

**UR20-4AI-UI-16-DIAG-HD****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image****Inputs can be parameterised; up to 3-wire + FE;  
accuracy 0.1% FSR**

Analogue input modules of the u-remote system are available in many variants with different resolutions and wiring solutions.

Variants are available with 12- and 16-bit resolution, which record up to 4 analogue sensors with  $\pm 10\text{ V}$ ,  $\pm 5\text{ V}$ ,  $0\ldots 10\text{ V}$ ,  $0\ldots 5\text{ V}$ ,  $2\ldots 10\text{ V}$ ,  $1\ldots 5\text{ V}$ ,  $0\ldots 20\text{ mA}$  or  $4\ldots 20\text{ mA}$  with maximum accuracy. Each plug-in connector can optionally connect sensors with 2- or 3-wire technology. The parameters for the measurement range can be individually set for each channel. In addition, each channel has its own status LED.

A special variant for Weidmüller interface units enables current measurements with 16-bit resolution and maximum accuracy for 8 sensors at a time ( $0\ldots 20\text{ mA}$  or  $4\ldots 20\text{ mA}$ ).

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

**General ordering data**

Version	Remote I/O module, IP20, 4-channel, Analog signals, Input, Current/Voltage, 16 Bit
Order No.	<a href="#">1506910000</a>
Type	UR20-4AI-UI-16-DIAG-HD
GTIN (EAN)	4050118315417
Qty.	1 pc(s).
Replacement parts	<a href="#">1350930000</a> <a href="#">1518820000</a> <a href="#">1515430000</a>

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## Technical data

## Dimensions and weights

Depth	76 mm	Depth (inches)	2.992 inch
Height	120 mm	Height (inches)	4.724 inch
Width	11.5 mm	Width (inches)	0.453 inch
Mounting dimension - height	128 mm	Net weight	72 g

## Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C ... +60 °C
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## analogue inputs

Accuracy	0.1% FSR	
Conversion time	1 ms	
Individual channel diagnosis	Yes	
Internal resistance I	45 Ω	
Internal resistance U	100 kΩ	
Module diagnosis	Yes	
Number of analogue inputs	4	
Resolution	16 Bit	
Response time	< 50 ms	
Reverse polarity protection	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Sensor supply	Yes	
Sensor supply	nominal	750 mA
	min.	0 mA
	max.	750 mA
Short-circuit-proof	Yes	
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)	

## Connection data

Wire connection cross section, finely stranded, max.	0.35 mm <sup>2</sup>	Wire connection cross section, finely stranded, min.	0.14 mm <sup>2</sup>
Wire cross-section, finely stranded, max. (AWG)	AWG 22	Wire cross-section, finely stranded, min. (AWG)	AWG 26
Wire cross-section, solid, max.	0.35 mm <sup>2</sup>	Wire cross-section, solid, max. (AWG)	AWG 22
Wire cross-section, solid, min.	0.14 mm <sup>2</sup>	Wire cross-section, solid, min. (AWG)	AWG 26

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## Technical data

## General data

Air humidity (operation)	10% to 95%, non-condensing as per DIN EN 61131-2	Air humidity (storage)	10% to 95%, non-condensing as per DIN EN 61131-2
Air humidity (transport)	10% to 95%, non-condensing as per DIN EN 61131-2	Air pressure (operation)	≥ 795 hPa (height ≤ 2000 m) as per DIN EN 61131-2
Air pressure (storage)	1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2	Air pressure (transport)	1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2
Pollution severity	2	Rail	TS 35
Shock	15 g over 11 ms, half sinus wave, acc. to IEC 60068-2-27	Surge voltage category	II
Test voltage	500 V	UL 94 flammability rating	V-0
Vibration resistance	5 Hz ≤ f ≤ 8.4 Hz: 3.5-mm amplitude as per IEC 60068-2-6, 8.4 Hz ≤ f ≤ 150 Hz: 1 g acceleration as per IEC 60068-2-6		

## Power supply

Current consumption from I <sub>IN</sub> (the respective power segment)	25 mA + sensor feed	Current consumption from I <sub>sys</sub> , typ.	8 mA
Reverse polarity protection	Yes	Voltage supply	24 V DC +20 %/-15 %, via the system bus

## System data

Diagnostic data	1 Bit	Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, CANopen, DeviceNet, POWERLINK, CC-Link, CC-Link IE TSN
Galvanic isolation	500 V DC between the current paths	Interface	u-remote system bus
Module type	Analogue input module	Process data	8 Byte
Transmission speed of system bus, max.	48 Mbit		

## Classifications

ETIM 6.0	EC001596	ETIM 7.0	EC001596
ETIM 8.0	EC001596	ETIM 9.0	EC001596
ECLASS 9.0	27-24-26-01	ECLASS 9.1	27-24-26-01
ECLASS 10.0	27-24-26-01	ECLASS 11.0	27-24-26-01
ECLASS 12.0	27-24-26-01	ECLASS 13.0	27-24-26-01

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8

## Important note

Product information	Note: Please order connector (1469340000) separately
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## Technical data

## Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

## Downloads

Approval/Certificate/Document of Conformity	<a href="#">KC certificate</a> <a href="#">DNV/GL certificate</a> <a href="#">DEMKO15ATEX1525X</a> <a href="#">CCC certificate</a> <a href="#">UKCA Declaration of Conformity - EN</a> <a href="#">CE Declaration of Conformity - DE</a>
Engineering Data	<a href="#">CAD data – STEP</a> <a href="#">Compatibility information – Combinability of UR20</a>
Engineering Data	<a href="#">Zuken E3.S</a>
Product Change Notification	<a href="#">Release-Notes - Firmware</a>
Software	<a href="#">Firmware – Current firmware UR20-4AI-UI</a> <a href="#">Firmware – Archive firmware UR20-4AI-UI</a>
User Documentation	<a href="#">MAN_U-REMOTE_DE</a> <a href="#">MAN_U-REMOTE_EN</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

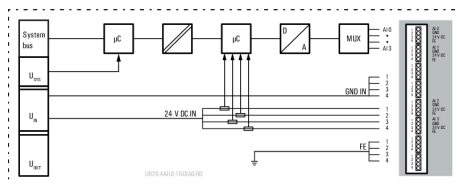
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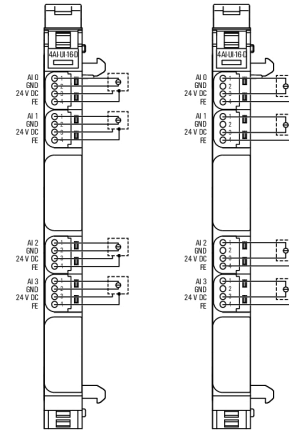
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## Drawings

## Block diagram

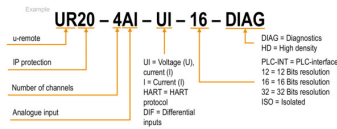


## Connection diagram



## Explanation of abbreviations

## Analogue input modules



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## Accessories

## Accessories



## System accessory

Discover a wide range of accessories for your u-remote system - the ideal addition to make your applications even more efficient and flexible.

## General ordering data

Type	UR20-EBK-ACC	Version		
Order No.	<a href="#">1346610000</a>	End bracket, ,		
GTIN (EAN)	4050118151596			
Qty.	5 pc(s).			
Type	UR20-SM-ACC	Version		
Order No.	<a href="#">1339920000</a>	Cover, ,		
GTIN (EAN)	4050118144727			
Qty.	20 pc(s).			
Type	KOSM BHZ5.00	Version	Product data	Packaging
Order No.	<a href="#">1483050000</a>	PCB plug-in connector, Accessories, Coding element, orange		Box
GTIN (EAN)	4050118292039			
Qty.	100 pc(s).			
Type	PWZ-UR20-HD	Version		
Order No.	<a href="#">1525820000</a>	Pressing tools		
GTIN (EAN)	4050118347067			
Qty.	1 pc(s).			
Type	UR20-PG0.35	Version		
Order No.	<a href="#">1469340000</a>	Connecting plug		
GTIN (EAN)	4050118275339			
Qty.	8 pc(s).			

## Aluminum



Aluminum has the second best electrical conductivity after copper. One advantage is low weight, anMiscellaneous is outstanding corrosion protection.

## General ordering data

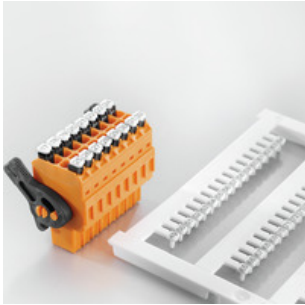
Type	TS 35X7.5 2M/AL/BK	Version	
Order No.	<a href="#">0330800000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm,	
GTIN (EAN)	4008190100650	Aluminium, untreated	
Qty.	2 m		

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Custom printing****General ordering data**

Type	PM 2.7/2.6 MC SDR	Version
Order No.	<a href="#">1323700000</a>	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch in
GTIN (EAN)	4050118126761	mm (P): 3.50 Weidmueller, To customer specification
Qty.	192 pc(s).	

**Tools**

- For flexible and solid conductors with special insulating materials
- High-quality stripping for industrial applications (complies with aircraft industry requirements)
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length adjustable via end stop
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function

**General ordering data**

Type	MULTI-STRIPAX 6-16	Version
Order No.	<a href="#">9202210000</a>	Tools, Stripping and cutting tool
GTIN (EAN)	4032248486144	
Qty.	1 pc(s).	

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## Accessories

## Custom printing



The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

- Large range of ready-to-use markers
- Strips for fast installation
- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

Type	DEK 5/8-11.5 MC SDR	Version
Order No.	<a href="#">1341610000</a>	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118146059	Weidmueller, To customer specification
Qty.	100 pc(s).	

## Stainless steel



Stainless steel is a collective term for all types of steel (alloys) with a high degree of purity and corrosion resistance.

## General ordering data

Type	TS 35X7.5 2M/CRN	Version
Order No.	<a href="#">1747350000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm,
GTIN (EAN)	4032248003372	Stainless steel, rust-proof, Stainless steel 1.4301, untreated
Qty.	2 m	



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## Accessories

## Steel



Steel DIN rails are the most widespread on the market. Among metal DIN rails, they have the lowest shortcircuit protection, similar to stainless steel.

## General ordering data

Type	TS 35X7.5/LL 2M/ST/SZ	Version
Order No.	<a href="#">7915060000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width:
GTIN (EAN)	4032248296279	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	2 m	passivated
Type	TS 35X7.5/LL 2M/ST/ZN	Version
Order No.	<a href="#">0514500000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width:
GTIN (EAN)	4008190046019	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	2 m	passivated
Type	TS 35X7.5 2M/ST/ZN	Version
Order No.	<a href="#">0383400000</a>	Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm, Steel,
GTIN (EAN)	4008190088026	galvanic zinc plated and passivated
Qty.	2 m	
Type	TS 35X7.5/LL 1M/ST/ZN	Version
Order No.	<a href="#">0514510000</a>	Terminal rail, with slot, Accessories, 35 x 7.5 x 1000 mm, Slit width:
GTIN (EAN)	4008190116620	5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and
Qty.	1 m	passivated

## Blank



## General ordering data

Type	PM 2.7/2.6 MC NE WS	Version
Order No.	<a href="#">1323710000</a>	OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch in
GTIN (EAN)	4050118126778	mm (P): 3.50 Weidmueller, white
Qty.	960 pc(s).	

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## Accessories

## Blank



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## General ordering data

Type	DEK 5/8-11.5 MC NE WS	Version
Order No.	<a href="#">1341630000</a>	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118145946	Weidmueller, white
Qty.	500 pc(s).	

## Tools



- Stripping tools with automatic self-adjustment
- For flexible and solid conductors
- Ideally suitable for mechanical and plant engineering, railway and rail traffic, wind energy, robot technology, explosion protection as well as marine, offshore and ship building sectors
- Stripping length adjustable via end stop
- Automatic opening of clamping jaws after stripping
- No fanning-out of individual conductors
- Adjustable to diverse insulation thicknesses
- Double-insulated cables in two process steps without special adjustment
- No play in self-adjusting cutting unit
- Long service life
- Optimised ergonomic design

## General ordering data

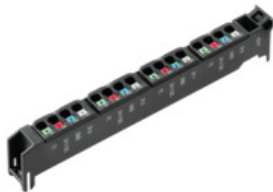
Type	STRIPAX ULTIMATE	Version
Order No.	<a href="#">1468880000</a>	Tools, Stripping and cutting tool
GTIN (EAN)	4050118274158	
Qty.	1 pc(s).	

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Type	UR20-PK-1506910000-SP	Version
Order No.	<a href="#">1518820000</a>	Replacement part
GTIN (EAN)	4050118326345	
Qty.	5 pc(s).	

**Basic modules****General ordering data**

Type	UR20-BM-SP	Version	Packaging
Order No.	<a href="#">1350930000</a>	Replacement part , Flange-mounted housing	Cardboard box
GTIN (EAN)	4050118402735		
Qty.	5 pc(s).		

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Type	UR20-EM-1506910000-SP	Version
Order No.	<a href="#">1515430000</a>	Replacement part
GTIN (EAN)	4050118322767	
Qty.	1 pc(s).	