

**UR20-2AO-UI-16****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**2- or 4-wire connection; 16-bit resolution; 4 outputs**

The analogue output module controls up to 4 analogue actuators 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 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 ( $U_{\text{OUT}}$ ).

**General ordering data**

|                   |                                                                             |
|-------------------|-----------------------------------------------------------------------------|
| Version           | Remote I/O module, IP20, Analog signals, Output, 2-channel, Current/Voltage |
| Order No.         | <a href="#">2705630000</a>                                                  |
| Type              | UR20-2AO-UI-16                                                              |
| GTIN (EAN)        | 4064675019114                                                               |
| Qty.              | 1 pc(s).                                                                    |
| Replacement parts | <a href="#">1350930000</a> <a href="#">2777410000</a>                       |

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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 |
| Net weight | 83 g    |                 |            |

## Temperatures

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

## 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         | No                                                                                            |
| Load impedance current          | < 600 Ω                                                                   | Max. error between T min. and T max. | 0.24 % FSR                                                                                    |
| Module diagnosis                | Yes                                                                       | Monotonicity                         | Yes                                                                                           |
| Number of analogue outputs      | 2                                                                         | 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 / 2 channels                                                         | Short-circuit-proof                  | Yes                                                                                           |
| Substitute values               | Yes                                                                       | Temperature coefficient              | 30 ppm/K                                                                                      |
| 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               |                                                      |                      |

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## 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) | $\geq 795$ hPa (height $\leq 2000$ 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                                                                      | 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 $\leq f \leq 8.4$ Hz: 3.5-mm amplitude as per IEC 60068-2-6, 8.4 Hz $\leq f \leq 150$ Hz: 1 g acceleration as per IEC 60068-2-6 |

## Power supply

|                                                                   |                                                   |                                           |      |
|-------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------|------|
| Current consumption from $I_{OUT}$ (the respective power segment) | 110 mA                                            | Current consumption from $I_{SYS}$ , typ. | 8 mA |
| Voltage supply                                                    | 24 V DC $\pm 20\%$ / $-15\%$ , via the system bus |                                           |      |

## System 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, IEC 61162-450 | Galvanic isolation                     | 500 V DC between the current paths |
| Interface          | u-remote system bus                                                                                                                                 | Module type                            | Analogue output module             |
| Process data       | 4 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 | ECLASS 12.0 | 27-24-26-01 |

## Environmental Product Compliance

|            |                                      |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1                       |
| SCIP       | 82327f13-cd27-455a-ab5b-a62e1996dcf8 |

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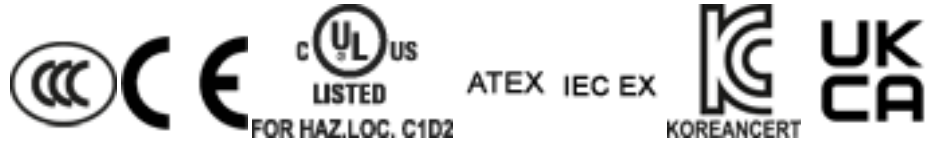
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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Approvals**

Approvals



UL File Number Search      UL Website

Certificate no. (cULusEX)      E223527

**Downloads**

|                                             |                                                                                                                                              |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">DEMKO15ATEX1525X</a><br><a href="#">UKCA Declaration of Conformity - EN</a><br><a href="#">CE Declaration of Conformity - DE</a> |
| Engineering Data                            | <a href="#">Compatibility information – Combinability of UR20</a><br><a href="#">CAD data – STEP</a>                                         |
| Software                                    | <a href="#">Firmware – Current firmware UR20-2AO-UI</a>                                                                                      |
| User Documentation                          | <a href="#">MAN_U-REMOTE_DE</a><br><a href="#">MAN_U-REMOTE_EN</a>                                                                           |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                                     |

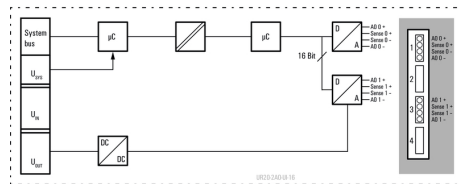
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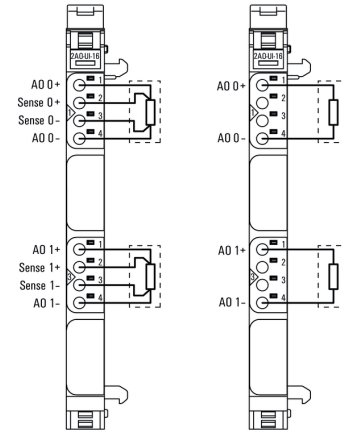
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## Drawings

## Block diagram



## Connection diagram



## Explanation of abbreviations

## Analogue output modules

