

## UR20-4AI-UI-16

**Weidmüller Interface GmbH & Co. KG**

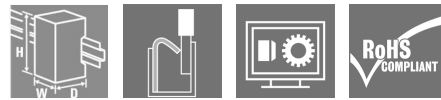
Klingenbergstraße 26

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 +/-10 V, +/-5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA with maximum accuracy. Each plug-in connector 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...20 mA or 4...20 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="#">1315620000</a>
Type	UR20-4AI-UI-16
GTIN (EAN)	4050118118551
Qty.	1 pc(s).

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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
Mounting dimension - height	128 mm	Net weight	89 g
Width	11.5 mm	Width (inches)	0.453 inch

## Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C ... +60 °C
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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## analogue inputs

Accuracy	0.1% FSR	
Conversion time	1 ms	
Individual channel diagnosis	No	
Internal resistance I	41.2 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	max.	750 mA
	nominal	750 mA
	min.	0 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), Adjustable input for current or voltage	

## 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		

## 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

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## Technical data

Restricted area	Negative expansion	X coordinate	-28 mm
		Z coordinate	0 mm
		Y coordinate	-40 mm
	Positive expansion	Z coordinate	85 mm
		Y coordinate	160 mm
	Type of restricted area	thermal	
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> (power segment of the field bus coupler), typ.	8 mA		
Current consumption from I <sub>IN</sub> (power segment of the fieldbus coupler), typ.	max.	8 mA	
	nominal	8 mA	
	min.	8 mA	
Current consumption from I <sub>IN</sub> (the respective power segment)	25 mA + sensor feed		
Current consumption from I <sub>IN</sub> (the respective power segment)	nominal	25 mA	
	min.	25 mA	
	max.	25 mA	
Reverse polarity protection	Yes		
Voltage supply	24 V DC +20 %/ -15 %, via the system bus		

## RS interface

Individual channel diagnosis	No	Module diagnosis	Yes
Short-circuit-proof	Yes		

## Serial inputs

Individual channel diagnosis	No	Module diagnosis	Yes
Short-circuit-proof	Yes		

## System data

Configuration interface	Micro USB 2.0	Diagnostic data	1 Bit
Field bus protocol	CANopen, DeviceNet, EtherCAT, EtherNet/IP, Modbus/TCP, PROFINET IRT, PROFIBUS DP-V1, POWERLINK	Galvanic isolation	DC 500 V between current paths
Interface	u-remote system bus	Module type	Analogue input module
Parameter data	14 Byte	Process data	8 Byte
Transmission speed of system bus, max.	48 Mbit		

## Classifications

ETIM 6.0	EC001597	ETIM 7.0	EC001597
eClass 9.0	27-24-26-02	eClass 9.1	27-24-26-02
eClass 10.0	27-24-26-02	eClass 11.0	27242602

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Catalogue status 20.11.2020 / We reserve the right to make technical changes.

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**Technical data**

**Tender specification sheets**

Long specification	Analogue input module 4AI-UI-16 4-channel analogue input module, positively switching Connection system: PUSH- IN Potentials on plugs: analogue input, 24 VDC and 0 V of the input path, FE 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: 88.6 g Module diagnosis: yes Individual channel diagnosis: no Reverse- polarity protection: yes Operating temperature: -20°C - +60°C Process data: 4 bits Diagnostic data: 1 bits Galvanic isolation: between field and system bus Supply voltage: 24 VDC +25% / -15% Internal current consumption: 8 mA Supply current consumption: 25 mA + sensor feed Accuracy: 0.1% FSR Resolution: 16 bits Conversion time: 1 ms Input parameters: voltage or current Internal resistance U: 100 kΩ Internal resistance I: 41.2 Ω Brand: Weidmüller Type: UR20-4AI-UI-16
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**Approvals**

Approvals



**WATEXIECEX**

ROHS	Conform
UL File Number Search	E141197

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**Technical data****Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of Conformity</a> <a href="#">Compass safe distance certificate</a> <a href="#">Lloyds Register certificate</a> <a href="#">DNV/GL certificate</a> <a href="#">ABS certificate</a> <a href="#">RINA certificate</a> <a href="#">Bureau Veritas - Type Approval Certificate</a> <a href="#">PRS (Polish Register of Shipping)</a> <a href="#">NIPPON KAIJI KYOKAI Certificate</a>
Engineering Data	<a href="#">STEP</a>
Engineering Data	<a href="#">EPLAN, WSCAD, Zuken E3.S</a>
Product Change Notification	<a href="#">Release-Notes - Firmware</a>
Software	<a href="#">Current Firmware 4AI_UI</a> <a href="#">Archiv Firmware UR20-4AI-UI</a>
User Documentation	<a href="#">MAN_U-REMOTE_DE</a> <a href="#">MAN_U-REMOTE_EN</a>

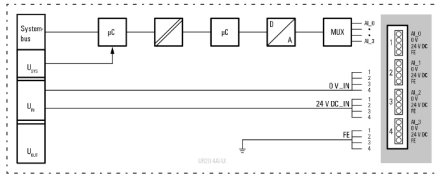
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**Drawings**

**Block diagram**



**Connection diagram**

