Data sheet

# UR20-4AO-UI-16-M

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image, Similar to illustration



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 (UOUT).

### General ordering data

| | |
|---|---|
| Version | Remote I/O module, IP20, Analog signals, Output, 4-channel, Current/Voltage |
| Order No. | 2453880000 |
| Type | UR20-4AO-UI-16-M |
| GTIN (EAN) | 4050118467970 |
| Qty. | 1 items |

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# Technical data

### Approvals

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

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 76 mm | Depth (inches) | 2.9921 inch |
| Height | 120 mm | Height (inches) | 4.7244 inch |
| Width | 11.5 mm | Width (inches) | 0.4528 inch |
| Mounting dimension - height | 128 mm | Net weight | 94 g |

### Temperatures

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

### 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 | |
| Product Carbon Footprint | Cradle to gate | 8,658 kg CO2 eq. |

### analogue outputs

| | | | |
|---|---|---|---|
| Short-circuit-proof | Yes | load impedance voltage | > 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA) |
| Load impedance current | <600 Ω | Repeat accuracy | <1 mV eff. |
| Accuracy | ±0,1 % FSR max., 0,05 % FSR typ. | 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) |
| Resolution | 16 Bit | Temperature coefficient | 20 ppm voltage / 31 ppm current measurement / °K |
| Number analogue outputs | 4 | Module diagnosis | Yes |
| Individual channel diagnosis | No | 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) |
| Response time | 1 ms / 4 channels | Monotonicity | Yes |
| Cross-talk between the channels in FSR | 0.001 % | Actuator connection | 2-wire (automatic detection), 4-wire |

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# Technical data

| | | | |
|---|---|---|---|
| Max. error between T min. and T max. in FSR | 220 % | Substitute values | Yes |

## Connection data

| | | | |
|---|---|---|---|
| Wire cross-section, finely stranded, max. (AWG) | AWG 16 | Wire cross-section, finely stranded, min. (AWG) | AWG 26 |
| Wire cross-section, solid, max. (AWG) | AWG 16 | Wire cross-section, solid, min. (AWG) | AWG 26 |
| Type of connection | PUSH IN | Wire cross-section, solid, max. | 1.5 mm² |
| Wire cross-section, solid, min. | 0.14 mm² | Wire connection cross section, finely stranded, max. | 1.5 mm² |
| Wire connection cross section, finely stranded, min. | 0.14 mm² | | |

## General data

| | | | |
|---|---|---|---|
| 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 | UL 94 flammability rating | V-0 |
| Test voltage | 500 V | Surge voltage category | II |
| Pollution severity | 2 | Mounting rail | TS 35 |
| Air pressure (operation) | ≥ 795 hPa (height ≤ 2000 m) as per DIN EN 61131-2 | Air humidity (transport) | 10% to 95%, non-condensing 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 | Air pressure (storage) | 1013 hPa (height 0 m) to 700 hPa (height 3000 m) as per DIN EN 61131-2 |
| 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 |
| Shock | 15 g over 11 ms, half sinus wave, acc. to IEC 60068-2-27 | | |

## Power supply

| | | | |
|---|---|---|---|
| Supply voltage | 24 V DC +30 %/ -25 %, via the system bus | Current consumption from Isys, typ. | 8 mA |
| Current consumption from IOUT (the respective power segment) | 85 mA | | |

## System data

| | | | |
|---|---|---|---|
| Module type | Analogue output module | Interface | u-remote system bus |
| Galvanic isolation | 500 V DC between the current paths | Process data | 8 Byte |
| Connection type | PUSH IN | 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 |
| Transmission speed of system bus, max. | 48 MBit/s | | |

## Classifications

| | | | |
|---|---|---|---|
| ETIM 8.0 | EC001596 | ETIM 9.0 | EC001596 |
| ETIM 10.0 | EC001596 | ECLASS 14.0 | 27-24-26-01 |
| ECLASS 15.0 | 27-24-26-01 | | |

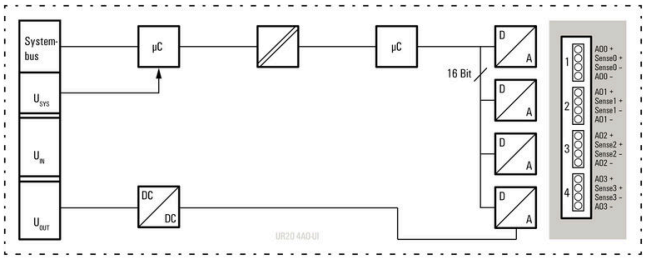
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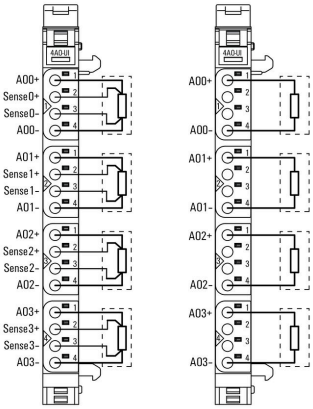
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## Drawings

### Similar to illustration




### Similar to illustration




### Explanation of abbreviations

**Analogue output modules**

