

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

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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  $\pm 10$  V,  $\pm 5$  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.  | <a href="#">2453870000</a>                                                  |
| Type       | UR20-4AO-UI-16-M-DIAG                                                       |
| GTIN (EAN) | 4050118467963                                                               |
| 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      | 94 g       |
| Width                       | 11.5 mm | Width (inches)  | 0.453 inch |

## Temperatures

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

## Environmental Product Compliance

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

## analogue outputs

|                                 |                                                                               |                                      |                                                                                               |
|---------------------------------|-------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------|
| Accuracy                        | ±0,1 % FSR max., 0,05 % FSR typ.                                              | Actuator connection                  | 2-wire (automatic detection), 4-wire                                                          |
| Cross-talk between the channels | 0.001 % FSR                                                                   | Individual channel diagnosis         | Yes                                                                                           |
| Load impedance current          | < 600 Ω                                                                       | Max. error between T min. and T max. | 220 ppm FSR                                                                                   |
| Module diagnosis                | Yes                                                                           | Monotonicity                         | Yes                                                                                           |
| Number of analogue outputs      | 4                                                                             | 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                                                                                           |
| 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 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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|                           |                                                                                                                      |                    |                     |
|---------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|
| Restricted area           | Type of restricted area                                                                                              | thermal            |                     |
|                           |                                                                                                                      | Positive expansion | X coordinate 43 mm  |
|                           |                                                                                                                      |                    | Z coordinate 85 mm  |
|                           | Negative expansion                                                                                                   |                    | Y coordinate 160 mm |
|                           |                                                                                                                      | 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 <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>OUT</sub> (the respective power segment)                | 85 mA                                    |       |
| Current consumption from I <sub>OUT</sub> (the respective power segment)                | max.                                     | 85 mA |
|                                                                                         | nominal                                  | 85 mA |
|                                                                                         | min.                                     | 85 mA |
| Voltage supply                                                                          | 24 V DC +30 %/ -25 %, via the system bus |       |

## RS interface

|                              |     |                  |     |
|------------------------------|-----|------------------|-----|
| Individual channel diagnosis | Yes | Module diagnosis | Yes |
| Short-circuit-proof          | Yes |                  |     |

## Serial inputs

|                              |     |                  |     |
|------------------------------|-----|------------------|-----|
| Individual channel diagnosis | Yes | Module diagnosis | Yes |
| Short-circuit-proof          | Yes |                  |     |

## System data

|                    |                                                                                                |                                                |                                |
|--------------------|------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------|
| 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 output module         |
| Process data       | 8 Byte                                                                                         | Transmission speed of system bus, max. 48 Mbit |                                |

## 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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## Approvals

Approvals



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

## Downloads

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of Conformity</a><br><a href="#">Compass safe distance certificate</a><br><a href="#">Lloyds Register certificate</a><br><a href="#">DNV/GL certificate</a><br><a href="#">ABS certificate</a><br><a href="#">RINA certificate</a><br><a href="#">Bureau Veritas - Type Approval Certificate</a><br><a href="#">PRS (Polish Register of Shipping)</a><br><a href="#">NIPPON KAIJI KYOKAI Certificate</a> |
| Product Change Notification                 | <a href="#">Release-Notes - Firmware</a>                                                                                                                                                                                                                                                                                                                                                                                         |
| Software                                    | <a href="#">4AO_UI-0002151-01_02_00-4</a>                                                                                                                                                                                                                                                                                                                                                                                        |
| User Documentation                          | <a href="#">MAN_U-REMOTE_DE</a><br><a href="#">MAN_U-REMOTE_EN</a>                                                                                                                                                                                                                                                                                                                                                               |

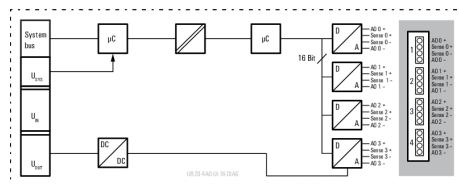
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## Drawings

## Similar to illustration



## Similar to illustration

