

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

Klingenbergstraße 26

D-32758 Detmold

Germany

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.	1506920000
Type	UR20-4AI-UI-16-HD
GTIN (EAN)	4050118315424
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	72 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	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	min.	0 mA
	nominal	750 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.	1.5 mm ²	Wire connection cross section, finely stranded, min.	0.14 mm ²
Wire cross-section, finely stranded, max. (AWG)	AWG 22	Wire cross-section, finely stranded, min. (AWG)	AWG 26
Wire cross-section, solid, max.	1.5 mm ²	Wire cross-section, solid, max. (AWG)	AWG 22
Wire cross-section, solid, min.	0.14 mm ²	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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Restricted area	Type of restricted area	thermal	
	Positive expansion	X coordinate	43 mm
		Z coordinate	85 mm
		Y coordinate	160 mm
	Negative expansion	X coordinate	-28 mm
		Z coordinate	0 mm
		Y coordinate	-40 mm
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 _{IN} (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I _{IN} (power segment of the fieldbus coupler), typ.	max.	8 mA
	nominal	8 mA
	min.	8 mA
Current consumption from I _{IN} (the respective power segment)	25 mA + sensor feed	
Current consumption from I _{IN} (the respective power segment)	min.	25 mA
	max.	25 mA
	nominal	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

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

Classifications

ETIM 6.0	EC001596	ETIM 7.0	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

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Important note

Product information

Note: Please order connector (1469340000) separately

Approvals

Approvals



ROHS

Conform

UL File Number Search

E141197

Downloads

Approval/Certificate/Document of Conformity

[Declaration of Conformity](#)

Engineering Data

[STEP](#)

Engineering Data

[EPLAN, WSCAD, Zuken E3.S](#)

Product Change Notification

[Release-Notes - Firmware](#)

Software

[Current Firmware 4AI_UI](#)[Archiv Firmware UR20-4AI-UI](#)

User Documentation

[MAN_U-REMOTE_DE](#)[MAN_U-REMOTE_EN](#)

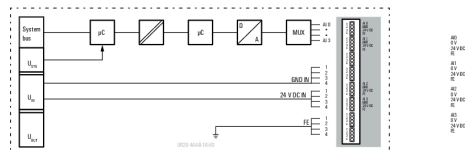
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Drawings

Block diagram



Connection diagram

