

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

Klingenbergstraße 26

D-32758 Detmold

Germany

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 ± 10 V, ± 5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA with an accuracy of 0.05% of the measurement-range end value. An actuator with 2-, 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.	1315680000
Type	UR20-4AO-UI-16
GTIN (EAN)	4050118118803
Qty.	1 pc(s).
Replacement parts	1350930000 1347270000 1484070000

UR20-4AO-UI-16

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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	87 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	No	
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	min.	0 mA
	max.	185 mA
	nominal	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	nominal	100 %
	max.	100 %
	min.	0 %
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 mm²
Wire connection cross section, finely stranded, min.	0.14 mm²	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 mm²
Wire cross-section, solid, max. (AWG)	AWG 16	Wire cross-section, solid, min.	0.14 mm²
Wire cross-section, solid, min. (AWG)	AWG 26		

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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 _{OUT} (the respective power segment)	85 mA	Current consumption from I _{sys} , typ.	8 mA
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 output module	Parameter data	12 Byte
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
ETIM 10.0	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
ECLASS 15.0	27-24-26-01		

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www.weidmueller.com**Technical data****Tender specification sheets**

Long specification

Analogue output module
4AO-UI-16 4-channel analogue output module
Connection system: PUSH IN
Dimensions (HxWxD): 120 mm (with lever: 128 mm), 11.5 mm, 76 mm
Module status: display via collective message, LED at the top of the module
Channel status: indication directly at the contact point
Weight: 83 g
Module diagnosis: yes
Individual channel diagnosis: no
Operating temperature: -20°C - +60°C
Process data: 8 bytes
Parameter data: 12 bytes
Diagnostic data: 1 bit
Galvanic isolation: between field and system bus
Supply voltage: 24 VDC +25% / -15%
Internal current consumption: 8 mA
Supply current consumption: 85 mA
Accuracy: 0.05% FSR
Resolution: 16 bits
Response time: 1 ms for 4 channels
Output parameters: voltage or current
Internal resistance U: 100 kΩ
Internal resistance I: 41.2 Ω
Brand: Weidmüller
Type: UR20-4AO-UI-16

UR20-4AO-UI-16

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Technical data

Approvals

Approvals



Approvals MAMID

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

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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www.weidmueller.com**Technical data****Downloads**

Approval/Certificate/Document of Conformity	DNV certificate DEMKO15ATEX1525X KR Korean register certificate KC certificate CCS certificate CCS certificate UKCA Declaration of Conformity - EN CE Declaration of Conformity - DE
Engineering Data	CAD data – STEP CAD data – DWG CAD data – DXF
Product Change Notification	Release-Notes - Firmware
Software	Firmware – Archive firmware UR20-4AO-UI Firmware – Current firmware UR20-4AO-UI
User Documentation	Handbuch u-remote DE Manual u-remote EN
Catalogues	Catalogues in PDF-format

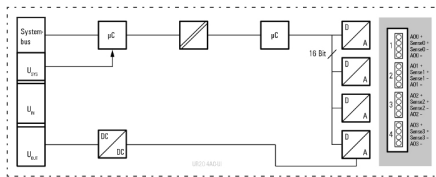
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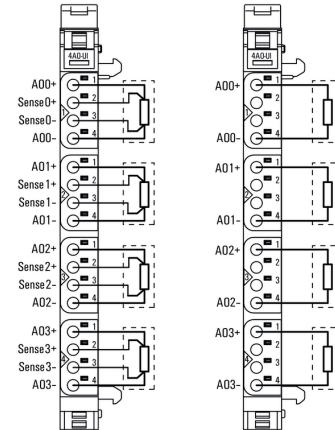
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Drawings

Block diagram

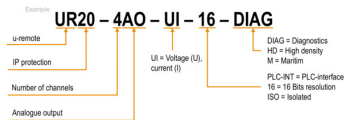


Connection diagram



Explanation of abbreviations

Analogue output modules



UR20-4AO-UI-16

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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.	1341610000	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118146059	Weidmueller, To customer specification
Qty.	100 pc(s).	

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 1M/ST/ZN	Version
Order No.	0514510000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190116620	Width: 1000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	20 m	
Type	TS 35X7.5/LL 2M/ST/SZ	Version
Order No.	7915060000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4032248296279	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	40 m	
Type	TS 35X7.5 2M/ST/ZN	Version
Order No.	0383400000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190088026	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	40 m	

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Accessories

Type	TS 35X7.5/LL 2M/ST/ZN	Version
Order No.	0514500000	Terminal rail, Accessories, Steel, galvanic zinc plated and passivated,
GTIN (EAN)	4008190046019	Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	40 m	

Blank



General ordering data

Type	PM 2.7/2.6 MC NE WS	Version
Order No.	1323710000	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).	

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.	0330800000	Terminal rail, Accessories, Aluminium, untreated, Width: 2000 mm,
GTIN (EAN)	4008190100650	Height: 35 mm, Depth: 7.5 mm
Qty.	40 m	

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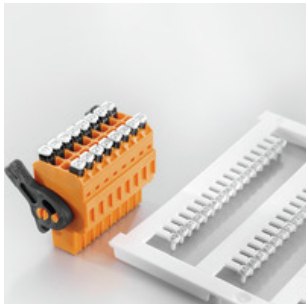
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www.weidmueller.com**Accessories****Crimping tools****Crimping tools for wire end ferrules, with and without plastic collars**

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

General ordering data

Type	PZ 2.5 S	Version
Order No.	2903690000	0. 14mm ² , 2.5mm ² , Trapezoidal crimp
GTIN (EAN)	4099986027008	
Qty.	1 pc(s).	

Custom printing**General ordering data**

Type	PM 2.7/2.6 MC SDR	Version
Order No.	1323700000	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).	

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Accessories

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.	1747350000	Terminal rail, Accessories, Stainless steel 1.4301, untreated, Width:
GTIN (EAN)	4032248003372	2000 mm, Height: 35 mm, Depth: 7.5 mm
Qty.	40 m	

Blank



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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 NE WS	Version
Order No.	1341630000	Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00
GTIN (EAN)	4050118145946	Weidmueller, white
Qty.	500 pc(s).	

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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.	1339920000	Cover, ,
GTIN (EAN)	4050118144727	
Qty.	20 pc(s).	
Type	UR20-EBK-ACC	Version
Order No.	1346610000	End bracket, ,
GTIN (EAN)	4050118151596	
Qty.	5 pc(s).	

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Replacement parts**Basic modules****General ordering data**

Type	UR20-BM-SP	Version		Packaging	
Order No.	1350930000	Replacement part, , Flange-mounted housing		Cardboard	
GTIN (EAN)	4050118402735			box	
Qty.	5 pc(s).				

Plugkit**General ordering data**

Type	UR20-PK-1315680000-SP	Version	
Order No.	1484070000	Replacement part	
GTIN (EAN)	4050118293463		
Qty.	5 pc(s).		

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www.weidmueller.com**Replacement parts****Electronic modules****General ordering data**

Type	UR20-EM-1315680000-SP	Version
Order No.	1347270000	Replacement part
GTIN (EAN)	4050118248326	
Qty.	1 pc(s).	