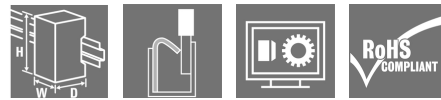


UR20-4AI-UI-16

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 +/-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. | 1315620000 |
| Type | UR20-4AI-UI-16 |
| GTIN (EAN) | 4050118118551 |
| Qty. | 1 pc(s). |
| Replacement parts | 1350930000 1347200000 1484020000 |

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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 | 89 g |

Temperatures

| | | | |
|---------------------|-------------------|-----------------------|-------------------|
| Storage temperature | -40 °C ... +85 °C | Operating temperature | -20 °C ... +60 °C |
|---------------------|-------------------|-----------------------|-------------------|

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

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 | min. | 0 mA | |
| | max. | 750 mA | |
| | nominal | 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), Adjustable input for current or voltage | | |

Connection data

| | | | |
|--|----------------------|--|----------------------|
| Type of connection | PUSH IN | 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 16 |
| 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 16 | 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 |

Creation date 07 February 2022 04:19:42 CET

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Technical data

| | | | |
|---------------------------|--|--------------|--------|
| Restricted area | Positive expansion | Y coordinate | 160 mm |
| | | X coordinate | 43 mm |
| | | Z coordinate | 85 mm |
| | Type of restricted area | thermal | |
| 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} (the respective power segment) | 25 mA + sensor feed | Current consumption from I _{sys} , 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, IEC 61162-450 |
| Galvanic isolation | 500 V DC between the 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 | EC001596 | ETIM 7.0 | EC001596 |
| ETIM 8.0 | 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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Technical data

Tender specification sheets

| | |
|--------------------|---|
| Long specification | <p>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</p> |
|--------------------|---|

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Technical data

Approvals

Approvals



| | |
|-----------------------|---------|
| ROHS | Conform |
| UL File Number Search | E141197 |

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of Conformity Compass safe distance certificate Lloyds Register certificate DNV/GL certificate ABS certificate RINA certificate Bureau Veritas - Type Approval Certificate PRS (Polish Register of Shipping) NIPPON KAIJI KYOKAI Certificate CCC certificate |
| Engineering Data | CAD data – STEP Compatibility information – Combinability of UR20 |
| Engineering Data | EPLAN, WSCAD, Zuken E3.S |
| Product Change Notification | Release-Notes - Firmware |
| Software | Firmware – Current firmware UR20-4AI-UI Firmware – Archive firmware UR20-4AI-UI |
| User Documentation | MAN U-REMOTE_DE MAN U-REMOTE_EN |
| Catalogues | Catalogues in PDF-format |

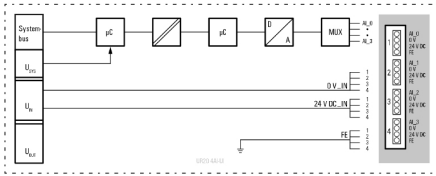
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Drawings

Block diagram



Connection diagram

