

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

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image****2- or 4-wire connection; 16-bit resolution; 4 outputs**

The analogue output module controls up to 4 analogue actuators with  $\pm 10$  V,  $\pm 5$  V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA with an accuracy of 0.05% of the measurement-range end value. An actuator with 2-, 3- or 4-wire technology can be connected to each plug-in connector. The measurement range is defined channel-by-channel using parameterisation. In addition, each channel has its own status LED.

The outputs are supplied from the output current path ( $U_{OUT}$ ).

**General ordering data**

Version	Remote I/O module, IP20, Analog signals, Output, 4-channel, Current/Voltage
Order No.	<a href="#">1315730000</a>
Type	UR20-4AO-UI-16-DIAG
GTIN (EAN)	4050118118667
Qty.	1 pc(s).
Replacement parts	<a href="#">1350930000</a> <a href="#">1518880000</a> <a href="#">1347330000</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	Width (inches)	0.453 inch
Mounting dimension - height	128 mm	Net weight	86 g

## Temperatures

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

Accuracy	±0,1 % FSR max., 0,05 % FSR typ.	
Actuator connection	2-wire (automatic detection), 4-wire	
Actuator supply	min.	0 mA
	max.	185 mA
	nominal	185 mA
Cross-talk between the channels in FSR	0.001 %	
Individual channel diagnosis	Yes	
Load impedance current	< 600 Ω	
Max. error between T min. and T max. in FSR	220 %	
Module diagnosis	Yes	
Monotonicity	Yes	
Number of analogue outputs	4	
Output current as per application	nominal	185 mA
	min.	0 mA
	max.	185 mA
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)	
Repeat accuracy	< 1 mV eff.	
Resolution	16 Bit	
Response time	1 ms / 4 channels	
Short-circuit-proof	Yes	
Simultaneity factor	min.	0 %
	max.	100 %
	nominal	100 %
Substitute values	Yes	
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K	
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)	
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)	

## Connection data

Type of connection	PUSH IN	Wire connection cross section, finely stranded, max.	1.5 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 16
Wire cross-section, finely stranded, min. (AWG)	AWG 26	Wire cross-section, solid, max.	1.5 mm <sup>2</sup>
Wire cross-section, solid, max. (AWG)	AWG 16	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>OUT</sub> (the respective power segment)	85 mA	Current consumption from I <sub>sys</sub> , typ.	8 mA
Voltage supply	24 V DC +20 %/-15 %, via the system bus		

## System data

Diagnostic data	2 Bit	Field bus protocol	CANopen, DeviceNet, EtherCAT, EtherNet/IP, Modbus/TCP, PROFINET IRT, PROFIBUS DP-V1, POWERLINK
Galvanic isolation	500 V DC between the current paths	Interface	u-remote system bus
Module type	Analogue output 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
ECLASS 14.0	27-24-26-01		

## Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8

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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 certificate</a> <a href="#">DEMKO15ATEX1525X</a> <a href="#">CCS certificate</a> <a href="#">CCS 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>
Product Change Notification	<a href="#">Release-Notes - Firmware</a>
Software	<a href="#">Firmware – Archive firmware UR20-4AO-UI</a> <a href="#">Firmware – Current firmware UR20-4AO-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>

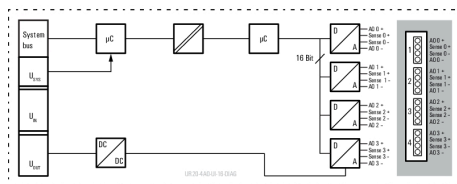
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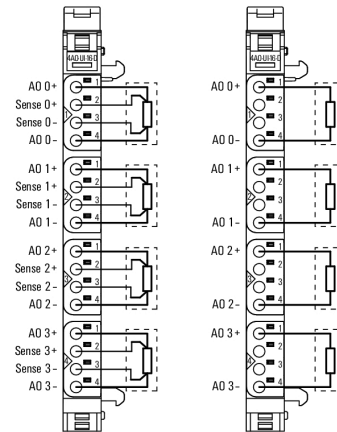
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## Drawings

## Block diagram

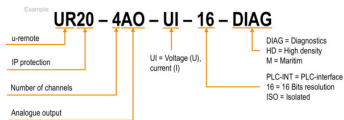


## Connection diagram



## Explanation of abbreviations

## Analogue output modules



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**Replacement parts****Electronic modules****General ordering data**

Type	UR20-EM-1315730000-SP	Version
Order No.	<a href="#">1347330000</a>	Replacement part
GTIN (EAN)	4050118152012	
Qty.	1 pc(s).	

**Plugkit****General ordering data**

Type	UR20-PK-1315730000-SP	Version
Order No.	<a href="#">1518880000</a>	Replacement part
GTIN (EAN)	4050118326512	
Qty.	5 pc(s).	

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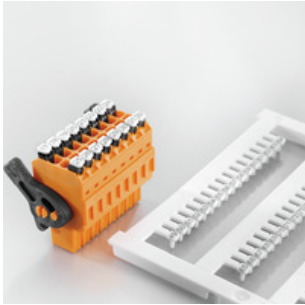
[www.weidmueller.com](http://www.weidmueller.com)**Replacement parts****Basic modules****General ordering data**

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

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**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).	

**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

## 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 2M/ST/ZN	Version
Order No.	<a href="#">0383400000</a>	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190088026	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	2 m	
Type	TS 35X7.5/LL 1M/ST/ZN	Version
Order No.	<a href="#">0514510000</a>	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190116620	Width: 1000 mm, Height: 35 mm, Depth: 7.5 mm, Slit width: 5.20
Qty.	1 m	mm, Slit length: 25.00 mm
Type	TS 35X7.5/LL 2M/ST/ZN	Version
Order No.	<a href="#">0514500000</a>	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190046019	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm, Slit width: 5.20
Qty.	40 m	mm, Slit length: 25.00 mm
Type	TS 35X7.5/LL 2M/ST/SZ	Version
Order No.	<a href="#">7915060000</a>	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4032248296279	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm, Slit width: 5.20
Qty.	2 m	mm, Slit length: 25.00 mm

## 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, Accessories, Stainless steel 1.4301, untreated, Width:
GTIN (EAN)	4032248003372	2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	2 m	

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## Accessories

## Aluminum



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

## General ordering data

Type	TS 35X7.5 2M/AL/BK	Version
Order No.	<a href="#">0330800000</a>	Terminal rail, Accessories, Aluminium, untreated, Width: 2000 mm,
GTIN (EAN)	4008190100650	Height: 35 mm, Depth: 7.5 mm
Qty.	2 m	

## 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).	

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## Accessories

## Blank



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- Terminal markers, suitable for all Weidmüller cable connectors
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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).	

## Crimping tools


**Crimping tools for wire end ferrules, with and without plastic collars**

- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

## General ordering data

Type	PZ 2.5 S	Version
Order No.	<a href="#">2903690000</a>	0.14mm <sup>2</sup> , 2.5mm <sup>2</sup> , Trapezoidal crimp
GTIN (EAN)	4099986027008	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**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-SM-ACC	Version
Order No.	<a href="#">1339920000</a>	Cover, ,
GTIN (EAN)	4050118144727	
Qty.	20 pc(s).	
Type	UR20-EBK-ACC	Version
Order No.	<a href="#">1346610000</a>	End bracket, ,
GTIN (EAN)	4050118151596	
Qty.	5 pc(s).	