

## 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  $\pm 10\text{ V}$ ,  $\pm 5\text{ V}$ ,  $0\text{...}10\text{ V}$ ,  $0\text{...}5\text{ V}$ ,  $2\text{...}10\text{ V}$ ,  $1\text{...}5\text{ V}$ ,  $0\text{...}20\text{ mA}$  or  $4\text{...}20\text{ mA}$  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 (UOUT).

### 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 items   |

## UR20-4AO-UI-16-M-DIAG

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

www.weidmueller.com

## Technical data

### Approvals

Approvals



|                           |                            |
|---------------------------|----------------------------|
| ROHS                      | Conform                    |
| UL File Number Search     | <a href="#">UL Website</a> |
| 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           | Yes                              | 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  |

## UR20-4AO-UI-16-M-DIAG

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

www.weidmueller.com

### Technical data

|   |                   |     |
|---|-------------------|-----|
| Max. error between T min. and T max. in 220 % FSR | 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 mm <sup>2</sup> |
| Wire cross-section, solid, min.                      | 0.14 mm <sup>2</sup> | 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> |  |                     |

#### 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 I <sub>sys</sub> , typ. | 8 mA |
| Current consumption from IO <sub>UT</sub> (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 |             |             |

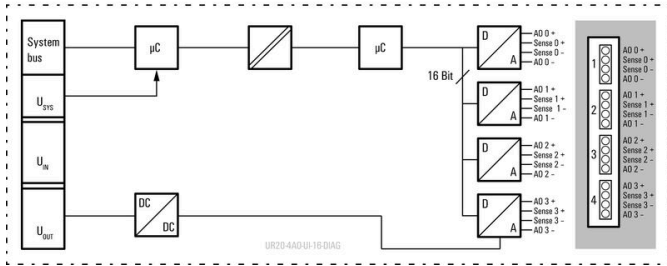
**UR20-4AO-UI-16-M-DIAG**

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

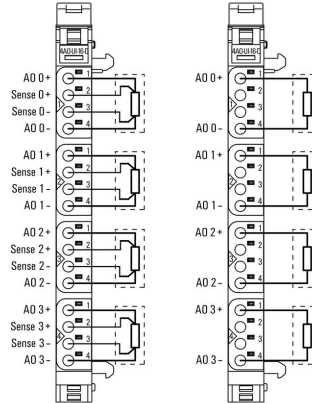
www.weidmueller.com

Drawings

Similar to illustration



Similar to illustration



Explanation of abbreviations

Analogue output modules



## UR20-4AO-UI-16-M-DIAG

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

www.weidmueller.com

## Accessories

### Accessories



#### System accessory

Discover a wide range of accessories for your u-remote system - the ideal addition to make your applications even more efficient and flexible.

### General ordering data

|            |                            |                |
|------------|----------------------------|----------------|
| Type       | UR20-EBK-ACC               | Version        |
| Order No.  | <a href="#">1346610000</a> | End bracket, , |
| GTIN (EAN) | 4050118151596              |                |
| Qty.       | 5 ST                       |                |

|            |                            |          |
|------------|----------------------------|----------|
| Type       | UR20-SM-ACC                | Version  |
| Order No.  | <a href="#">1339920000</a> | Cover, , |
| GTIN (EAN) | 4050118144727              |          |
| Qty.       | 20 ST                      |          |

### Blank



### General ordering data

|            |                            |  |
|------------|----------------------------|--|
| Type       | PM 2.7/2.6 MC NE WS        | Version  |
| Order No.  | <a href="#">1323710000</a> | OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch |
| GTIN (EAN) | 4050118126778              | in mm (P): 3.50 Weidmueller, white                               |
| Qty.       | 960 ST                     |  |

### Custom printing



## UR20-4AO-UI-16-M-DIAG

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

www.weidmueller.com

## Accessories

## General ordering data

|            |                            |   |  |
|------------|----------------------------|---|--|
| Type       | PM 2.7/2.6 MC SDR          | Version   |  |
| Order No.  | <a href="#">1323700000</a> | OMNIMATE Signal - series PM, Pusher markers, 2.7 x 2.6 mm, Pitch in mm (P): 3.50 Weidmueller, To customer specification |  |
| GTIN (EAN) | 4050118126761              |   |  |
| Qty.       | 192 ST                     |   |  |
| Type       | DEK 5/8-11.5 MC SDR        | Version   |  |
| Order No.  | <a href="#">1341610000</a> | Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00 Weidmueller, To customer specification                        |  |
| GTIN (EAN) | 4050118146059              |   |  |
| Qty.       | 100 ST                     |   |  |

## Blank



The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

- Large range of ready-to-use markers
  - Strips for fast installation
  - Terminal markers, suitable for all Weidmüller cable connectors
  - Available as blank MultiCard or with standard printing
- For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

|            |                            |  |  |
|------------|----------------------------|--|--|
| Type       | DEK 5/8-11.5 MC NE WS      | Version  |  |
| Order No.  | <a href="#">1341630000</a> | Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00 Weidmueller, white |  |
| GTIN (EAN) | 4050118145946              |  |  |
| Qty.       | 500 ST                     |  |  |

## Aluminum



Aluminum has the second best electrical conductivity after copper. One advantage is low weight, anMiscellaneous is outstanding corrosion protection.

## General ordering data

|            |                            |  |  |
|------------|----------------------------|--|--|
| Type       | TS 35X7.5 2M/AL/BK         | Version  |  |
| Order No.  | <a href="#">0330800000</a> | Terminal rail, Accessories, Aluminium, untreated, Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm |  |
| GTIN (EAN) | 4008190100650              |  |  |
| Qty.       | 40 M                       |  |  |

**UR20-4AO-UI-16-M-DIAG**

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

www.weidmueller.com

**Accessories**

**Stainless steel**



Stainless steel is a collective term for all types of steel (alloys) with a high degree of purity and corrosion resistance.

**General ordering data**

|            |                            |   |  |
|------------|----------------------------|---|--|
| Type       | TS 35X7.5 2M/CRN           | Version   |  |
| Order No.  | <a href="#">1747350000</a> | Terminal rail, Accessories, Stainless steel 1.4301, untreated, Width: |  |
| GTIN (EAN) | 4032248003372              | 2000 mm, Height: 35 mm, Depth: 7.5 mm                                 |  |
| Qty.       | 40 M                       |   |  |

**Steel**



Steel DIN rails are the most widespread on the market. Among metal DIN rails, they have the lowest shortcircuit protection, similar to stainless steel.

**General ordering data**

|            |                            |   |  |
|------------|----------------------------|---|--|
| Type       | TS 35X7.5 2M/ST/ZN         | Version   |  |
| Order No.  | <a href="#">0383400000</a> | Terminal rail, Accessories, Steel, galvanic zinc plated and passivated, |  |
| GTIN (EAN) | 4008190088026              | Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm                            |  |
| Qty.       | 40 M                       |   |  |
| Type       | TS 35X7.5/LL 2M/ST/ZN      | Version   |  |
| Order No.  | <a href="#">0514500000</a> | Terminal rail, Accessories, Steel, galvanic zinc plated and passivated, |  |
| GTIN (EAN) | 4008190046019              | Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm                            |  |
| Qty.       | 40 M                       |   |  |
| Type       | TS 35X7.5/LL 1M/ST/ZN      | Version   |  |
| Order No.  | <a href="#">0514510000</a> | Terminal rail, Accessories, Steel, galvanic zinc plated and passivated, |  |
| GTIN (EAN) | 4008190116620              | Width: 1000 mm, Height: 35 mm, Depth: 7.5 mm                            |  |
| Qty.       | 20 M                       |   |  |
| Type       | TS 35X7.5/LL 2M/ST/SZ      | Version   |  |
| Order No.  | <a href="#">7915060000</a> | Terminal rail, Accessories, Steel, galvanic zinc plated and passivated, |  |
| GTIN (EAN) | 4032248296279              | Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm                            |  |
| Qty.       | 40 M                       |   |  |

## UR20-4AO-UI-16-M-DIAG

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

www.weidmueller.com

## Accessories

### Crimping tools



Crimping tools for wire end ferrules, with and without plastic collars

- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

### General ordering data

|            |                            |         |  |
|------------|----------------------------|---------|--|
| Type       | PZ 2.5 S                   | Version |  |
| Order No.  | <a href="#">2903690000</a> |         | 0.14mm <sup>2</sup> , 2.5mm <sup>2</sup> , Trapezoidal crimp |
| GTIN (EAN) | 4099986027008              |         |  |
| Qty.       | 1 ST                       |         |  |

### Basic modules



### General ordering data

|            |                            |         |   |
|------------|----------------------------|---------|---|
| Type       | UR20-BM-SP                 | Version |   |
| Order No.  | <a href="#">1350930000</a> |         | Replacement part , Flange-mounted housing |
| GTIN (EAN) | 4050118402735              |         |   |
| Qty.       | 5 ST                       |         |   |

### Electronic modules



### General ordering data

|            |                            |         |                  |
|------------|----------------------------|---------|------------------|
| Type       | UR20-EM-2453870000-SP      | Version |                  |
| Order No.  | <a href="#">2508800000</a> |         | Replacement part |
| GTIN (EAN) | 4099987169295              |         |                  |
| Qty.       | 1 ST                       |         |                  |

## UR20-4AO-UI-16-M-DIAG

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

[www.weidmueller.com](http://www.weidmueller.com)

## Accessories

### Plugkit



### General ordering data

|            |                            |                  |  |
|------------|----------------------------|------------------|--|
| Type       | UR20-PK-2453870000-SP      | Version          |  |
| Order No.  | <a href="#">2508780000</a> | Replacement part |  |
| GTIN (EAN) | 4050118525724              |                  |  |
| Qty.       | 5 ST                       |                  |  |