
Thermotransfer version (Material: Polyester)	1429910000	C.141
Thermotransfer version (material: polyester)	1429420000	C.141
Paper version for Laserprinter	1429430000	C.141



#### Calculation of the power refresh

The additional supply calculation is different for each application. Simultaneity factors and current requirement must be known. The following simplified calculation example serves as an aid. Here, a row consists of 8 DO modules, each of which can accommodate four actuator connections. The actual current demand and therefore the position for a power-feed module for supplying the current path can be calculated from the combination of current demand and simultaneity factor. Please note that u-remote provides you with one input and one 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

Module no.	Module type	Current requirement of connected devices (A)	Simultaneity factor	Current following calculation of simultaneity factor per module	Current requirement of system – cumulative	Current requirement of system – cumulative with UR20-PF-O
1st module	UR20-8DO-P	0.5	0.5	0.25	0.25	0.25
2nd module	UR20-8DO-P	0.3	0.5	0.15	0.4	0.4
3rd module	UR20-8DO-P	2.0	0.7	1.4	1.8	1.8
4th module	UR20-8DO-P	2.0	0.5	1	2.8	2.8
5th module	UR20-8DO-P	2.0	0.3	2	4.8	4.8
6th module	UR20-8DO-P	0.5	0.2	0.1	4.9	4.9
7th module	UR20-8DO-P	1.0	0.1	0.75	5.65	5.65
8th module	UR20-8DO-P	1.0	0.2	0.2	5.85	5.85
9th module	UR20-8DO-P	1.2	0.5	0.6	6.45	6.45
10th module	UR20-8DO-P	2.0	1.0	2	8.45	8.45
	UR20-PF-O					
11th module	UR20-8DO-P	2.0	1.0	2	10.45	2
12th module	UR20-8DO-P	3.0	1.0	1	11.45	3
13th module	UR20-8DO-P	2.0	1.0	2	13.45	5

#### Current requirement exceeds 10 A!

The output current path therefore needs an additional supply before the 11th module.

10 A are supplied by the UR20-PF-O module. The 1.55 A calculated as remaining after the tenth module must not be added to the 10 A after the UR20-PF-O module!

## Decentralised automation FieldPower® housing for I/O system IP20

Automation located close to the process reduces complexity and increases reliability through shorter and standardised lines. In addition, decentralisation with predefined function modules saves time and money in planning and installation. The wide range of functions of the remote I/O u-remote can be used decentrally in the innovative FieldPower® housing with its unique wiring concept.

C

The modular FieldPower® system offers two housing sizes for a wide variety of u-remote module configurations. Innovative hinged seals or plug-in connectors allow the usage of pre-assembled cables and ensure quick and error-free wiring directly at the point of use.

The required u-remote modules can be planned in advance on the appropriate terminal rail within the Weidmüller configurator, which significantly simplifies project planning. Further information on the use of u-remote modules in FieldPower® can be found under the QR code at the bottom.

### Your special advantage:

- Easy decentralisation of your individual u-remote combination
- Robust housing with high degree of protection
- Reduced wiring time due to innovative hinged seals or plug-in connectors



For further products, information, technical specifications or additional services, please visit our website: [www.weidmueller.com/fieldpower](http://www.weidmueller.com/fieldpower)





# Remote I/O system in protection class IP67

## Flexible sensor/actuator coupling to control systems in IP67 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 size and also the count of the signals may be very large so that fieldbuses and IO systems can be used to collect the signals locally.

The u-remote IP67 product family solves this problem by means of IP67 protected encapsulation at the very point where the sensors and actuators are located. In the variants with a subbus system, this is done very flexibly and in a wide range of applications.

Direct incorporation in the PLC 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.

### Improved Connectivity Technology

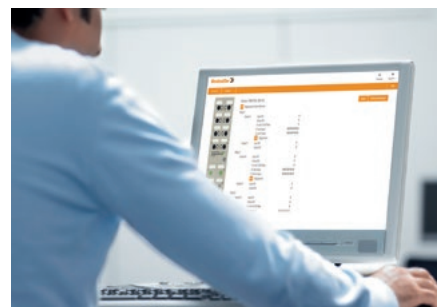
With the I-coded M12 or PushPull Power connectors the ampacity of the connectors has been increased to 16 A.

For a control of significantly more actuators and therefore more decentral remote I/Os are possible. Take advantage of the opportunities for more flexible planning in your system.



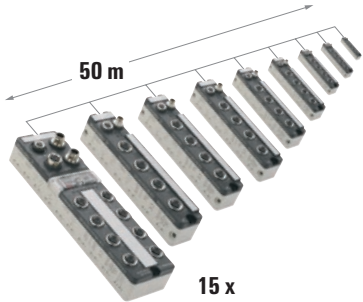
### Efficient engineering

Direct incorporation and configuration in the standard PLC engineering systems with webserver.



**50 % reduced costs through flexible subbus concept**

Subbus length of up to 50 m with up to 15 slaves per subbus 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.



**Freedom of choice**  
Support for all common fieldbus systems.



**Advanced diagnostic capabilities**  
A channel wise diagnosis based on two-colored LEDs will quickly and clearly shows the state of the individual channels on site.



**PROFINET**

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



**UR67-PN-HP-8IOL-12-30M**



**UR67-PN-HP-8IOL-12-60M**



**Technical data**

**Connections**

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

**Supply voltage**

Operating voltage  
 Power consumption of module electronics  
 Module supply

**Digital inputs**

IO link standard  
 Galvanic isolation  
 Input current, low  
 Input current, high  
 Status indicator  
 Diagnostic display

**Digital outputs**

max. current-carrying capacity per output signal  
 Output voltage, low  
 Output voltage, high  
 Status indicator  
 Diagnostic display

**Fieldbus**

Bus system  
 Transmission rate  
 Addressing

**General data**

Length / Width / Height  
 Earth  
 Protection degree  
 Operating temperature  
 Housing main material / UL 94 flammability rating

**Note**

1x M12 female 4-pole, D-coded  
 1x M12 female 4-pole, D-coded  
 1x M12 plug 5-pole, L-coded  
 1x M12 socket 5-pole, L-coded  
 8 x M12 socket 5-pole, A-coded

24 V (18 V DC ... 30 V DC)  
 160 mA typical  
 16 A

IO-Link v.1.1, IEC 61131-9  
 2000 V DC  
 Type 1 in acc. with IEC 61131-2  
 Type 1 in acc. with IEC 61131-2  
 Per channel, via LED, yellow  
 Per channel, via LED, red

0.5 A, 2 A  
 - 1 V  
 max. 2 V  
 Per channel, via LED, yellow  
 Per channel, via LED, red

PROFINET V2.3  
 10/100 MBit/s  
 DCP

225 mm / 30 / 30 mm  
 480 g  
 IP67  
 -20...70  
 Zinc diecast / UL 94

Download of GSDML-files on [www.weidmueller.com](http://www.weidmueller.com)

1x M12 female 4-pole, D-coded  
 1x M12 female 4-pole, D-coded  
 1x M12 plug 5-pole, L-coded  
 1x M12 socket 5-pole, L-coded  
 8 x M12 socket 5-pole, A-coded

24 V (18 V DC ... 30 V DC)  
 160 mA typical  
 16 A

IO-Link v.1.1, IEC 61131-9  
 2000 V DC  
 Type 1 in acc. with IEC 61131-2  
 Type 1 in acc. with IEC 61131-2  
 Per channel, via LED, yellow  
 Per channel, via LED, red

0.5 A, 2 A  
 - 1 V  
 max. 2 V  
 Per channel, via LED, yellow  
 Per channel, via LED, red

PROFINET V2.3  
 10/100 MBit/s  
 DCP

200 mm / 59.6 / 17.6 mm  
 500 g  
 IP67  
 -20...70  
 Zinc diecast / UL 94

Download of GSDML-files on [www.weidmueller.com](http://www.weidmueller.com)

**Ordering data**

**Module variants**

IO link, 4 x type A, 4 x type B

**Note**

Type	Qty.	Order No.
UR67-PN-HP-8IOL-12-30M	1	2426250000

Type	Qty.	Order No.
UR67-PN-HP-8IOL-12-60M	1	2426260000

**Accessories**

M12 sensor cable  
 M12 sensor cable  
 Bus cable  
 Bus cable  
 Markers

**Plug**

Metal plug Ethernet, Male M12, D-coded, straight

**Note**

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
MF 5/10 MC NE WS	250	1954050000

SAISM-4/8S-M12-4P D-COD	1	1892120000
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Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

SAISM-4/8S-M12-4P D-COD	1	1892120000
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Further cables can be found at the end of this chapter.

## Multiprotocol

### Remote I/O for digital signal conditioning



#### Technical data

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

#### Ordering data

<b>Module variants</b>	16 digital inputs
	16 digital out
<b>Note</b>	

#### Accessories

	M12 sensor cable
	M12 sensor cable
	Bus cable
	Bus cable
	Markers
<b>Plug</b>	
	Metal plug Ethernet, Male M12, D-coded, straight
<b>Note</b>	

#### UR67-MP-HP-16DI-12-M60



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 / 17.6 mm
500 g
IP67
-20...70
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-16DI-12-60M	1	2426270000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISM-4/8S-M12-4P D-COD	1	1892120000

Further cables can be found at the end of this chapter.

#### UR67-MP-HP-16DO-12-M60



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-16DO-12-60M	1	2426280000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISM-4/8S-M12-4P D-COD	1	1892120000

Further cables can be found at the end of this chapter.

**Multiprotocol**  
Remote I/O for digital signal conditioning



**Technical data**

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

**Ordering data**

<b>Module variants</b>	8 digital inputs / 8 digital outputs 16 universal channels
<b>Note</b>	

**Accessories**

	M12 sensor cable
	M12 sensor cable
	Bus cable
	Bus cable
	Markers
<b>Plug</b>	
	Metal plug Ethernet, Male M12, D-coded, straight
<b>Note</b>	

**UR67-MP-HP-8DIDO-12-60M**



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-8DIDO-12-60M	1	2426290000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISM-4/8S-M12-4P D-COD	1	1892120000

Further cables can be found at the end of this chapter.

**UR67-MP-HP-16DIO-12-60M**



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-16DIO-12-60M	1	2512840000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISM-4/8S-M12-4P D-COD	1	1892120000

Further cables can be found at the end of this chapter.



## Multiprotocol

### Remote I/O for digital signal conditioning



#### Technical data

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

#### Ordering data

<b>Module variants</b>	
	16 digital inputs
	16 digital out
<b>Note</b>	

#### Accessories

	M12 sensor cable
	M12 sensor cable
	Bus cable
	Markers
<b>Note</b>	

#### UR67-MP-78-16DI-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 / 17.3 mm
520 g
IP67
-20...70
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-78-16DI-12-60M	1	2426300000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

#### UR67-MP-78-16DO-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 mm / 17.3 mm
520 g
IP67
-20...70 °C
Zinc diecast / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-78-16DO-12-60M	1	2426310000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

**Multiprotocol**

Remote I/O for digital signal conditioning



**UR67-MP-78-16DIO-12-60M**



**UR67-MP-78-8DIDO-12-60M**



**Technical data**

<b>Connections</b>	
Fieldbus (BUS-IN)	
Fieldbus (BUS-OUT)	
Supply voltage (AUX-IN)	
Supply voltage (AUX-OUT)	
I/O connections	
<b>Supply voltage</b>	
Operating voltage	
Power consumption of module electronics	
Module supply	
<b>Digital inputs</b>	
Input current, low	
Input current, high	
Status indicator	
Diagnostic display	
<b>Digital outputs</b>	
max. current-carrying capacity per output signal	
Output voltage, low	
Output voltage, high	
Status indicator	
Diagnostic display	
<b>Fieldbus</b>	
Bus system	
Transmission rate	
Addressing	
<b>General data</b>	
Length / Width / Height	
Earth	
Protection degree	
Operating temperature	
Housing main material / UL 94 flammability rating	
<b>Note</b>	

1x M12 female 4-pole, D-coded	
1x M12 female 4-pole, D-coded	
1x 7/8" plug 5-pole	
1x 7/8" socket 5-pole	
8 x M12 socket 5-pole, A-coded	
<b>24 V (18 V DC ... 30 V DC)</b>	
100 mA typical	
9 A, 12 A (see manual)	
<b>Type 1 in acc. with IEC 61131-2</b>	
Type 1 in acc. with IEC 61131-2	
Per channel, via LED, yellow	
Per channel, via LED, red	
<b>2 A</b>	
min. (UL -1)	
max. 2 V	
Per channel, via LED, yellow	
Per channel, via LED, red	
<b>PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol</b>	
10/100 MBit/s	
Via rotary coding switch, DCP	
<b>206 mm / 59.6 mm / 17.3 mm</b>	
500 g	
IP67	
-20...70 °C	
Zinc diecast / UL 94	
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

1x M12 female 4-pole, D-coded	
1x M12 female 4-pole, D-coded	
1x 7/8" plug 5-pole	
1x 7/8" socket 5-pole	
8 x M12 socket 5-pole, A-coded	
<b>24 V (18 V DC ... 30 V DC)</b>	
100 mA typical	
9 A, 12 A (see manual)	
<b>Type 1 in acc. with IEC 61131-2</b>	
Type 1 in acc. with IEC 61131-2	
Per channel, via LED, yellow	
Per channel, via LED, red	
<b>2 A</b>	
min. (UL -1)	
max. 2 V	
Per channel, via LED, yellow	
Per channel, via LED, red	
<b>PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol</b>	
10/100 MBit/s	
Via rotary coding switch, DCP	
<b>206 mm / 59.6 mm / 17.3 mm</b>	
520 g	
IP67	
-20...70 °C	
Zinc diecast / UL 94	
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

**Ordering data**

<b>Module variants</b>	
	16 universal channels
	8 digital inputs / 8 digital outputs
<b>Note</b>	

Type	Qty.	Order No.
UR67-MP-78-16DIO-12-60M	1	2512830000

Type	Qty.	Order No.
UR67-MP-78-8DIDO-12-60M	1	2426320000

**Accessories**

M12 sensor cable	
M12 sensor cable	
Bus cable	
Markers	
<b>Note</b>	

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

## Multiprotocol Remote I/O for digital signal conditioning



### UR67-PN-V14-CU-8DIDO-12



### UR67-PN-V14-CU-16DI-12



#### Technical data

Module variants	
Module variants	
Connections	
Fieldbus (BUS-IN)	
Fieldbus (BUS-OUT)	
Supply voltage (AUX-IN)	
Supply voltage (AUX-OUT)	
I/O connections	
Supply voltage	
Operating voltage	
Max. total current module	
Module supply	
Digital inputs	
Number	
Input type	
Input voltage, high	
Input voltage, low	
Sensor connection	
Digital outputs	
Number	
Max. total current outputs	
Switching frequency, resistive load	
Switching frequency, inductive load	
Switching frequency, lamp load	
Short-circuit proof	
Fieldbus	
Bus system	
Addressing	
Transmission rate	
General data	
Length / Width / Height	
Weight	
Protection degree	
Operating temperature	
Housing main material / UL 94 flammability rating	
Note	

#### Ordering data

Module variants	
8 digital inputs / 8 digital outputs	
16 digital inputs	
Note	

8 digital inputs, 8 digital outputs
V14 PushPull RJ45
V14 PushPull RJ45
PushPull-Power
PushPull-Power
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
150 mA
16 A
8
P-switching, Type 2 in acc. with IEC 61131-2
> 11 V
<5 V
2-wire, 3-wire + FE, M12, 5 pole, A coded
8
2 A per channel, 16 A per module
500 Hz
0.2 Hz without free-wheeling diode, 500 Hz with suitable free-wheeling diode
10 Hz
Yes
PROFINET V2.3
DCP
100 MBit/s
225 mm / 60 mm / 43 mm
970 g
IP67
-20...55 °C
Zinc diecast / UL 94

Type	Qty.	Order No.
UR67-PN-V14-CU-8DIDO-12	1	2599670000

16 digital inputs
V14 PushPull RJ45
V14 PushPull RJ45
PushPull-Power
PushPull-Power
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
150 mA
16 A
16
P-switching, Type 2 in acc. with IEC 61131-2
> 11 V
<5 V
2-wire, 3-wire + FE, M12, 5 pole, A coded
PROFINET V2.3
DCP
100 MBit/s
225 mm / 60 mm / 43 mm
965 g
IP67
-20...55 °C
Zinc diecast / UL 94

Type	Qty.	Order No.
UR67-PN-V14-CU-16DI-12	1	2599680000

## Multiprotocol

## Remote I/O for digital signal conditioning



## Technical data

Module variants
Module variants
Connections
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
Supply voltage
Operating voltage
Max. total current module
Module supply
Digital inputs
Number
Input type
Input voltage, high
Input voltage, low
Sensor connection
Digital outputs
Number
Max. total current outputs
Switching frequency, resistive load
Switching frequency, inductive load
Switching frequency, lamp load
Short-circuit proof
Fieldbus
Bus system
Addressing
Transmission rate
General data
Length / Width / Height
Weight
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
Note

## Ordering data

Module variants
8 digital inputs / 8 digital outputs 16 digital out
Note

## UR67-PN-V14-POF-8DIDO-12



Module variants
8 digital inputs, 8 digital outputs
Connections
V14 PushPull SC-RJ POF
V14 PushPull SC-RJ POF
PushPull-Power
PushPull-Power
8 x M12 socket 5-pole, A-coded
Supply voltage
24 V (18 V DC ... 30 V DC)
150 mA
16 A
Digital inputs
8
P-switching, Type 2 in acc. with IEC 61131-2
> 11 V
<5 V
2-wire, 3-wire + FE, M12, 5 pole, A coded
Digital outputs
8
2 A per channel, 16 A per module
500 Hz
0.2 Hz without free-wheeling diode, 500 Hz with suitable free-wheeling diode
10 Hz
Yes
Fieldbus
PROFINET V2.3
DCP
100 MBit/s
General data
225 mm / 60 mm / 51 mm
1000 g
IP67
-20...55 °C
Zinc diecast / UL 94

Type	Qty.	Order No.
UR67-PN-V14-POF-8DIDO-12	1	2599690000

## UR67-PN-V14-POF-16DI-12



Module variants
16 digital inputs
Connections
V14 PushPull SC-RJ POF
V14 PushPull SC-RJ POF
PushPull-Power
PushPull-Power
8 x M12 socket 5-pole, A-coded
Supply voltage
24 V (18 V DC ... 30 V DC)
150 mA
16 A
Digital inputs
16
P-switching, Type 2 in acc. with IEC 61131-2
> 11 V
<5 V
2-wire, 3-wire + FE, M12, 5 pole, A coded
Digital outputs
Fieldbus
PROFINET V2.3
DCP
100 MBit/s
General data
225 mm / 60 mm / 51 mm
995 g
IP67
-20...55 °C
Zinc diecast / UL 94

Type	Qty.	Order No.
UR67-PN-V14-POF-16DI-12	1	2599700000



## SAI Active Universal Pro

### Professional versions of the Remote I/O System featuring IP67 protection

The modules in the SAI Active Universal Pro systems provide additional I/O and functional modules for more versatile topologies in the field. 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 IP20 master module UR20-1COM-SAI-PRO.

In addition to the digital input and output modules, we also offer counter unit 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.



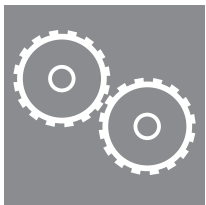
#### Cost-effective Subbus system

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.

## Subbus modules with digital input/outputs

### Technical data

Connections	
Supply voltage (AUX-IN)	
Connection to Subbus (SUB-IN)	
Connection to Subbus (SUB-OUT)	
I/O connections	
Supply voltage	
Operating voltage	
Contact load	
Max. total current module	
Digital inputs	
Permitted input voltage	
Input voltage, low	
Input voltage, high	
Input current, low	
Input current, high	
Input filter	
Separation of potentials to module electronics	
Digital outputs	
max. current-carrying capacity per output signal	
Separation of potentials to module electronics	
Switching frequency, resistive load	
Switching frequency, inductive load	
Switching frequency, lamp load	
Short-circuit proof	
Output voltage, low	
Output voltage, high	
Max. total current outputs	
Fieldbus	
Bus system	
Addressing	
System integration	
General data	
Length / Width / Height	
Earth	
Protection degree	
Operating temperature	
Storage temperature	
Housing main material / UL 94 flammability rating	
Certificate	
Note	

### Ordering data

Module variants	
	8 digital in; 8 digital in / 8 digital out
	8 digital inputs; 8 digital inputs / 8 digital outputs
	8 digital outputs 2A
	8 digital outputs 2A
Note	

### Accessories

Miscellaneous accessories	
	Marker, transparent
	M12 protective cap
	M8 protective cap
Note	

### SAI-AU Digital



1 x M8 plug 4-pole, A-coded
1 x M8 female 4-pole, A-coded
8 x M8 socket 3-pole
24 V (18 V DC ... 30 V DC)
-30 V to +30 V (protected against polarity reversal)
<5 V in accordance with EN 61131-2 Type 1
>15 V 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
1 ms, 3 ms, 5 ms, 10 ms, configurable
none
Subbus
automatic
automatic
155 mm / 30 / 32 mm
< 200 g
IP67
0...60
-25 °C...85 °C
Pocan, PBT / 5VA
CE, cULus

Type	Qty.	Order No.
SAI-AU M8 SB 8DI	1	193860000
SAI-AU M12 SB 8DI	1	1938610000

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.

### SAI-AU Digital



1 x M12 plug 5-pole, A-coded
1 x M8 plug 4-pole, A-coded
1 x M8 female 4-pole, A-coded
8 x M8 socket 3-pole
24 V (18 V DC ... 30 V DC)
Per PIN max. 4 A
8 A
-30 V to +30 V (protected against polarity reversal)
<5 V in accordance with EN 61131-2 Type 1
>15 V 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
1 ms, 3 ms, 5 ms, 10 ms, configurable
none
0.5 A
none
max. 100 Hz
max. 1 Hz
max. 8 Hz
Yes, cut-off for short circuit and error message
0 V DC
Supply voltage less 0.7 V DC
4 A
Subbus
automatic
automatic
180 mm / 30 / 32 mm
< 200 g
IP67
0...60
-25 °C...85 °C
Pocan, PBT / 5VA
CE, cULus

Type	Qty.	Order No.
SAI-AU M8 SB 8DIO	1	1938630000
SAI-AU M12 SB 8DIO	1	1938640000
SAI-AU M8 SB 8DO 2A	1	1938660000
SAI-AU M12 SB 8DO 2A	1	1938680000

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.

### Subbus modules with analogue input/outputs

#### SAI-AU analogue



#### SAI-AU analogue



#### Technical data

<b>Connections</b>
Connection to Subbus (SUB-IN)
Connection to Subbus (SUB-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
<b>Analogue inputs</b>
Measurement range
Maximum input voltage in relation to GND
Input resistance (load)
Max. input current (differential)
Short-circuit proof
Resolution / Precision
<b>Analogue outputs</b>
Measurement range
Output interval
Short-circuit proof
Resolution / Precision
<b>Fieldbus</b>
Bus system
Addressing
System integration
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Storage temperature
Housing main material / UL 94 flammability rating
Certificate
<b>Note</b>

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)
/
/
/
/
/
-10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA
5 ms to 250 ms (can be configured)
Yes
12-bit / < 0.2 %
Subbus
automatic
automatic
155 mm / 30 / 32 mm
< 200 g
IP67
0...60
-25 °C...85 °C
Pocan, PBT / 5VA
CE, cULus

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)
-10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA
35 V
<125 Ohm
-50 mA to +50 mA (protected against polarity reversal)
Yes
12-bit / < 0.2 %
/
Subbus
automatic
automatic
155 mm / 30 / 32 mm
< 200 g
IP67
0...60
-25 °C...85 °C
Pocan, PBT / 5VA
CE, cULus

#### Ordering data

<b>Module variants</b>	4 analogue outputs / 4 analogue inputs
<b>Note</b>	

Type	Qty.	Order No.
SAI-AU M12 SB 4A0	1	1938700000

Type	Qty.	Order No.
SAI-AU M12 SB 4AI	1	1938690000

#### Accessories

<b>Miscellaneous accessories</b>	
Marker, transparent	
M12 protective cap	
M8 protective cap	
<b>Note</b>	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.



## Subbus modules with functional inputs

### SAI-AU Counter



#### Technical data

<b>Connections</b>	
Supply voltage (AUX-IN)	
Connection to Subbus (SUB-IN)	
Connection to Subbus (SUB-OUT)	
I/O connections	
<b>Supply voltage</b>	
Operating voltage	
Contact load	
Max. total current module	
<b>Functional inputs</b>	
Counting breadth	
Switching frequency	
Number of inputs	
<b>Fieldbus</b>	
Bus system	
Addressing	
System integration	
<b>General data</b>	
Length / Width / Height	
Earth	
Protection degree	
Operating temperature	
Storage temperature	
Housing main material / UL 94 flammability rating	
Certificate	
<b>Note</b>	

1 x 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
8 A
32 Bit
100 kHz
2x release, 2x counter, 2 x count directions
Subbus
automatic
automatic
180 mm / 30 / 32 mm
< 200 g
IP67
0...60
-25 °C...85 °C
Pocan, PBT / 5VA
CE, cULus

#### Ordering data

<b>Module variants</b>	
	2 counter inputs / 2 gate outputs
<b>Note</b>	

Type	Qty.	Order No.
SAI-AU M12 SB 2COUNTER	1	1938730000

#### Accessories

<b>Miscellaneous accessories</b>	
Marker, transparent	
M12 protective cap	
M8 protective cap	
<b>Note</b>	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.

## SAI cable

In an increasingly digital environment, the reliable transmission of power, signals and data requires the rapid availability of standardised cabling solutions and the development of individual special cables.

Irrespective of whether you require signal cables for sensor lines or data cables for Ethernet lines with different mating profiles – Weidmüller offers the right solution for every field of application.

**We offer a wide range of products in this category:**

- Standard cables from the catalogue
- Configuration of specialised variants using the online product wizard
- Customer-specific variants with custom cable lengths, connecting plugs, markings or colours

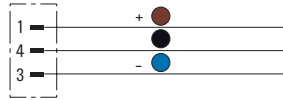


Sensor cables from Weidmüller: shown here with yellow and black cables, together with bus cables

M12 cables with connector at one end only

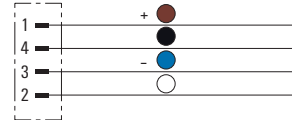
3-pole

Female



4-pole

Female



Technical data

Rated current
Rated voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
250 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://catalog.weidmueller.com">catalog.weidmueller.com</a> and in Chapter W (Technical Annex)

4 A
250 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://catalog.weidmueller.com">catalog.weidmueller.com</a> and in Chapter W (Technical Annex)

Ordering data

<b>Female, straight</b>
M12 straight socket, PVC
M12 straight socket, halogen-free PUR
M12 straight socket, halogen-free PUR, yellow
M12 straight socket, halogen-free PUR, resistant to welding beads
<b>Female, angled</b>
M12 angled socket, PVC
M12 angled socket, halogen-free PUR
M12 angled socket, halogen-free PUR, yellow
M12 angled socket, halogen-free PUR, resistant to welding beads
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12BG-3-1.5V	1	1925570150
SAIL-M12BG-3-1.5U	1	9457820150
SAIL-M12BG-3-1.5UGE	1	1092910150
SAIL-M12BG-3-1.5T	1	1968590150
SAIL-M12BW-3-1.5V	1	1925630150
SAIL-M12BW-3-1.5U	1	9457320150
SAIL-M12BW-3-1.5UGE	1	1092940150
SAIL-M12BW-3-1.5T	1	1968560150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M12BG-4-1.5T	1	1968580150
SAIL-M12BG-4-1.5U	1	9457730150
SAIL-M12BG-4-1.5UGE	1	1092920150
SAIL-M12BG-4-1.5V	1	1925580150
SAIL-M12BW-4-1.5V	1	1925640150
SAIL-M12BW-4-1.5U	1	9457740150
SAIL-M12BW-4-1.5UGE	1	1092960150
SAIL-M12BW-4-1.5T	1	1968570150
Other lengths on request		

Accessories

<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

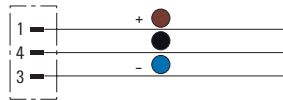
Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

**M8 cables with connector at one end only**

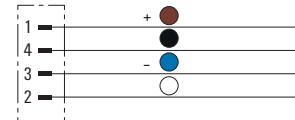
**3-pole**

Female



**4-pole**

Female



**Technical data**

Rated current
Rated voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
60 V
-25...+85 °C
0.25 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://catalog.weidmueller.com">catalog.weidmueller.com</a> and in Chapter W (Technical Annex)

4 A
30 V
-25...+85 °C
0.25 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://catalog.weidmueller.com">catalog.weidmueller.com</a> and in Chapter W (Technical Annex)

**Ordering data**

<b>Female, straight</b>
M8 straight socket, PVC
M8 straight socket, halogen-free PUR
M8 straight socket, halogen-free PUR, yellow
<b>Female, angled</b>
M8 angled socket, PVC
M8 angled socket, halogen-free PUR
M8 angled socket, halogen-free PUR, yellow
<b>Note</b>

Type	Qty.	Order No.
SAIL-M8BG-3-1.5V	1	1927240150
SAIL-M8BG-3-1.5U	1	9457450150
SAIL-M8BG-3-1.5UGE	1	1093190150
SAIL-M8BW-3-1.5V	1	1927320150
SAIL-M8BW-3-1.5U	1	9457380150
SAIL-M8BW-3-1.5UGE	1	1093220150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M8BG-4-1.5V	1	1927260150
SAIL-M8BG-4-1.5U	1	9457850150
SAIL-M8BG-4-1.5UGE	1	1093200150
SAIL-M8BW-4-1.5V	1	1927340150
SAIL-M8BW-4-1.5U	1	9456150150
SAIL-M8BW-4-1.5UGE	1	1093240150
Other lengths on request		

**Accessories**

<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

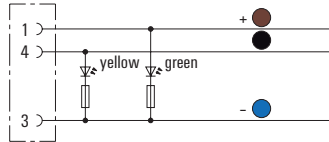
Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

**M12 / M8 cables with connector at one end only with LED**

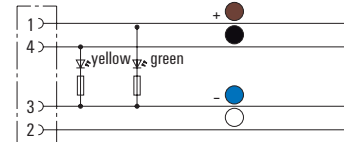
**3-pole / 2 LEDs**

Female



**4-pole / 2 LEDs**

Female



**Technical data**

Rated current
Rated voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
24 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on catalog.weidmueller.com and in Chapter W (Technical Annex)

4 A
24 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on catalog.weidmueller.com and in Chapter W (Technical Annex)

**Ordering data**

<b>Female, angled</b>
M12 angled socket, PVC
M12 angled socket, halogen-free PUR
M12 angled socket, halogen-free PUR, yellow
M12 angled socket, halogen-free PUR, resistant to welding beads
M8 angled socket, PVC
M8 angled socket, halogen-free PUR
M8 angled socket, halogen-free PUR, yellow
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12BW-3L1.5V	1	1925460150
SAIL-M12BW-3L1.5U	1	9457800150
SAIL-M12BW-3L1.5UGE	1	1114880150
SAIL-M12BW-3L1.5T	1	1004330150
SAIL-M8BW-3L1.5V	1	1927350150
SAIL-M8BW-3L1.5U	1	9457460150
SAIL-M8BW-3L1.5UGE	1	1093210150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M12BW-4-2L1.5V	1	1925470150
SAIL-M12BW-4-2L1.5U	1	9456380150
SAIL-M12BW-4-2L1.5UGE	1	1092950150
SAIL-M12BW-4-2L1.5T	1	1007000150
SAIL-M8BW-4L1.5V	1	1927360150
SAIL-M8BW-4L1.5U	1	1906400150
SAIL-M8BW-4L1.5UGE	1	1093230150
Other lengths on request		

**Accessories**

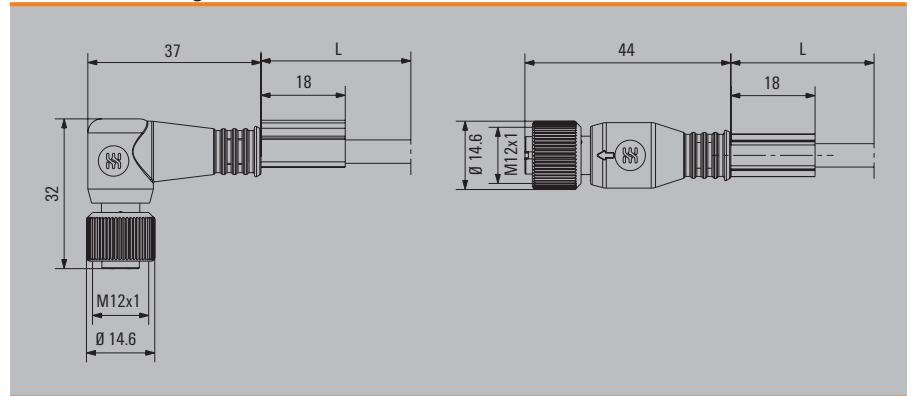
<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

M12 straight/angled socket

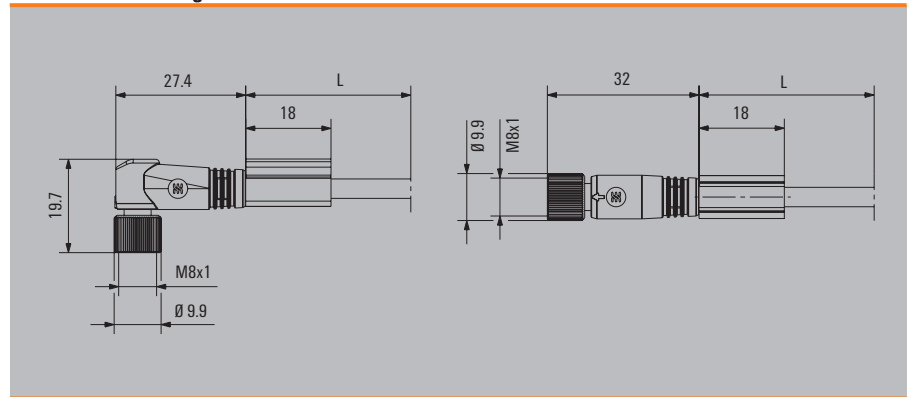
Dimensioned drawing



C

M8 straight/angled socket

Dimensioned drawing



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

Type	Qty.	Order No.
Screwty®-Set-DM	1	1920000000





Selection table

Order No.	Product designation	Connection system				Communication			
		M8	M12	7/8"	PushPull	Subbus	PROFIBUS	PROFINET	MP = PN, EIP & EC
<b>u-remote UR67</b>									
2426250000	UR67-PN-HP-8IOL-12-30M		X					X	
2426260000	UR67-PN-HP-8IOL-12-60M		X					X	
2426270000	UR67-MP-HP-16DI-12-60M		X						X
2426280000	UR67-MP-HP-16DO-12-60M		X						X
2512840000	UR67-MP-HP-16DIO-12-60M		X						X
2426290000	UR67-MP-HP-8DIDO-12-60M		X						X
2426320000	UR67-MP-78-8DIDO-12-60M			X					X
2426300000	UR67-MP-78-16DI-12-60M			X					X
2426310000	UR67-MP-78-16DO-12-60M			X					X
2512830000	UR67-MP-78-16DIO-12-60M			X					X
2599670000	UR67-PN-V14-CU-8DIDO-12				X			X	
2599680000	UR67-PN-V14-CU-16DI-12				X			X	
2599690000	UR67-PN-V14-PDF-8DIDO-12				X			X	
2599700000	UR67-PN-V14-PDF-16DI-12				X			X	
<b>SAI Active Universal Pro</b>									
1938600000	SAI-AU M8 SB 8DI	X				X			
1938660000	SAI-AU M8 SB 8DO 2A	X				X			
1938630000	SAI-AU M8 SB 8DIO	X				X			
1938610000	SAI-AU M12 SB 8DI		X			X			
1938680000	SAI-AU M12 SB 8DO 2A		X			X			
1938640000	SAI-AU M12 SB 8DIO		X			X			
1938690000	SAI-AU M12 SB 4AI		X			X			
1938700000	SAI-AU M12 SB 4AO		X			X			
1938730000	SAI-AU M12 SB 2Counter		X			X			



	Inputs				Outputs				Supply voltage feed circuits	Page
	IO-Link	Digital	Analogue	Counter	Digital	Output current	Analogue	Output range		
	4xType A & 4xType B									C.150
	4xType A & 4xType B									C.150
		16								C.151
					16	2 A				C.151
		16			16	2 A				C.152
		8			8	2 A				C.152
		8			8	2 A				C.154
		16								C.153
					16	2 A				C.153
		16			16	2 A				C.154
		8			8	2 A				C.155
		16								C.155
		8			8	2 A				C.156
		16								C.156
		8								C.159
					8	2 A			2	C.159
		max. 8, min. 0 (can be configured)			max. 8, min. 0 (can be configured)	0.5 A			2	C.159
		8								C.159
					8	2 A			2	C.159
		max. 8, min. 0 (can be configured)			max. 8, min. 0 (can be configured)	0.5 A			2	C.159
			4							C.160
							4	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA		C.160
				2					2	C.161

# Configuration and parameterisation of complex I/O modules

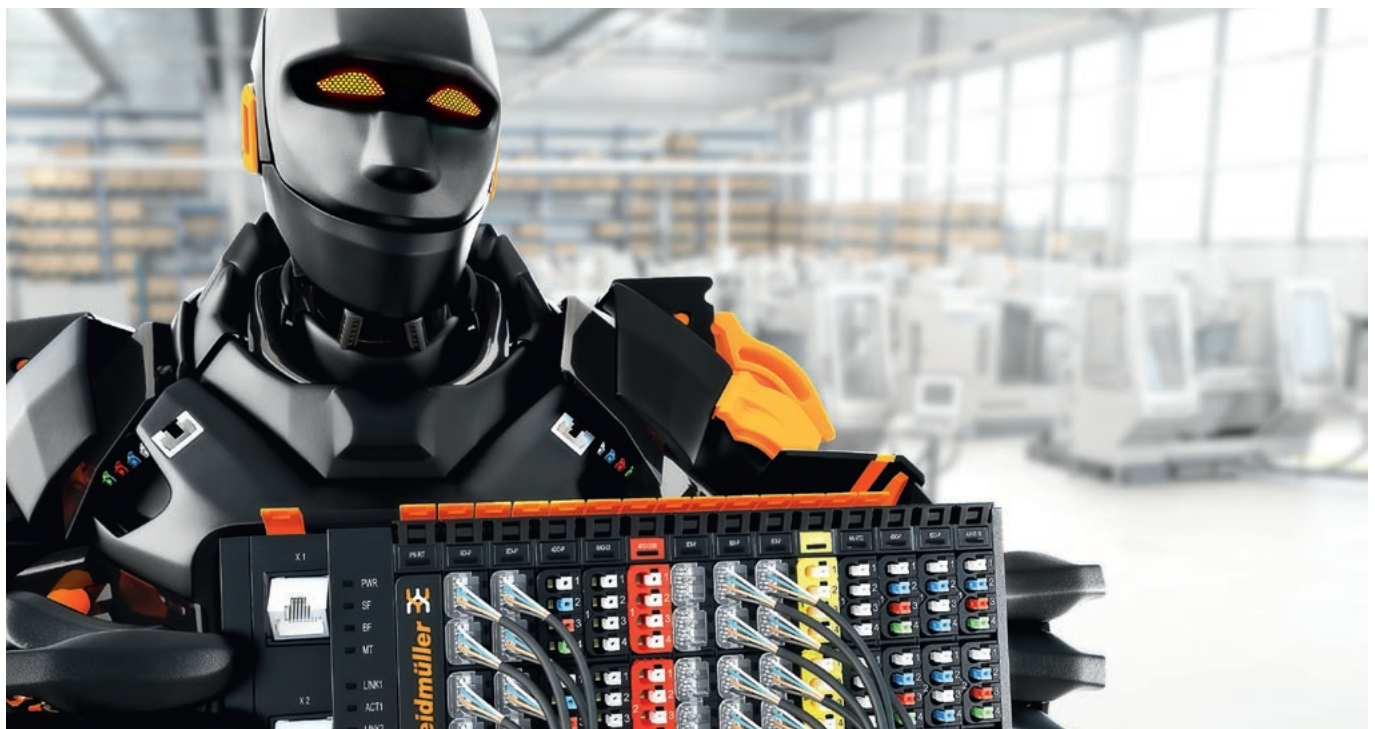
## Maximum flexibility with reduced complexity with the u-mation configurator

**C** All Weidmüller remote I/O modules can be adapted flexibly to the characteristics of your application with the help of the web server integrated into every fieldbus coupler. For more complex functions, like I/O Link or CANopen, the u-mation configurator is also available to download free of charge from the Weidmüller Support Center. It can be used to easily integrate connected devices from the field level from third party providers that can communicate via u-remote.

Configure and parameterise the specific, technical features of u-remote modules or third party devices from the field level through the user-friendly interface with just a few clicks. Keep an overview of the diverse available setting options. The u-mation configurator is based on standard web technology, and integrates very easily into your existing infrastructure – meaning you are not OS dependent and can freely choose your device.



The u-mation configurator is available for download in our Support Center:  
[www.weidmueller.com/u-mation-configurator](http://www.weidmueller.com/u-mation-configurator)





#### Your advantages for IO-Link:

- Simple configuration: install IIOD data, locally or via the integrated Web-Finder
- Clear parameterisation: Display all setting options using the convenient interface
- Additional support: for instance, display the configured process data bandwidth for IO-Link modules
- Growing configurator support: support planned for additional complex I/O modules

#### Your advantages for CANopen:

- Efficient configuration of the basic settings for the CANopen Manager
- Optional parameterisation of a monitoring and SYNC protocol
- Import EDS files to display, configure and parameterise CANopen devices
- Transparent display of all process data and service data objects



# u-view – Touch Panels

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<b>u-view – Touch Panels</b>	Overview	D.2
	Eco Line	D.4
	Advanced Line	D.6

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## Optimum visualisation and operation

u-view touch panels: brilliant pictures meet elegant, flat design

Comfortable touch panels simplify the monitoring and control of machines and systems. Web-based u-view HMIs from Weidmüller offer excellent image quality and can be used in an industrial environment without any restrictions.

The u-view series comprises zwei product lines:

- Eco Line (resistive web panels) in 4.3", 7" and 10.1"
- Advanced Line (capacitive web panels) in 7", 10.1", 15.6" und 21.5"

All panels feature a particularly flat design, a robust aluminium housing and IP66 protection on the front. In addition, they also offer convenient configuration options for accessing different web servers via modern browsers. This makes them ideally suitable for future-oriented web applications, especially for web-based visualisation solutions with PROCON-WEB.



D



**Comfortable configuration**

u-view touch panels are quick and easy to configure and can therefore be set up intuitively.

**Attractive design**

All u-view touch panels come with particularly flat and space-saving housings.

**Optimized for PROCON-WEB and other web technologies**



**High compatibility**

u-view touch panels can be used in a wide variety of applications thanks to their modern web technology based on HTML5.

**Great performance**

First-class image quality and powerful processors make working with u-view touch panels particularly enjoyable.

**Intuitive touch-technology**

**u-view Eco or Advanced – Which product line best meets your needs?**

Compared to the Eco Line, the Advanced Line offers significantly better connectivity with two independently usable Ethernet interfaces (10/100/1000 Mbit/s), two USB type A interfaces to connect external devices (like a mouse, keyboard or storage media), a high-precision capacitive multi-touch with gesture control and higher performance when displaying complex web content.



**Eco Line**

**Touch Panels - Eco Line**

- Resistive
- 4.3", 7" and 10.1"
- 4 GB memory
- Display material plastic

**UV66-ECO-4-RES-W**



**UV66-ECO-7-RES-W**



**Technical data**

General data	
Protection degree	IP66
Operating temperature	0 °C ... +50 °C
Humidity	10 - 95% relative humidity, non-condensing
Depth / Width / Height	36 / 120 / 89 mm
Cut-Out dimension (Height)	80 mm
Cut-Out dimension (Width)	111 mm
Wall thickness, min./max.	2...6 mm
Installation clearance (X)	51 mm
Installation clearance (Y)	51 mm
Installation clearance (Z)	51 mm
Hardware specification	
Processor	Dual Core ARM® Cortex®-A9, 1 GHz, (GPU 2D / GPU 3D support)
Memory (Flash)	4 GB
Memory (RAM)	1 GB
Type of cooling	Passive cooling
Firmware specification	
Operating system	Linux + Browser (HTML5)
Display specification	
Size	4.3"
Resolution	480 x 272
Material display	Plastic
Touch-Screen	resistive
Number of displayable colours	16 M
Luminance	400 cd/m²
Luminance dimmable	Yes
Viewing angle horizontal	top 60 ° / bottom 60 °
Viewing angle vertical	left 55 ° / right 55 °
Display technology	LCD TFT, LED backlight
Housing specification	
Material frame	Plastic
Interfaces	
Interfaces behind	1x Ethernet 10/100 MBit/s (RJ45)
Power supply	
Voltage type	DC
Voltage, min.	20.4V
Voltage, max.	27.6V
Current consumption	0.23 A
Note	

General data		
Protection degree	IP66	
Operating temperature	0 °C ... +50 °C	
Humidity	10 - 95% relative humidity, non-condensing	
Depth / Width / Height	36 / 120 / 89 mm	
Cut-Out dimension (Height)	80 mm	
Cut-Out dimension (Width)	111 mm	
Wall thickness, min./max.	2...6 mm	
Installation clearance (X)	51 mm	
Installation clearance (Y)	51 mm	
Installation clearance (Z)	51 mm	
Hardware specification		
Processor	Dual Core ARM® Cortex®-A9, 1 GHz, (GPU 2D / GPU 3D support)	
Memory (Flash)	4 GB	
Memory (RAM)	1 GB	
Type of cooling	Passive cooling	
Firmware specification		
Operating system	Linux + Browser (HTML5)	
Display specification		
Size	4.3"	
Resolution	480 x 272	
Material display	Plastic	
Touch-Screen	resistive	
Number of displayable colours	16 M	
Luminance	400 cd/m²	
Luminance dimmable	Yes	
Viewing angle horizontal	top 60 ° / bottom 60 °	
Viewing angle vertical	left 55 ° / right 55 °	
Display technology	LCD TFT, LED backlight	
Housing specification		
Material frame	Plastic	
Interfaces		
Interfaces behind	1x Ethernet 10/100 MBit/s (RJ45)	
Power supply		
Voltage type	DC	
Voltage, min.	20.4V	
Voltage, max.	27.6V	
Current consumption	0.23 A	
Note		

General data		
Protection degree	IP66	
Operating temperature	0 °C ... +50 °C	
Humidity	10 - 95% relative humidity, non-condensing	
Depth / Width / Height	35.3 / 186 / 138 mm	
Cut-Out dimension (Height)	127 mm	
Cut-Out dimension (Width)	175 mm	
Wall thickness, min./max.	2...6 mm	
Installation clearance (X)	51 mm	
Installation clearance (Y)	51 mm	
Installation clearance (Z)	51 mm	
Hardware specification		
Processor	Dual Core ARM® Cortex®-A9, 1 GHz, (GPU 2D / GPU 3D support)	
Memory (Flash)	4 GB	
Memory (RAM)	1 GB	
Type of cooling	Passive cooling	
Firmware specification		
Operating system	Linux + Browser (HTML5)	
Display specification		
Size	7"	
Resolution	800 x 480	
Material display	Plastic	
Touch-Screen	resistive	
Number of displayable colours	16 M	
Luminance	350 cd/m²	
Luminance dimmable	Yes	
Viewing angle horizontal	top 70 ° / bottom 70 °	
Viewing angle vertical	left 60 ° / right 60 °	
Display technology	LCD TFT, LED backlight	
Housing specification		
Material frame	Plastic	
Interfaces		
Interfaces behind	1x Ethernet 10/100 MBit/s (RJ45), 1x USB-C	
Power supply		
Voltage type	DC	
Voltage, min.	20.4V	
Voltage, max.	27.6V	
Current consumption	0.25 A	
Note		

**Ordering data**

Type	Qty.	Order No.
UV66-ECO-4-RES-W	1	2555660000
Note		

Type	Qty.	Order No.
UV66-ECO-4-RES-W	1	2555660000
Note		

Type	Qty.	Order No.
UV66-ECO-7-RES-W	1	2555780000
Note		



## Touch Panels - Eco Line

- Resistive
- 4.3", 7" and 10.1"
- 4 GB memory
- Display material plastic

## UV66-ECO-10-RES-W



## Technical data

General data	
Protection degree	IP66
Operating temperature	0 °C ... +50 °C
Humidity	10 - 95% relative humidity, non-condensing
Depth / Width / Height	36.8 / 268 / 190 mm
Cut-Out dimension (Height)	178 mm
Cut-Out dimension (Width)	256 mm
Wall thickness, min./max.	2...6 mm
Installation clearance (X)	51 mm
Installation clearance (Y)	51 mm
Installation clearance (Z)	51 mm
Hardware specification	
Processor	Dual Core ARM® Cortex®-A9, 1 GHz, (GPU 2D / GPU 3D support)
Memory (Flash)	4 GB
Memory (RAM)	1 GB
Type of cooling	Passive cooling
Firmware specification	
Operating system	Linux + Browser (HTML5)
Display specification	
Size	10.1"
Resolution	1024 x 600
Material display	Plastic
Touch-Screen	resistive
Number of displayable colours	16 M
Luminance	400 cd/m <sup>2</sup>
Luminance dimmable	Yes
Viewing angle horizontal	top 60 ° / bottom 60 °
Viewing angle vertical	left 70 ° / right 70 °
Display technology	LCD TFT, LED backlight
Housing specification	
Material frame	Plastic
Interfaces	
Interfaces behind	1x Ethernet 10/100 MBit/s (RJ45)
Power supply	
Voltage type	DC
Voltage, min.	20.4V
Voltage, max.	27.6V
Current consumption	0.35 A
Note	

## Ordering data

Type	Qty.	Order No.
UV66-ECO-10-RES-W	1	2555790000
Note		

**Advanced Line**

**Touch Panels - Advanced Line**

- Capacitive
- 7", 10.1" und 15.6"
- 8 GB memory
- Display material glass

**UV66-ADV-7-CAP-W-V2**



**UV66-ADV-10-CAP-W-V2**



**Technical data**

General data	
Protection degree	
Operating temperature	
Humidity	
Depth / Width / Height	
Cut-Out dimension (Height)	
Cut-Out dimension (Width)	
Hardware specification	
Processor	
Memory (Flash)	
Memory (RAM)	
Type of cooling	
Firmware specification	
Operating system	
Display specification	
Size	
Resolution	
Material display	
Touch-Screen	
Number of displayable colours	
Luminance	
Luminance dimmable	
Viewing angle horizontal	
Viewing angle vertical	
Display technology	
Housing specification	
Material frame	
Interfaces	
Interfaces behind	
Power supply	
Voltage type	
Voltage, min.	
Voltage, max.	
Note	

Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 205 / 146.92 mm
139 mm
192.4 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.0.
7"
1024 x 600
Glass
Projected capacitive (P-CAP)
16000000
425 cd/m²
Yes
top 170 ° / bottom 170 °
left 170 ° / right 170 °
LCD TFT, LED backlight
Aluminium coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 283.1 / 202.3 mm
193.3 mm
274.1 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.0.
10.1"
1280 x 800
Glass
Projected capacitive (P-CAP)
16000000
500 cd/m²
Yes
top 170 ° / bottom 170 °
left 170 ° / right 170 °
LCD TFT, LED backlight
Aluminium coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

**Ordering data**

Module variants	
Note	

Type	Qty.	Order No.
UV66-ADV-7-CAP-W-V2	1	2932870000

Type	Qty.	Order No.
UV66-ADV-10-CAP-W-V2	1	2933040000

## Touch Panels - Advanced Line

- Capacitive
- 7", 10.1" und 15.6"
- 8 GB memory
- Display material glass

## Technical data

General data	
Protection degree	
Operating temperature	
Humidity	
Depth / Width / Height	
Cut-Out dimension (Height)	
Cut-Out dimension (Width)	
Hardware specification	
Processor	
Memory (Flash)	
Memory (RAM)	
Type of cooling	
Firmware specification	
Operating system	
Display specification	
Size	
Resolution	
Material display	
Touch-Screen	
Number of displayable colours	
Luminance	
Luminance dimmable	
Viewing angle horizontal	
Viewing angle vertical	
Display technology	
Housing specification	
Material frame	
Interfaces	
Interfaces behind	
Power supply	
Voltage type	
Voltage, min.	
Voltage, max.	
Note	

## Ordering data

Module variants	
Note	

## UV66-ADV-15-CAP-W-V2



Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 419.7 / 269 mm
261.2 mm
411.9 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.0.
15.6"
1920 x 1080
Glass
Projected capacitive (P-CAP)
16200000
450 cd/m <sup>2</sup>
Yes
top 170 ° / bottom 170 °
left 170 ° / right 170 °
LCD TFT, LED backlight
Aluminium coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

Type	Qty.	Order No.
UV66-ADV-15-CAP-W-V2	1	2932860000

## UV66-ADV-21-CAP-W-V2



Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 558.4 / 349.8 mm
341.3 mm
549.8 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.0.
21.5"
1920 x 1080
Glass
Projected capacitive (P-CAP)
16700000
250 cd/m <sup>2</sup>
Yes
top 89 ° / bottom 89 °
left 89 ° / right 89 °
LCD TFT, LED backlight
Aluminium coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

Type	Qty.	Order No.
UV66-ADV-21-CAP-W-V2	1	2987520000



# u-OS – Operating system

<b>u-OS – Operating system</b>	Introduction	E.2
	u-OS Apps	E.4
	u-OS licenses	E.5
	Engineering Software	E.6

# Independence and flexibility for your machines and facilities

## u-OS – The open operating system for Industrial IoT and Automation

The convergence of different classes of device represents a significant development in digitalisation. Within automation, as well, the lines between controllers, routers, and gateways are becoming increasingly blurred. The operating system plays a key role in this context. For only if the latter permits integration of the hardware and software, as well as cloud and on-premises solutions, can the possibilities of automation and the Industrial IoT be united in a single device. u-OS, the open and independent operating system from Weidmüller, takes this approach.

u-OS realises its full potential on the Weidmüller automation hardware u-mation. Our approach is simple: u-OS is not another ecosystem, but rather a platform that connects different ecosystems with one another. This is the only way to integrate the possibilities offered by an Edge application in a versatile yet simple manner. You can benefit, for example, from more efficient data pre-processing and more precise control directly on the machine easily – with u-OS in your individual OT/IT stack.



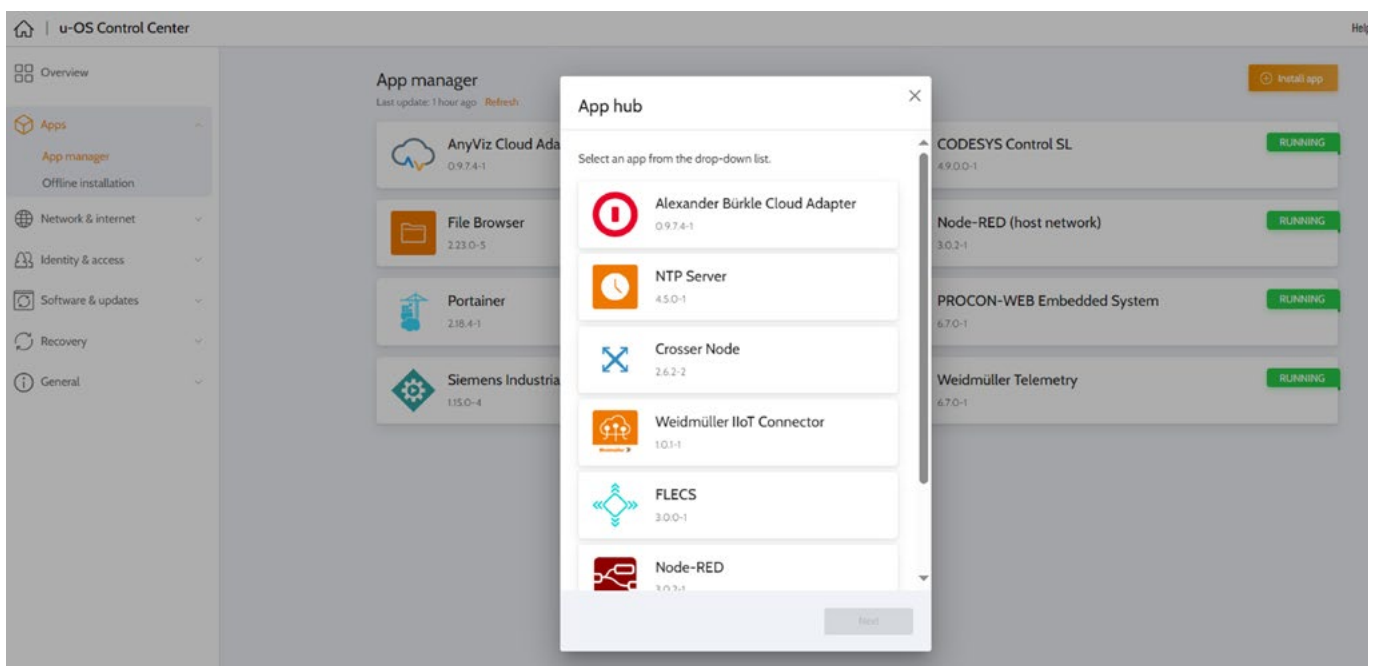


## u-OS Apps

The Linux-based u-OS operating system offers interfaces between customer-specific software solutions, Industrial IoT, and automation technology. The App Manager provides an overview of all installed apps, and the option of installing additional applications on u-OS. In addition to a range of Weidmüller products, solutions from our Weidmüller partners are available – such as CODESYS®, the largest independent ecosystem for automation. The apps work together, without requiring extensive programming. This saves time and lowers costs. In addition, you can adapt your own applications to u-OS via API interfaces.



Discover Weidmüller partners:  
[www.weidmueller.com/u-os-apps](http://www.weidmueller.com/u-os-apps)



**u-OS Datahub**

The u-OS Datahub serves as the foundation for seamless links between applications, and the base for easily exchanging data between the individual apps.



**Open**

With u-OS, open interfaces at all levels guarantee easy integration of your own applications, communication drivers, runtime environments, and cloud connections.

**Flexible**

u-OS can be extended and adapted to individual needs. It covers the requirements of OT and IT applications for an OS in equal measure. The App Manager allows easy use of pre-integrated functions such as CODESYS®.

**Independent**

The use of established open standards such as Linux, containers, or OPC UA makes u-OS independent and future-proof. Dependence on one provider is avoided.



# Weidmüller u-OS target devices – Full scope of functions for your application

u-OS installed  
Open for the future



Select Weidmüller target device and download the appropriate u-OS firmware [www.weidmueller.com/u-os-downloads](http://www.weidmueller.com/u-os-downloads)

## u-mation Edition

Target device	u-control WL2000, M3000, M4000 and IoT Gateway
Target group	Machine and plant engineering, power, maritime applications
Target applications	Industrial automation and Industrial IoT, Edge applications
Functional scope	Datahub for easy Exchange of data, User Management, App Manager, Certificate management, Rollout Management, License Management, Developer Kit, Secure Boot, Web-based Workspace, yocto based with linux rt, Container Runtime

## Engineering Software

Just select your CODESYS® package and get in touch with your Weidmüller sales contact.



Current information is available on our website:  
[www.weidmueller.com/u-os-apps](http://www.weidmueller.com/u-os-apps)

### U-OS-CODESYS-BASIC

For applications that solve simple and individual automation tasks.

#### Ordering data

Type	Code size	Max I/O	Order-No.
U-OS-CODESYS-BASIC-S	500 kB	64	2924000000
U-OS-CODESYS-BASIC-M	1 MB	128	2924020000
U-OS-CODESYS-BASIC-L	3 MB	256	2924030000

### U-OS-CODESYS-STANDARD and U-OS-CODESYS-PERFORMANCE

For applications with more complex logic and an increased need for external communication.

#### Ordering data

Type	Code size	Max I/O	Order-No.
<b>Standard</b>			
U-OS-CODESYS-STANDARD-S	3 MB	512	2924040000
U-OS-CODESYS-STANDARD-M	5 MB	1.024	2924050000
U-OS-CODESYS-STANDARD-L	6 MB	2.048	2924060000
<b>Performance</b>			
U-OS-CODESYS-PERFORMANCE-M	8 MB	4.096	2924070000
U-OS-CODESYS-PERFORMANCE-L	10 MB	8.192	2924080000

### Web-Visualisation

#### Ordering data

Type	Number of Tags	Order-No.
U-OS-CODESYS-VISU-M	2.048	2924100000
U-OS-CODESYS-VISU-L	4.096	2924110000
U-OS-CODESYS-VISU-XL	8.192	2924120000
U-OS-CODESYS-VISU-XXL	unlimited	3012570000

### U-OS-CODESYS-COMMUNICATION

The CODESYS Communication M licence enables the use of the symbol configuration, the communication manager and the DataSource Manager.

#### Ordering data

Type	Number of Tags	Order-No.
U-OS-CODESYS-COMMUNICATION M	4.096	2984440000
U-OS-CODESYS-COMMUNICATION XXL	unlimited	2924130000
U-OS-CODESYS-REDUNDANCY		2924090000
U-OS-CODESYS-OPC-UA-XL		3012600000

# PROCON-Connect – Data acquisition, pre-processing and communication

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PROCON-Connect – Data acquisition,  
pre-processing and communication

Overview – PROCON-Connect

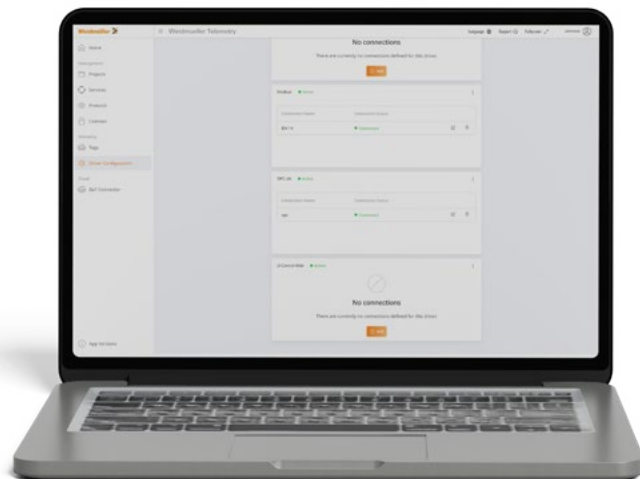
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# PROCON-Connect – Simple data acquisition, pre-processing and communication

Our PROCON-Connect enables the acquisition of machine data from a wide variety of controllers. It also allows local pre-processing and the use of machine data in other software systems through connectors and APIs, among other things.

The PROCON-Connect can be used for a wide range of data- and service-oriented Industrial IoT use cases. The connections to controllers, databases and the interfaces to other software solutions are conveniently configured in the browser. In addition to a comprehensive driver portfolio for connecting controllers, the PROCON-Connect uses industry-appropriate standards (such as InfluxDB or MQTT), and makes it possible to use machine data in the Weidmüller solutions ResMa® and easyConnect, among others.



- Drivers with browsing function: OPC-UA, ModbusTCP/RTU, CODESYS®, AllenBradley and drivers for u-mation PLC
- Installation of u-OS App Manager or on industrial PCs via Docker container
- Parameterisation of controller connections, databases and cloud connections via browser

### Platform-independent app

Simple installation under u-OS using the App Manager and on any hardware using Docker containers.

### Open standards and interfaces

Communication drivers, database technologies, APIs and cloud interfaces of the PROCON-Connect are based on open standards (e.g. OPC-UA, InfluxDB or MQTT) and, in addition to our APIs, allow seamless integration into the IIoT infrastructure.

### Intuitive web engineering

Our PROCON-Connect can be configured completely in the browser at run-time. It supports engineering with project import and export functionality as well as extensive feedback for the user.

**Ordering data**

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
P-CON RUN			Windows, Linux, Docker Container	3053900000
P-CON DRV CODESYS			Windows, Linux, Docker Container	3053910000
P-CON DRV ALLENBRADLEY			Windows, Linux, Docker Container	3053920000
P-CON COM 50	50		Windows, Linux, Docker Container	3053930000
P-CON COM 100	100		Windows, Linux, Docker Container	3053940000
P-CON COM 250	250		Windows, Linux, Docker Container	3053950000
P-CON COM 500	500		Windows, Linux, Docker Container	3053960000
P-CON COM 1000	1000		Windows, Linux, Docker Container	3053970000
P-CON COM 2500	2500		Windows, Linux, Docker Container	3053980000
P-CON COM 5000	5000		Windows, Linux, Docker Container	3053990000
P-CON COM 10000	10000		Windows, Linux, Docker Container	3054000000

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# PROCON-WEB – Visualisation software

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<b>PROCON-WEB – Visualisation software</b>	PROCON-WEB Embedded Systems	G.2
	PROCON-WEB SCADA	G.6

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# Future-proof visualisations for Industrial IoT applications

## PROCON-WEB Embedded Systems – the platform-independent HMI software

In modern Industrial IoT and automation applications, machine data must be available locally and in the cloud for all users. To ensure task-oriented provision and intuitive use, the relevant information needs to be collected and visually prepared.

PROCON-WEB Embedded Systems is a platform-independent visualisation solution ideally suited for use in modern Industrial IoT applications. Thanks to its low system requirements, it can be used on many different devices, and is also available on Weidmüller u-OS family controllers through the App Manager. The HMI is conveniently accessed via HTML5-compatible browsers and can therefore be accessed from a wide variety of end devices.

### Your special advantage:

- Portable and easy-to-parametrise HMI and Industrial IoT solution
- High performance with low resource requirements
- Compatible with devices with OPC-UA server, Modbus interface, CODESYS® and u-OS PLCs
- Dynamic web interface with adaptive design and customisable control elements

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**Many visualisation features**

Predefined control elements, user and rights management, multilingualism, data recording, recipe management, alarm and message processing, and many other features make PROCON-WEB Embedded Systems versatile.

**Maximum flexibility**

PROCON-WEB Embedded Systems can be used independently of hardware and operating system. Web-based visualisation, support for mobile devices, and open communication standards increase flexibility.

**Efficient project planning**

Project management is accelerated through features like a class-instance concept, structural support and automated project generation. Scripting and customisable control elements increase flexibility for complex requirements.

## PROCON-WEB Embedded Systems – Visualisation solutions for your Industrial IoT applications

### Ordering data

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>PROCON-WEB Embedded Systems runtime licences</b>				
PWEB-ES-RT-50/2	50	2	Windows, Linux, Docker Container	2992900000
PWEB-ES-RT-50/5	50	5	Windows, Linux, Docker Container	2992910000
PWEB-ES-RT-50/10	50	10	Windows, Linux, Docker Container	2992890000
PWEB-ES-RT-100/2	100	2	Windows, Linux, Docker Container	2992810000
PWEB-ES-RT-100/5	100	5	Windows, Linux, Docker Container	2992820000
PWEB-ES-RT-100/10	100	10	Windows, Linux, Docker Container	2992800000
PWEB-ES-RT-500/2	500	2	Windows, Linux, Docker Container	2992930000
PWEB-ES-RT-500/5	500	5	Windows, Linux, Docker Container	2992940000
PWEB-ES-RT-500/10	500	10	Windows, Linux, Docker Container	2992920000
PWEB-ES-RT-1000/2	1000	2	Windows, Linux, Docker Container	2992840000
PWEB-ES-RT-1000/5	1000	5	Windows, Linux, Docker Container	2992850000
PWEB-ES-RT-1000/10	1000	10	Windows, Linux, Docker Container	2992830000
PWEB-ES-RT-2000/2	2000	2	Windows, Linux, Docker Container	2992870000
PWEB-ES-RT-2000/5	2000	5	Windows, Linux, Docker Container	2992880000
PWEB-ES-RT-2000/10	2000	10	Windows, Linux, Docker Container	2992860000
PWEB-ES-RT-5000/2	5000	2	Windows, Linux, Docker Container	2875320000
PWEB-ES-RT-5000/5	5000	5	Windows, Linux, Docker Container	2875330000
PWEB-ES-RT-5000/10	5000	10	Windows, Linux, Docker Container	2875340000
PWEB-ES-DESIGNER-2000_FREE	2000			3037270000
PWEB-DESIGNER-PRO				2857650000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000

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### Ordering data

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>PROCON-WEB Embedded Systems runtime licences for u-OS</b>				
U-OS-PWEB-ES-RT-250/1_free	250	1	u-OS	2987740000
U-OS-PWEB-ES-RT-250/2	250	2	u-OS	3038630000
U-OS-PWEB-ES-RT-500/2	500	2	u-OS	2941960000
U-OS-PWEB-ES-RT-500/5	500	5	u-OS	2941970000
U-OS-PWEB-ES-RT-1000/2	1000	2	u-OS	2941980000
U-OS-PWEB-ES-RT-1000/5	1000	5	u-OS	2941990000
U-OS-PWEB-ES-RT-2000/2	2000	2	u-OS	2942000000
U-OS-PWEB-ES-RT-2000/5	2000	5	u-OS	2942010000
U-OS-PWEB-ES-RT-5000/2	5000	2	u-OS	2942020000
U-OS-PWEB-ES-RT-5000/5	5000	5	u-OS	2942030000
U-OS-PWEB-ES-RT-10000/2	10000	2	u-OS	2942040000
U-OS-PWEB-ES-RT-10000/5	10000	5	u-OS	2942050000
PWEB-DESIGNER-PRO				2857650000
PWEB-ES-DESIGNER-2000_FREE				3037270000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000



# Operate machines and systems via browser interfaces

## PROCON-WEB SCADA – the future-proof visualisation solution

Easily scalable and platform-independent HMI and SCADA solutions can be used flexibly and make relevant machine data available everywhere. They facilitate fault processing as well as data recording and management to support the control of complex processes.

PROCON-WEB SCADA as a Windows application for complex tasks simplifies the project planning of modern multi-touch-capable user interfaces for automation. The integrated web server enables the use of all HTML5-capable browsers without special plug-ins. The comprehensive portfolio of communication drivers facilitates the connection with all common control systems. Standardised open interfaces guarantee problem-free integration into any IT surroundings.

### Your special advantage:

- Easy creation of modern user interfaces without knowledge of web technologies
- Dynamic web interface with adaptive design and customisable control elements
- User and rights management including geographical rights assignment
- Ideal for control technology or complex digitalisation tasks
- Expanded scope of functions for more efficient data processing



**Future-proof solution**

Intuitive user interfaces, the solutions are especially future-proof with the help of an adaptive UX design and the use of state-of-the-art web technologies.

**Efficient project planning**

The class-instance concept and automation objects with structure support accelerate project planning. Scripting and customisable control elements increase flexibility for special requirements.



**Simple scalability**

From simple HMI applications to complex SCADA applications, PROCON-WEB SCADA is scalable and flexible, and can be integrated into your IT environment through open standards and interfaces.



**PROCON-WEB SCADA**

**PROCON-WEB SCADA – Visualisation solutions for your Industrial IoT applications**

**Ordering data**

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>SCADA runtime licences</b>				
PWEB-SCADA-RT-500/2	500	2	Windows	2857420000
PWEB-SCADA-RT-500/5	500	5	Windows	2857430000
PWEB-SCADA-RT-500/10	500	10	Windows	2857470000
PWEB-SCADA-RT-1000/2	1000	2	Windows	2857480000
PWEB-SCADA-RT-1000/5	1000	5	Windows	2857520000
PWEB-SCADA-RT-1000/10	1000	10	Windows	2997580000
PWEB-SCADA-RT-2000/2	2000	2	Windows	2857540000
PWEB-SCADA-RT-2000/5	2000	5	Windows	2857550000
PWEB-SCADA-RT-2000/10	2000	10	Windows	2857560000
PWEB-SCADA-RT-5000/2	5000	2	Windows	2857570000
PWEB-SCADA-RT-5000/5	5000	5	Windows	2857580000
PWEB-SCADA-RT-5000/10	5000	10	Windows	2857600000
PWEB-SCADA-RT-10000/2	10000	2	Windows	2857610000
PWEB-SCADA-RT-10000/5	10000	5	Windows	2857620000
PWEB-SCADA-RT-10000/10	10000	10	Windows	2857630000
PWEB-SCADA-RT-30000/2	30000	2	Windows	2862170000
PWEB-SCADA-RT-30000/5	30000	5	Windows	2862180000
PWEB-SCADA-RT-30000/10	30000	10	Windows	2862190000
PWEB-SCADA-RT-60000/2	60000	2	Windows	2862200000
PWEB-SCADA-RT-60000/5	60000	5	Windows	2862210000
PWEB-SCADA-RT-60000/10	60000	10	Windows	2862220000
PWEB-DESIGNER-PRO			Windows	2857650000
PWEB-ES-DESIGNER-2000_FREE			Windows	3037270000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000

# AutoML – Data analysis and automated machine learning

<b>AutoML – Data analysis and automated machine learning</b>	Automated Machine Learning	H.2
	AutoML ModelBuilder	H.3
	AutoML ModelRuntime	H.3
	edgeML – Easy and flexible ML integration into automation	H.4
	edgeML ModelRuntime	H.6

# AutoML

## The most important facts at a glance

**Build and deploy end-to-end machine learning model solutions faster. You only need your domain knowledge.**

With AutoML, you can easily use advanced analytic functions to optimise operations, improve product quality and enable new business models. As a machine or process expert, you can build and run machine learning models quickly and easily without expert knowledge in data science. As machine builder, the AutoML tool enables you to transform your data and domain knowledge into ML models that add value to your business. In manufacturing environments, the models can be used in order to provide machine operators with real-time analysis and insight during operation, for example. The tool consists of AutoML ModelBuilder, with which models are created, AutoML ModelRuntime for cloud applications, and edgeML ModelRuntime for on-premise applications.



### The benefits for you



#### Accelerated innovation

Leverage your existing machine data and domain knowledge and benefit directly from advanced analytics. Maintain sovereignty over your own data.



#### End-to-end solution

Build and continuously improve ML models with AutoML ModelBuilder.



#### Build customer relationships and new business models

Increase customer satisfaction with improved products and services. Get a better understanding of your customers' needs.

### Ordering data

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
AutoML				
AML-MB-EC-TRIAL-3M				2864180000
AML-MB-EC-1Y				2864190000
AML-MR-EC-TRIAL-3M				2976350000
AML-MR-EC-1Y-S				2976360000
AML-MR-EC-1Y-M				2976370000
AML-MR-EC-1Y-L				2976380000
AML-MB-AZ-3-Trial				2885120000
AML-MB-MA-AZ-03				2819870000
AML-MR-AZ-Trial				2885130000
AML-MR-MA-AZ-L				2886760000
AML-MR-MA-AZ-M				2886750000
AML-MR-MA-AZ-S				2886740000
AML-OPERATIONS BASIC				2896870000
AML-OPERATIONS PLUS				2896860000



# AutoML ModelBuilder

## From data to model in just a few steps

### Feature of the ModelBuilder

The AutoML ModelBuilder is available as a cloud-based solution. On the basis of prepared data, the user is guided through the following essential building blocks of the tool:



- Import machine and process data and analyse examined
- Data using automatically generated quality criteria (such as missing words)
- Enrich data by creating custom features
- Set data into a context, for instance by determining anomalies and normal behaviour
- Selection of the machine learning model to be created possible (for instance a model to detect or classify anomalies)
- The tool then automates the model creation process, including feature engineering, required preprocessing and post processing operations
- Selection of the created models possible (for instance based on criteria like model performance or plausibility)

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# AutoML ModelRuntime

## For flexible use in the cloud

### Features of AutoML ModelRuntime for the cloud

AutoML ModelRuntime makes it easy for an organization's machine or process experts to bring ML models directly into the application – with complete flexibility in the cloud.

- Easily connect machine data with ModelRuntime via databases or other standardised interfaces
- Import created models and assign them to specific machines (multiple models can be used for the same machine)
- Visualise results directly in the production process with the help of the embedded graphic user interface and trigger alarms, for instance
- Use and configure AutoML ModelRuntime with the help of the provided interfaces



# edgeML – Simple and flexible ML integration into automation

## High flexibility: use hardware and OS agnostic ML models

edgeML makes it possible to integrate ML models into automation in a particularly easy and flexible way – regardless of the hardware. And this is completely independent of the hardware. This allows systems or processes to be monitored continuously and efficiently with machine learning.

With edgeML, machine or process experts can quickly and easily put ML models into practical use. The models can be conveniently managed and executed using the integrated web server. The model results provide detailed insight into the condition of the machine. This information can be used, for example, to optimise maintenance intervals and improve product quality. edgeML thus makes an important contribution to increasing production efficiency.

### H

#### Simple integration on controllers

edgeML is available as an app for u-OS and can be conveniently installed via the App-Manager. In addition, edgeML is available for Docker and can also be installed as a Linux image on third-party hardware.

#### Intuitive operation of ML models

edgeML supports MLOps and can therefore be easily integrated into company processes. In addition, the runtime allows the models to be operated intuitively (e.g. through import and administration functions).

#### Supports ML models according to ONNX format

In addition to models created by the Weidmüller ModelBuilder, edgeML also allows the execution of ML models in the open ONNX standard.



Open platform  
(supports the  
ONNX format)

Intuitive import, parameterisation  
and commissioning of ML models  
on Edge devices

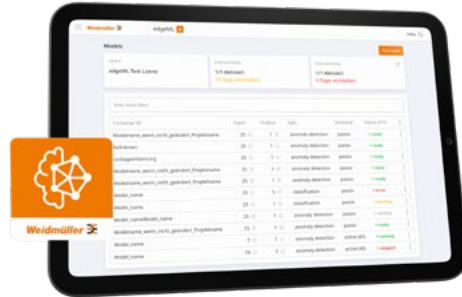
Hardware-independent  
deployment (docker  
containers)

# edgeML ModelRuntime

Machine and process managers who work on-premise use edgeML ModelRuntime

## Features of edgeML ModelRuntime

- Quickly begin operation of ML models on edge devices – importing is simple and parameterisation is intuitive
- Deploy your application on any hardware via docker containers or on u-OS
- Trust in an open platform – we support the ONNX format and MLOps



## H

### Ordering data

Type	Platform for runtime system	Order No.
edgeML		
EML-RT-S	Windows, Linux, Docker Container	2885080000
EML-RT-M	Windows, Linux, Docker Container	2885090000
EML-RT-L	Windows, Linux, Docker Container	2885110000
EML-RT-XL	Windows, Linux, Docker Container	on request
U-OS-EML-RT-S	Windows, Linux, Docker Container	3036820000
U-OS-EML-RT-M	Windows, Linux, Docker Container	3036830000
U-OS-EML-RT-L	Windows, Linux, Docker Container	3036840000
U-OS-EML-RT-XL	Windows, Linux, Docker Container	on request
EML-RT-Trial	Windows, Linux, Docker Container	3037000000

# ResMa<sup>®</sup> – Energy management software

<b>ResMa<sup>®</sup> – Energy management software</b>	ResMa <sup>®</sup> Resource and energy management	I.2
	ResMa <sup>®</sup> Basic	I.4
	ResMa <sup>®</sup> Package extensions	I.4
	ResMa <sup>®</sup> IPC-PLC Connector	I.5
	ResMa <sup>®</sup> Evaluation Kit	I.6
	Order overview	I.7

# ResMa® Software for process and energy optimization

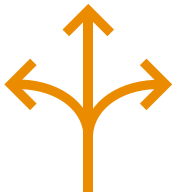
## Optimize your processes with the intelligent energy management that can be combined to Industrial IoT

The use of energy and resources is a cost factor that grows with increasing automation and is having an increasing impact on industrial production. By linking resource and energy management with Industrial IoT, we create the transparency needed to make your processes more sustainable and economical.

The resource and energy management software ResMa® combines the analysis of energy and process data with Industrial IoT platform solutions and offers an integrated system to merge and analyse comprehensive data centrally and to use the knowledge for the optimisation of processes or for new services.

The modular and preconfigured system variants for the standard ResMa® use cases enable the flexible and fast implementation of your projects, whether in production, industry or distributed infrastructures. In addition, open interfaces allow simple and cost-effective integration into the existing IT environment. We enable you to make optimal use of your data, uncovering potential and increasing your productivity.

### Your benefits at a glance



#### Recording of production data

The simple collection of data from different machines and systems enables the collection of production data. Thus, complex key figures can be calculated and plausibility can be configured to optimize production processes.



#### Reduction of costs

With our solutions, energy and process data become meaningful key figures. In this way, you not only reduce costs, but also optimize your processes, increase availability and reduce the use of resources.



#### Automatic reporting

For standardized reporting, individual energy reports or production-relevant evaluations can be sent automatically. In addition, the interactive documentation within the system supports the exchange of information between users.



#### Real-time alerting

States, limit or set values are continuously monitored and show abnormalities in order to avoid downtimes and increase OEE. This information can be conveniently forwarded to users.



#### Simple system integration

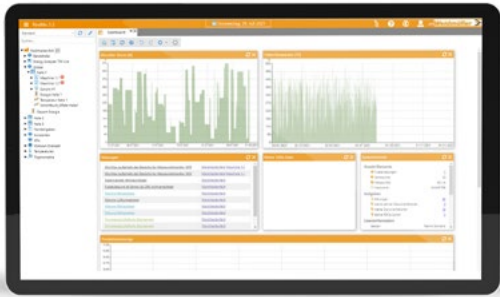
Flexible integration of different measurement systems, industrial controllers or other data sources through communication drivers (like Modbus or OPC-UA) and open interfaces. Data exchange with ERP/MES systems or other databases is also easy to implement.



#### Certified acc. to ISO 50001

DIN EN ISO 50001 compliant energy management certified by the TÜV-Süd (German Technical Inspectorate) and listed at the BAFA. ResMa® allows for simple documentation of energy saving measures with subsequent monitoring and final analysis.

ResMa® offers comprehensive analysis options to identify energy and process-based potentials, document them and derive measures for optimization. Power and production data are collected and prepared in ResMa®. Display options like Sankey diagrams, comprehensive reports or options to compare time periods provide maximum transparency.



### Transparency of production

Simple acquisition of all measured variables

- Electricity, gas, water, heat, air consumption
- Order-related quantities and material input
- Machine and equipment performance

ResMa® delivers comprehensive values for statistical analysis of all recorded measured variables, such as: Min, Max, Mean, Sum etc.

### Simple and efficient process analysis

Detailed analysis via interactive, adaptable charts for optimal display

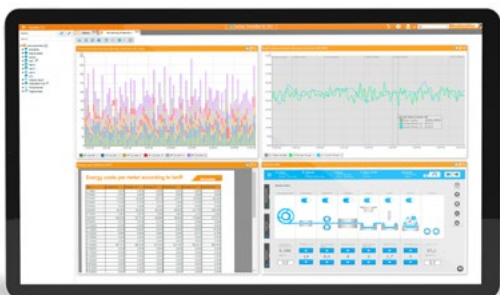
- Generation of meaningful key figures including production parameters
- Specific analyses for energy usage and other production parameters



### Less effort, more control

Automated evaluation

- Representation of energy flows via Sankey diagrams
- Use of mobile devices for fast notifications and status queries
- Central monitoring of all production halls or branches for cross-site benchmarking

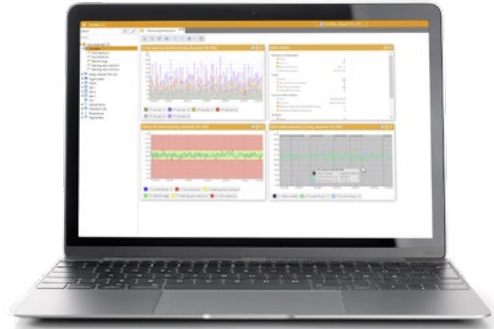


## ResMa® Basic

### Evaluate data – plan optimizations

Basic package for the preparation, presentation and analysis of data from the production environment

- Identification of weak points and causes with fluctuating process quality
- Documentation of the entire consumption
- Efficient reporting through automated reports
- Simple operability with high functionality at the same time
- Adjustable dashboards for maximum transparency



## Optionally extend your ResMa® Basic Add-on Packages

Optionally expand your ResMa® Basic. The modular structure allows you to use special and extensive evaluations and analyses. Find the ideal addition to optimise your use case with the ResMa® energy management software and easily gain added value from your data.

### ResMa® Energy Package

DIN EN ISO 50001 certified energy management system



- Continuous monitoring and optimisation of energy usage
- PDCA cycles and documentation functions
- Calculate meaningful energy KPIs and key data
- Automated reporting with custom reporting templates
- Transparent cost calculation with tariff integration

### ResMa® Production Package

For a detailed analysis of machines and systems



- Increase process stability to reduce scrap and increase quality
- Reduce use of resources (material and power) to save costs
- Statistics on the causes of downtime as the basis for a cost analysis
- Increase availability and productivity to maximize profits
- Optimize productivity through cross-location benchmarking on the product level and on an order-specific basis



**ResMa® Regression Analysis Package**

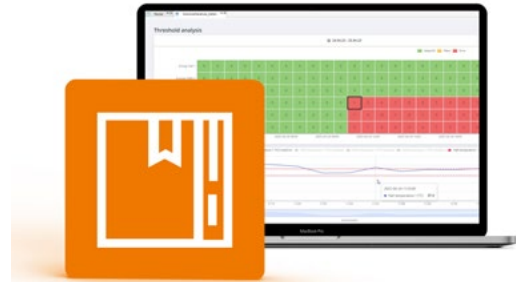
Regression analyses for optimisation and investment decisions



- Find dependencies in data via correlation analyses and thereby boost process understanding and transparency
- Determine the type and strength of dependencies as the basis for optimization and investment decisions
- Create regression models based on dependency findings
- Complete regression analyses based on created models for any time period
- Visualise the effects of optimisation measures on energy and processes

**ResMa® Recipe Management Package**

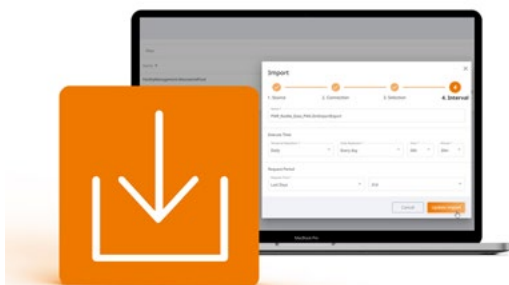
Documentation, representation and analysis of recipes to improve quality



- Standardisation through the use and exchange of recipes
- Document concrete production processes
- Analyse warning and limit value violations
- Visualise unstable processes early on (connection to LiveValueCache)
- Integrate findings into newly developed recipe versions
- Increase production quality for the long-term

**ResMa® Import Package**

Facilitates imports from third-party systems to evaluate all data in a single system



- Browse through external data sources (MS SQL, CSV)
- Map time series data on measurement points
- Configure import jobs
- Automatic cyclical execution
- Automate adoption of time series data from third-party systems

**ResMa® IPC-PLC Connector**

IPC as data collector and gateway



- Comprehensive selection of industrial communication protocols – Simatic S7/TIA, Beckhoff ADS, CODESYS®, Mitsubishi Melsec, Modbus-RTU/TCP, OPC-UA and more
- Convenient configuration interface installed on an IPC, directly for assembly in a control cabinet
- Existing energy meters can be integrated
- Encrypted transmission via the network/internet to the ResMa® server

# ResMa® Evaluation Kit

## Test package with comprehensive functions

To get to know the versatile functions of ResMa®, our ResMa® Evaluation Kit provides a cost-effective introduction to recording and evaluating measured values. We would like to make it possible for everyone to use our ResMa® energy management software in the form of a test package in order to make energy management in companies of any size as efficient as possible.



Further information is available on our website:  
<http://wmqr.eu/ResMa-Evaluation-Kit>

### Your advantages



#### Short delivery times

Hardware and software test package available at short notice



#### More efficiency through transparency

Continuous monitoring, analysis and evaluation of your energy data



#### Individual introduction

You will receive an introduction to your individual project from our experts



# ResMa® Basic & Add-on Packages

## Order overview

The available functions of ResMa® are divided into different function packages, allowing you to customise configuration to suit your needs. We will be happy to advise you with the selection and demonstrate the corresponding scope of services of the extension packages.

Type	Number of process variables, max.	Platform for runtime system	Order No.
<b>RESMA</b>			
RESMA-100	100	Windows	3036610000
RESMA-200	200	Windows	3036620000
RESMA-500	500	Windows	3036630000
RESMA-1000	1000	Windows	3036640000
RESMA-3000	3000	Windows	3036650000
RESMA-10000	100000	Windows	3036660000
RESMA-100-ENMS	100	Windows	3036750000
RESMA-200-ENMS	200	Windows	3036760000
RESMA-500-ENMS	500	Windows	3036770000
RESMA-1000-ENMS	1000	Windows	3036780000
RESMA-3000-ENMS	3000	Windows	3036790000
RESMA-10000-ENMS	10000	Windows	3036800000
RESMA-100-PROD	100	Windows	3036670000
RESMA-200-PROD	200	Windows	3036690000
RESMA-500-PROD	500	Windows	3036700000
RESMA-3000-PROD	3000	Windows	3036720000
RESMA-10000-PROD	10000	Windows	3036710000
RESMA-100-IMPORT	100	Windows	3029480000
RESMA-200-IMPORT	200	Windows	3029490000
RESMA-500-IMPORT	500	Windows	3029500000
RESMA-3000-IMPORT	3000	Windows	3029520000
RESMA-1000-IMPORT	1000	Windows	3029510000
RESMA-10000-IMPORT	10000	Windows	3029530000
RESMA-100-REZEPTUR	100	Windows	3029540000
RESMA-200-REZEPTUR	200	Windows	3029550000
RESMA-500-REZEPTUR	500	Windows	3029560000
RESMA-1000-REZEPTUR	1000	Windows	3029570000
RESMA-3000-REZEPTUR	30000	Windows	3029580000
RESMA-200-REGRESSION	200	Windows	3029610000
RESMA-500-REGRESSION	500	Windows	3029620000
RESMA-3000-REGRESSION	3000	Windows	3029640000
RESMA-1000-REGRESSION	1000	Windows	3029630000
RESMA-10000-REGRESSION	10000	Windows	3029650000
Inbetriebnahme [Tag]		Windows	2938830000
RESMA-MODBUS-CONNECTOR		Windows	2854870000
RESMA-PLC-CONNECTOR		Windows	2854120000
RESMA-PRO		Windows	2853390000
Basic Training			2938790000
Customer Specific Training			2938800000
SLA Technical Support			2938730000
Installation Standard			2938810000
Project Coordination			2938820000

### PROCON-Connect – Simple data acquisition, pre-processing and communication

- Drivers with browsing function: OPC-UA, ModbusTCP/RTU, CODESYS®, AllenBradley and drivers for u-mation PLC
- Installation via u-OS App-Manager or on industrial PCs via Docker Container
- Configuration of controller connections, databases and cloud connections via browser

Further information on PROCON-Connect is available in section F.



# u-link – Remote maintenance

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**u-link – Remote maintenance**

u-link Remote Access Service

J.2

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# u-link Remote Access Service – one tool for all cases

## Advanced functions for convenient remote access management

The remote maintenance of machines and systems is often complex and time-consuming. In addition, users also need a targeted and secure functional connection to the associated IT systems. For many users, these two challenges are a major obstacle to the worldwide connection of systems.

u-link guarantees quick and secure access to machinery and equipment while enabling the efficient management of production facilities, user clients, access rights or firmware versions. You choose: use u-link classic as a web-based portal application, or u-link on easyConect, our cloud-based industrial service platform.

The intuitive u-link web portal can be quickly and easily configured and adapted to specific processes without expert knowledge. Secured servers in Europe and the USA provide an online platform that ensures conformity between different IT systems when performing remote maintenance. easyConnect, in contrast, combines your entire Weidmüller service landscape at a single location. In addition to remote maintenance, realise your use cases easily, consistently and without any relevant prior knowledge, thanks to the perfect interaction of platform, devices and diverse software services. It is your intuitive, future-proof tool for your path to the Industrial IoT.

**Remote Access head office of manufacturers**



J



**Individual system management**

u-link can manage users and groups as well as their access rights according to individual specifications. These include group allocation and access permission to production facilities.



**Low configuration effort**

With the intuitive user interface and without specific IT knowledge, you can easily connect routers and clients to each other. With u-link, you can quickly establish a several systems network.



**Secure remote access and remote diagnosis**

Remote access to machines and systems is provided worldwide everywhere via secure VPN connection. The high availability of the servers grants secure access to your systems at all times.



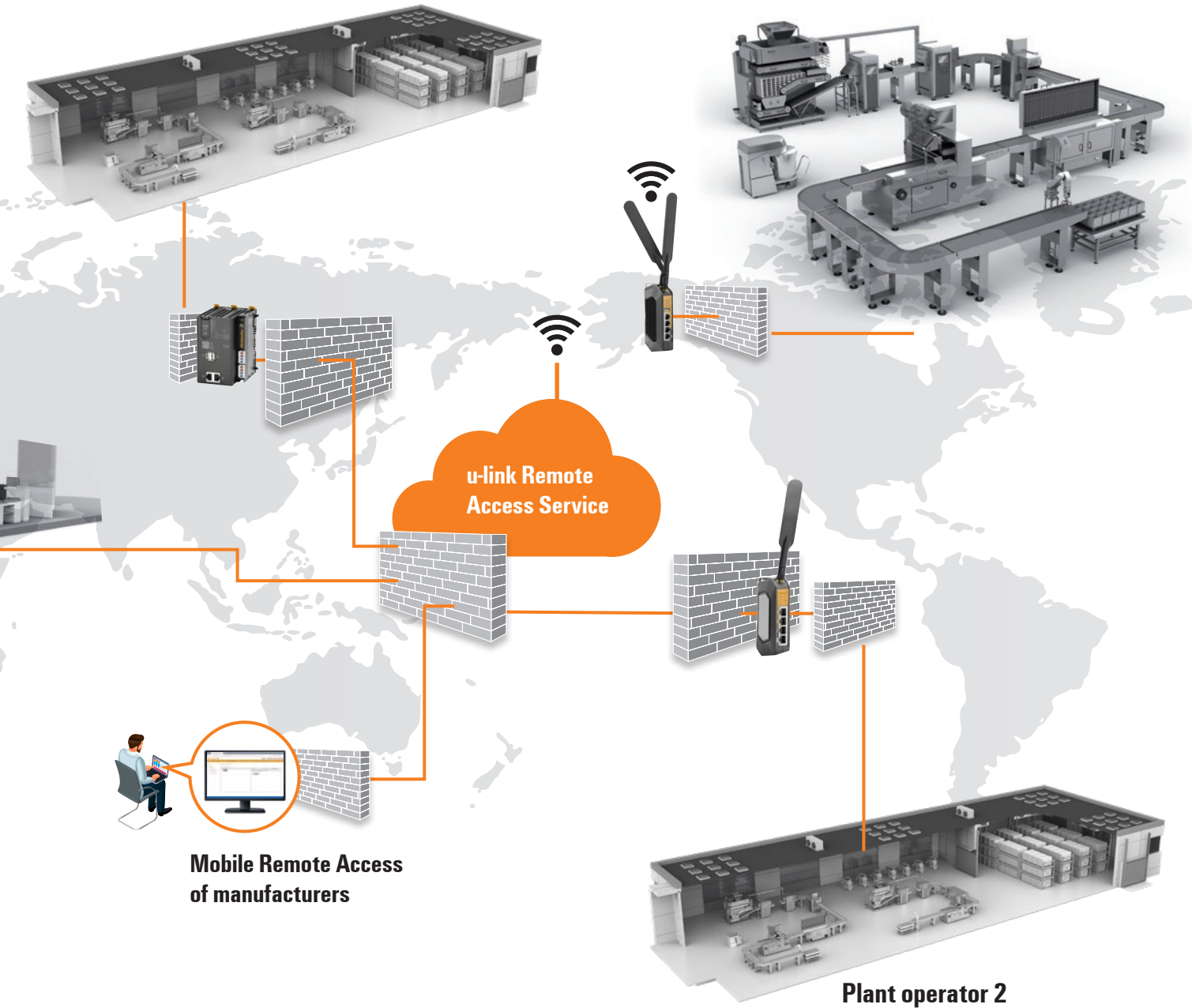
**Status monitoring and status message**

Weidmüller Heartbeat can be used to report the availability of a router to u-link. It facilitates status monitoring and enables status messages from the installed router.

[u-link.weidmueller.com](http://u-link.weidmueller.com)

Plant operator 3

Plant operator 1



Mobile Remote Access of manufacturers

Plant operator 2







# Service and support

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<b>Service and support</b>	Service connects - worldwide	V.2
	Engineering services and customised products	V.3
	easyConnect - Your Industrial Service Platform	V.4
	Support Center	V.6
	Additional support services	V.7
	Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering	V.8
	Your digital ordering options at Weidmüller	V.10

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# Our expertise for your requirements

## Service connects – worldwide



Automation technology functions are becoming more complex in a globally-oriented world facing ambitious targets in terms of energy efficiency and smart production. We are your equal partners for the best connections in Industrial Connectivity.

Our personal support answers all questions reliably and expertly. During planning, installation or operation our service and support offer is your best companion.

In short: Weidmüller's global service combines our expertise with your requirements.

V



**Your way to our service**  
[www.weidmueller.com/service](http://www.weidmueller.com/service)

# Engineering services and customised products

Automation engineering and connectivity consulting belongs to our services as well as assembly of engineered products. We also support the process from the idea to the product with our Weidmüller Configurator and the Configure-to-Order process.



## Consulting and engineering

The challenge for you is reducing costs and increasing efficiency. This requires intelligent, individual solutions. Whether it is modified products, pre-fitted mounting rails or complete small cabinets – our application centres provide a highly qualified custom-made engineering and production service.



## Connectivity Consulting

Increase your competitiveness - supported by our experts. Our drive is to optimise your competitiveness. That's why our team of experts supports you in significantly increasing your efficiency in electrical machine design and control cabinet construction. With proven products and services from the Weidmüller portfolio – and with the experience gained from over 300 projects worldwide.



## Assembled terminal rails - Flexibly designed to suit your requirements

Your processes in panel building have to be fast, flexible and productive. This is the only way you can cut your costs and increase efficiency. Depending on the application in question, you will have different requirements with respect to the engineering service, delivery speed and flexibility to be provided.



## Modified and assembled enclosures - Competitive advantages included

To compete internationally, your plants need to satisfy high standards of safety, quality and performance. The smart combination of consultation, application expertise and industry know-how is our key to finding a custom-fit solution for your application. Reduce costs and increase efficiency.



## Fast Delivery Service - Your ideas deserve a quick realisation

Obtain offers 24/7 and within minutes, including directly orderable article numbers with our Fast Delivery Service. The Weidmüller Configurator (WMC) for planning and configuration is key for consistent processes. Dispatch your orders in 5 days. Assemble individual terminal strips and enclosures from batch size 1!

# Your ticket to the world of digital service

## easyConnect – Your Industrial Service Platform



Our cloud-based platform is your ticket to the world of digital services from Weidmüller, and the intuitive and future-proof tool for your way to the Industrial IoT. Realise your use cases easily, consistently and without any relevant prior knowledge, thanks to the perfect interaction of platform, devices and diverse software services.

As an open, modular and perfectly integrable system, the platform is your enabler for a wide range of use cases. Increase your efficiency and unleash your full innovation potential with easyConnect.

V



### Interested in using easyConnect?

Learn how to get started with easyConnect step-by-step.

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

## Why should you use easyConnect?

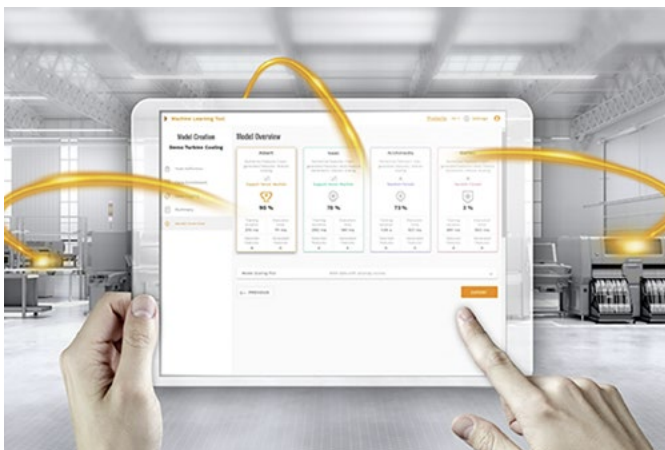
- You want to enter your digital transformation step-by-step?
- You want to make the step into Industrial IOT, but have no or little IT expertise?
- You want to use your digital data for smart & scalable services?
- You want to offer digital services (such as customised dashboard) to your customers?
- You want to improve your service offering and efficiency, e.g. through remote access?
- You feel Weidmüller's digital services are interesting, but you have „your cloud“ already?



Weidmüller comes up with the solution: easyConnect, the new digitalisation platform. It bundles Weidmüller's digital services at one place in the cloud and connects them with various Weidmüller devices.

With easyConnect you start digitalising your application step-by-step without ballast in a secure way.

## The following services are initially available on easyConnect:



### **Device management**

Adding and managing cloud-connected devices is typically the first step in any Industrial IoT use case.

### **Asset management**

The asset management service is a modelling tool that allows users to model their assets and processes and link them to relevant time series data.

### **Remote access (u-link)**

u-link guarantees a quick and secure access to machines and plants while also allowing for efficient management.

### **Data visualisation**

easyConnect data visualisation services enable users to view, monitor and display live and historical data.

### **AutoML**

With Weidmüller Industrial AutoML, you can optimize operations, increase product quality and develop new business models by benefiting from advanced analytics.

## Expand the possibilities of our products

Our Support Center provides you with comprehensive, clear and personal assistance



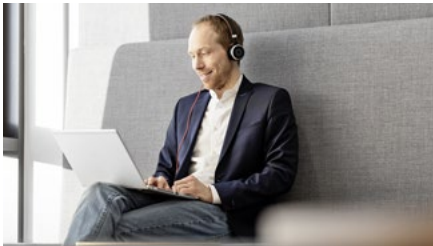
Receive fast and intuitive support to get the most out of our products in your application. In our new Support Center you can search or navigate to the many application notes, product information, video tutorials or software downloads of our products.

- **Everything at a glance** – One central support hub, where all relevant information is available
- **Powerful search** – Provides filter functions for various types of information and products
- **Different views and navigations** – Content provided in views product information, engineering support or software downloads
- **More than 170,000 downloads** – Application notes, video tutorials, templates and examples, user documentation, engineering data, ...
- **Personal contact** – Direct access to your personal technical contact in your country



Explore the world of our new Support Center  
[support.weidmueller.com](https://support.weidmueller.com)

## Additional support services



### Training and Webinars

Stay tuned in a world that is accelerating. In our entertaining interactive webinars, we offer you the opportunity to learn about new products and technology topics and to interact with our experts.



### Repairs and replacement parts

We offer repair and components for our Workplace Solutions as well as assistance for other Weidmüller products. Find out how our experts can help you with your repair request.



### Security advisory board

Our Product Security Incident Response Team (PSIRT) continuously informs you about possible security-related vulnerabilities of our products.



### Engineering data

For the quick integration of our products into your design, there are a lot of digital product data for engineering systems like EPLAN, Zuken E3.series, WSCAD and many others available for download.



### Product change notifications

Technical modifications of our products always available online.



### Technical product catalogues

Technical data for our entire program in Industrial Connectivity for download in PDF-format.

## From the idea to the finished solution

# Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering

Digital engineering can be so easy – with the Weidmüller Configurator!

It's a **free to use** software application to easily configure industrial solutions. It features more than **12,000 articles** from multiple product families including rail-mounted components, industrial and ex-certified enclosures, Heavy Duty Connectors, remote I/O-systems and PCB connectors.

Unleash the full power of digital engineering:

Our application wizards help you choose the right articles.

Place, mark or modify them to your needs and get your solution **visualized in 3D** – what you see is what you get!

Our promise: Speed up your solution planning process by up to 70%!

### Your benefits:

- **Proven configuration designs in real 3D:** The plausibility and collision check with the complete digital documentation ensures that you can rely 100% on your configuration.
- **Seamless E-CAD Roundtrip:** Interfaces enable the simple exchange of product data between the WMC and all common engineering tools, such as Zuken E3 or EPLAN Electric P8.
- **Sample Service & Fast Delivery Service:** to support your design-in process, we offer a **3-day sample service** for many products. Inquire them directly online – for free!  
You want your solution right away? Our **Fast Delivery Service** guarantees delivery of individually assembled terminal strips or enclosures within a few days.

### Get started online now!

The Weidmüller Configurator makes solution planning easy. Visit our website for more information, tutorials and download it for free:



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



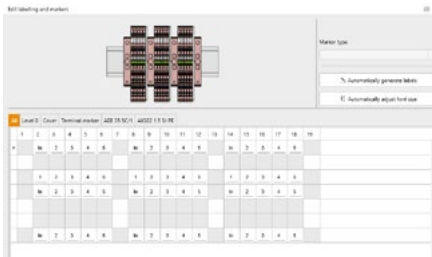
or register on [easyconnect.weidmueller.com](http://easyconnect.weidmueller.com) and use it online.





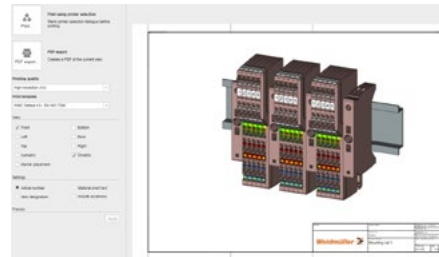
**Wizards:**

Design complete applications within few clicks – even without detailed product knowledge – for signal wiring, load monitoring, instrument transformers, enclosures, remote I/O-systems and many more.



**Assistants:**

Finalize your solutions with supporting assistants to add cross-connectors, markers or colors and verify the faultlessness. Automatic modes save valuable time!



**1-click documentation:**

Get assembly drawings for production – only 1 click. Bill of material – only 1 click. The complete solution documentation including all component data sheets – you’re right, only 1 click!



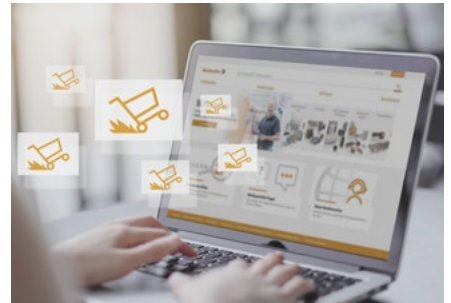
# Digital ordering options

## Your digital ordering options at Weidmüller

Find and easily select the products you need, with convenient ordering: as your Partner in Industrial Connectivity, we know what counts in purchasing. That is why we offer you a variety of options for ordering products from us and optimising your purchasing processes to meet your individual requirements and your workflow. The choice is yours.

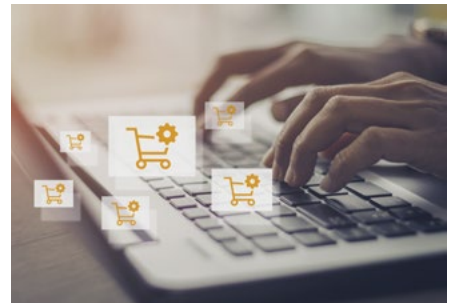
### Order via the Weidmüller eShop

Our eShop offers you access to the complete Weidmüller product range around the clock – directly from a PC, tablet, or smartphone. The intuitive user guidance supports you as you select from over 50,000 products. Technical data, prices, and availabilities are available at any time. The shopping basket with check out function lets you place an order in seconds. Convenient additional functions like CSV upload, order history, reports, or custom order templates make your ordering processes even more efficient.



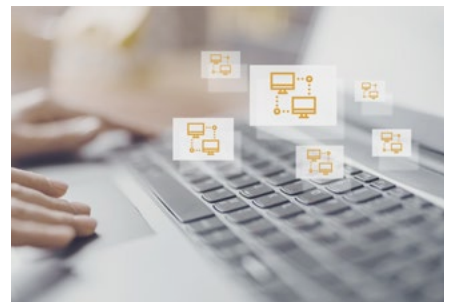
### Order via the OCI interface

The Open Catalogue Interface (OCI) facilitates the exchange of data between your enterprise resource planning system and our eShop. This means that our eShop is integrated into your system via an OCI interface, so you have access to our complete product catalogue from your enterprise resource planning system. You can filter and select products, place them in your shopping basket and place direct orders without changing your software application. The open OCI standard is supported worldwide from a variety of software providers.



### Order via the EDI interface

Our Electronic Data Interchange (EDI) also offers you the option of ordering our products directly from your enterprise resource planning system. All order data is transmitted automatically to our system and processed immediately. Orders, order confirmations, invoices, and delivery notices are transmitted lightning fast. This helps you make your purchasing processes even more efficient.



We will be glad to advise you on which solutions are suitable for you and how implementation is possible.

**Get in touch with us**

[www.weidmueller.com/digital-order](http://www.weidmueller.com/digital-order)

# Index

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Table with 3 columns: Order No., Type, Page. Contains 2 rows of order data.

1990000000

Table with 3 columns: Order No., Type, Page. Contains 10 rows of order data.

Table with 3 columns: Order No., Type, Page. Contains 8 rows of order data.

2000000000

Table with 3 columns: Order No., Type, Page. Contains 19 rows of order data.

2010000000

Table with 3 columns: Order No., Type, Page. Contains 4 rows of order data.

2060000000

Table with 3 columns: Order No., Type, Page. Contains 9 rows of order data.

2330000000

Table with 3 columns: Order No., Type, Page. Contains 3 rows of order data.

2420000000

Table with 3 columns: Order No., Type, Page. Contains 27 rows of order data.

2440000000

Table with 3 columns: Order No., Type, Page. Contains 4 rows of order data.

2450000000

Table with 3 columns: Order No., Type, Page. Contains 18 rows of order data.

Table with 3 columns: Order No., Type, Page. Contains 2 rows of order data.

2460000000

Table with 3 columns: Order No., Type, Page. Contains 28 rows of order data.

2470000000

Table with 3 columns: Order No., Type, Page. Contains 3 rows of order data.

2480000000

Table with 3 columns: Order No., Type, Page. Contains 6 rows of order data.

2500000000

Table with 3 columns: Order No., Type, Page. Contains 10 rows of order data.

2510000000

Table with 3 columns: Order No., Type, Page. Contains 4 rows of order data.

2540000000

Table with 3 columns: Order No., Type, Page. Contains 17 rows of order data.

2550000000

Table with 3 columns: Order No., Type, Page. Contains 7 rows of order data.



Order No.	Type	Page
3036650000	RESMA-3000	I.7
3036660000	RESMA-10000	I.7
3036670000	RESMA-100-PROD	I.7
3036690000	RESMA-200-PROD	I.7
3036700000	RESMA-500-PROD	I.7
3036710000	RESMA-10000-PROD	I.7
3036720000	RESMA-3000-PROD	I.7
3036750000	RESMA-100-ENMS	I.7
3036760000	RESMA-200-ENMS	I.7
3036770000	RESMA-500-ENMS	I.7
3036780000	RESMA-1000-ENMS	I.7
3036790000	RESMA-3000-ENMS	I.7
3036800000	RESMA-10000-ENMS	I.7
3036820000	U-OS-EMLRT-S	H.6
3036830000	U-OS-EMLRT-M	H.6
3036840000	U-OS-EMLRT-L	H.6
3036950000	UR20-2PVM-PN-2A-V2	C.72
3036950000	UR20-2PVM-PN-2A-V2	C.142
3036950000	UR20-2PVM-PN-2A-V2	C.144
3036960000	UR20-2PVM-PN-0.5A-V2	C.71
3036960000	UR20-2PVM-PN-0.5A-V2	C.142
3036960000	UR20-2PVM-PN-0.5A-V2	C.144
3037000000	EMLRT-Trial	H.6
3037270000	PWEB-ES-DESIGNER-2000_FREE	G.4
3037270000	PWEB-ES-DESIGNER-2000_FREE	G.8
3037270000	PWEB-ES-DESIGNER-2000_FREE	G.4
3038630000	U-OS-PWEB-ES-RT-250/2	G.4

## 3050000000

3052120000	UR20-EM-2920830000-SP	C.102
3052120000	UR20-EM-2920830000-SP	C.143
3052130000	UR20-EM-2920840000-SP	C.103
3052130000	UR20-EM-2920840000-SP	C.143
3052170000	UR20-PK-2920830000-SP	C.102
3052170000	UR20-PK-2920830000-SP	C.143
3052180000	UR20-PK-2920840000-SP	C.103
3052180000	UR20-PK-2920840000-SP	C.143
3053900000	P-CON RUN	F.3
3053910000	P-CON DRV CODESYS	F.3
3053920000	P-CON DRV ALLENBRADLEY	F.3
3053930000	P-CON COM 50	F.3
3053940000	P-CON COM 100	F.3
3053950000	P-CON COM 250	F.3
3053960000	P-CON COM 500	F.3
3053970000	P-CON COM 1000	F.3
3053980000	P-CON COM 2500	F.3
3053990000	P-CON COM 5000	F.3
3054000000	P-CON COM 10000	F.3

## 7780000000

7789306010	PAC-UNIV-HE20-LCH-1M	C.43
7789306010	PAC-UNIV-HE20-LCH-1M	C.49
7789306010	PAC-UNIV-HE20-LCH-1M	C.59
7789306010	PAC-UNIV-HE20-LCH-1M	C.64
7789306010	PAC-UNIV-HE20-LCH-1M	C.87

## 9000000000

9002650000	KT 8	C.163
9002650000	KT 8	C.164
9002650000	KT 8	C.165

## 9030000000

9030060000	AM 12	C.163
9030060000	AM 12	C.164
9030060000	AM 12	C.165

## 9200000000

9202210000	MULTI-STRIPAX 6-16	C.41
9202210000	MULTI-STRIPAX 6-16	C.57
9202210000	MULTI-STRIPAX 6-16	C.83
9202210000	MULTI-STRIPAX 6-16	C.84
9202210000	MULTI-STRIPAX 6-16	C.85
9202210000	MULTI-STRIPAX 6-16	C.86
9202210000	MULTI-STRIPAX 6-16	C.112
9203110000	STRIPPER 6-16 RED-LINE	C.163
9203110000	STRIPPER 6-16 RED-LINE	C.164
9203110000	STRIPPER 6-16 RED-LINE	C.165

## 9440000000

9445700000	RS 1610 1W H S	C.43
9445700000	RS 1610 1W H S	C.49
9445700000	RS 1610 1W H S	C.59
9445700000	RS 1610 1W H S	C.64

## 9450000000

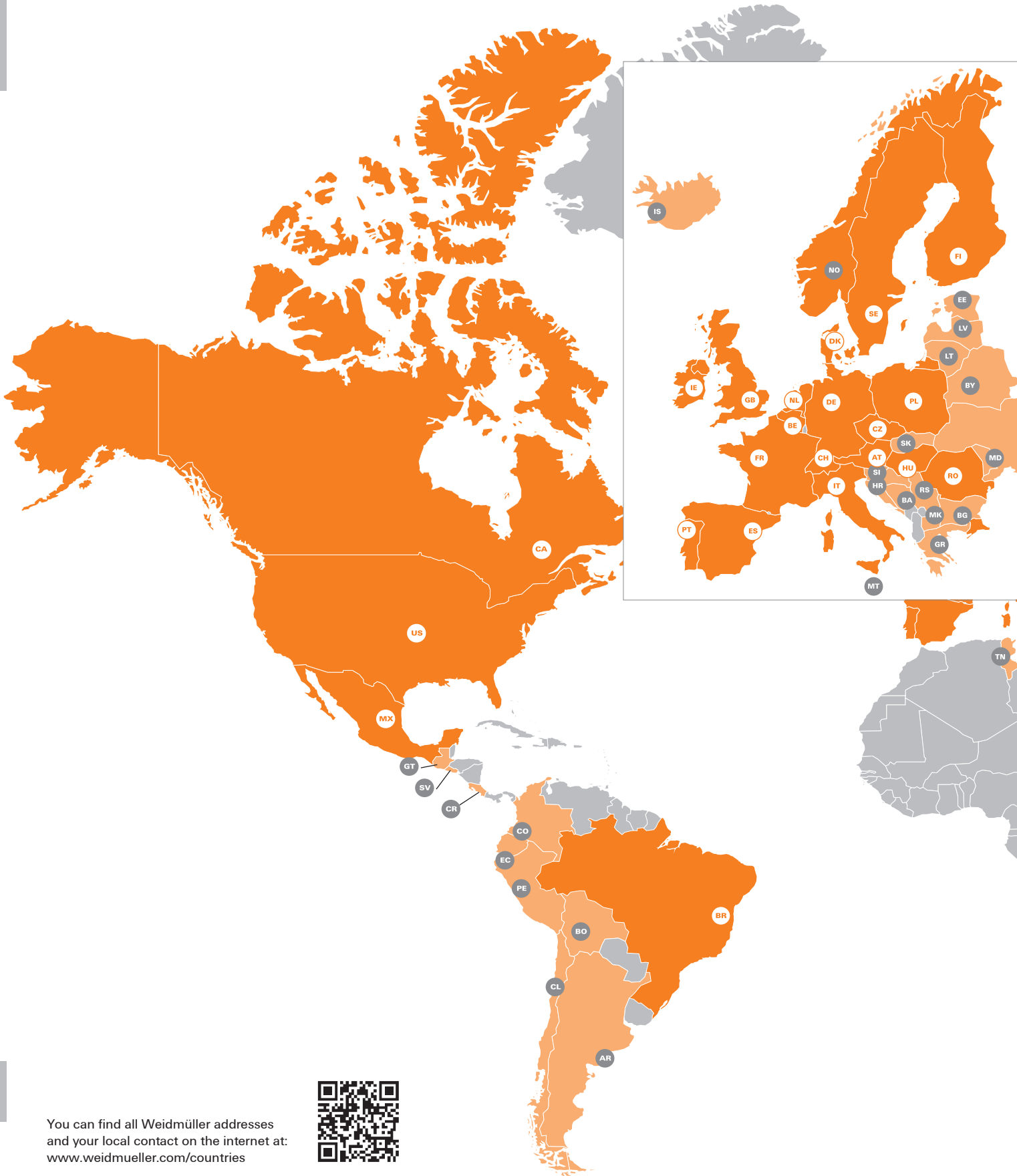
9456150150	SAIL-M8BW-4-1.5U	C.164
9456380150	SAIL-M12BW-4-2L1.5U	C.165
9457320150	SAIL-M12BW-3-1.5U	C.163
9457380150	SAIL-M8BW-3-1.5U	C.164
9457450150	SAIL-M8BG-3-1.5U	C.164
9457460150	SAIL-M8BW-3L1.5U	C.165
9457610150	SAIL-M12G-5-1.5U	C.150

Order No.	Type	Page
9457610150	SAIL-M12G-5-1.5U	C.151
9457610150	SAIL-M12G-5-1.5U	C.152
9457610150	SAIL-M12G-5-1.5U	C.153
9457610150	SAIL-M12G-5-1.5U	C.154
9457610150	SAIL-M12W-5-1.5U	C.150
9457670150	SAIL-M12W-5-1.5U	C.151
9457670150	SAIL-M12W-5-1.5U	C.152
9457670150	SAIL-M12W-5-1.5U	C.153
9457670150	SAIL-M12W-5-1.5U	C.154
9457730150	SAIL-M12BG-4-1.5U	C.163
9457740150	SAIL-M12BW-4-1.5U	C.163
9457800150	SAIL-M12BW-3L1.5U	C.165
9457820150	SAIL-M12BG-3-1.5U	C.163
9457850150	SAIL-M8BG-4-1.5U	C.164





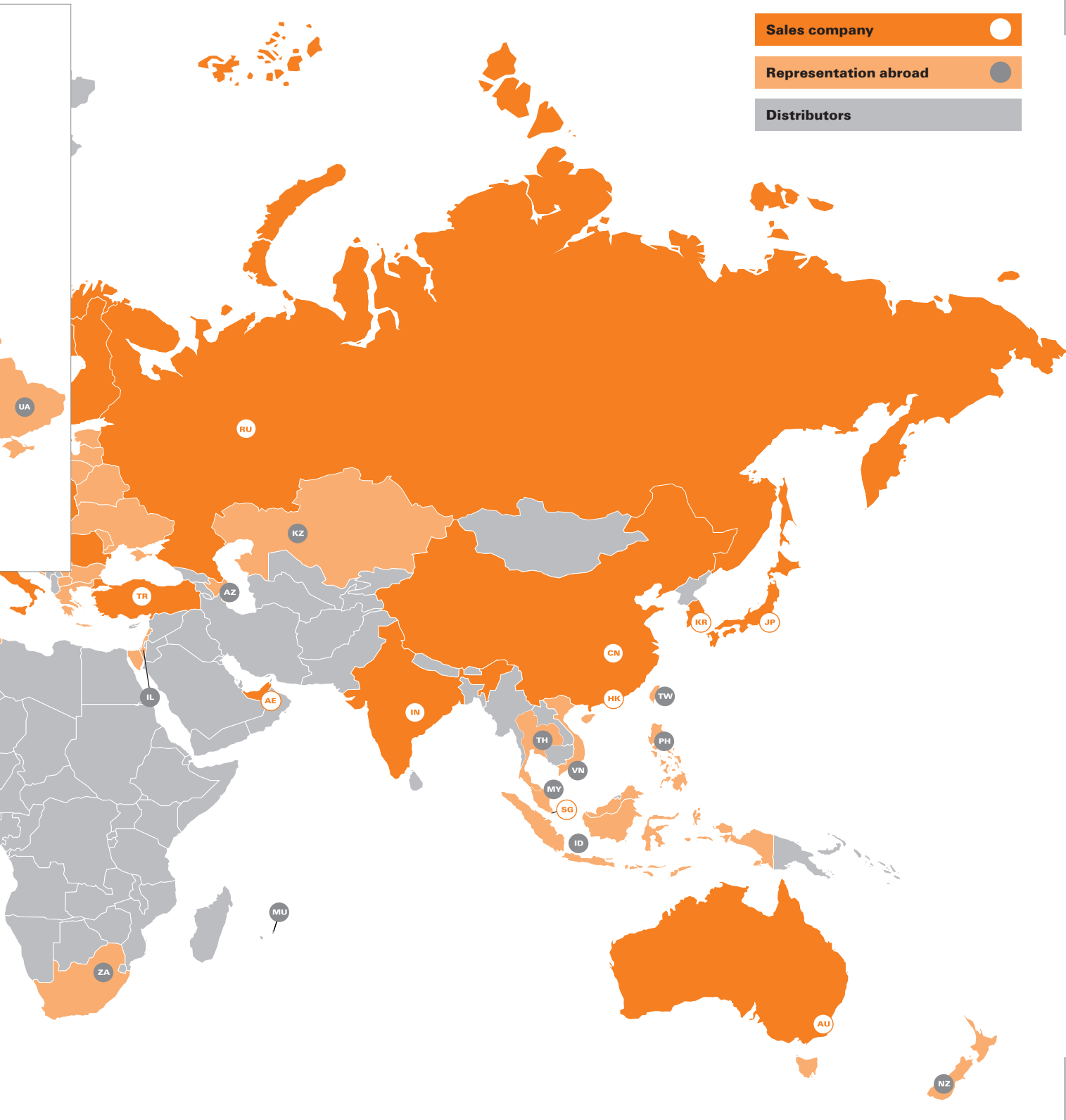
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