

**UR20-8DIO-P-3W-DIAG****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

Digital input and output modules More performance. Simplified. u-remote. Weidmüller u-remote – our innovative remote I/O concept with IP 20 which focuses purely on user benefits: tailored planning, faster installation, safer start-up, no more downtime. For considerably improved performance and greater productivity. Reduce the size of your cabinets with u-remote, thanks to the narrowest modular design on the market and the need for fewer power-feed modules. Our u-remote technology also offers tool-free assembly, while the modular "sandwich" design and integrated web server speed up installation, both in the cabinet and machine. Status LEDs on the channel and each u-remote module enable reliable diagnosis and rapid service. This and many other amazing ideas boost the availability of your machines and systems. And ensure smooth processes too. From planning to operation. u-remote stands for "More Performance". Simplified

**General ordering data**

|                   |  |
|-------------------|--|
| Version           | Remote I/O module, IP20, Digital signals, Input, Output, 8-channel |
| Order No.         | <a href="#">2456530000</a>   |
| Type              | UR20-8DIO-P-3W-DIAG  |
| GTIN (EAN)        | 4050118471694  |
| Qty.              | 1 pc(s).   |
| Replacement parts | <a href="#">1350930000</a> <a href="#">2593320000</a>              |

## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## 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      | 83 g       |

## Temperatures

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

## digital inputs

|                              |   |                     |  |
|------------------------------|---|---------------------|--|
| Individual channel diagnosis | only auxiliary voltage output                                       | Input filter        | Input delay adjustable from 0 to 40 ms                               |
| Input type                   | P-switching, for Type 1 and Type 3 sensors as per IEC 61131-2       | Input voltage, high | > + 11 V referred to 0 V of the output power supply U <sub>OUT</sub> |
| Input voltage, low           | < + 5 V referred to 0 V of the output power supply U <sub>OUT</sub> | Module diagnosis    | Yes  |
| Number of digital inputs     | 8   | Protective circuit  | Constant current with thermal switch-off and automatic restart       |
| Reverse polarity protection  | No, Input voltage below -10 V can destroy the module                | Sensor connection   | 2-wire, 3-wire   |
| Sensor supply                | ≥ 0.3 A per connector, limited electronically                       | Short-circuit-proof | Yes  |
| Type                         | PNP switched  |                     |  |

## digital outputs

|  |  |                                 |   |
|--|--|---------------------------------|---|
| Actuator connection  | 2-wire, 3-wire   | Actuator supply                 | ≤ 0.3 A per connector; limited electronically             |
| Feedback-free  | Yes  | Individual channel diagnosis    | Yes, Overcurrent monitoring > 0.5 A, line break detection |
| Inductive load (DC13)                                      | 0.2 Hz   | Lamp load (12 W)                | 10 Hz   |
| Module diagnosis   | Yes  | Number of digital outputs       | 8   |
| Output current per channel, max.                           | 0.5 A  | Output current per module, max. | 4 A   |
| Protective circuit   | Constant current with thermal switch-off and automatic restart | Resistive load (min. 47 Ω)      | 1 kHz   |
| Response time of the protective circuit (current limiting) | < 100µs  | Sensor connection               | 2-wire, 3-wire  |
| Short-circuit-proof  | Yes  | Switch-off energy (inductive)   | < 150 mJ / channel  |
| Type   | PNP switched   |                                 |   |

## 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               |  |                      |

Creation date May 2, 2024 5:47:02 AM CEST

## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## 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  |
| 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> (the respective power segment) | 8 mA                                     | Current consumption from I <sub>OUT</sub> (the respective power segment) | 32 mA + I-Last                                       |
| Current consumption from I <sub>sys</sub> , typ.                        | 8 mA                                     | Reverse polarity protection  | No, Input voltage below -10 V can destroy the module |
| Voltage supply  | 24 V DC +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 | Galvanic isolation                     | 500 V DC between the current paths          |
| Interface           | u-remote system bus  | Module type                            | Digital input module, Digital output module |
| Possible connection | 2-wire, 3-wire   | Transmission speed of system bus, max. | 48 Mbit                                     |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC001599    | ETIM 7.0    | EC001599    |
| ETIM 8.0    | EC001599    | ETIM 9.0    | EC001599    |
| ECLASS 9.0  | 27-24-26-04 | ECLASS 9.1  | 27-24-26-04 |
| ECLASS 10.0 | 27-24-26-04 | ECLASS 11.0 | 27-24-26-04 |
| ECLASS 12.0 | 27-24-26-04 | ECLASS 13.0 | 27-24-26-04 |

## Environmental Product Compliance

|            |  |
|------------|--|
| REACH SVHC | Lead 7439-92-1 Diboron trioxide 1303-86-2 Lead monoxide (lead oxide) 1317-36-8 |
| SCIP       | b5ed5bad-cbfe-4ad3-903c-fc3d1093a415   |

## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Approvals

Approvals



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

## Downloads

|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">KC certificate</a><br><a href="#">Lloyds Register certificate</a><br><a href="#">DNV/GL certificate</a><br><a href="#">RINA certificate</a><br><a href="#">DEMKO15ATEX1525X</a><br><a href="#">CCC certificate</a><br><a href="#">UKCA Declaration of Conformity - EN</a><br><a href="#">CE Declaration of Conformity - DE</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a><br><a href="#">Compatibility information – Combinability of UR20</a>   |
| Product Change Notification                 | <a href="#">Release-Notes - Firmware</a>   |
| Software                                    | <a href="#">Firmware – Current firmware UR20-8DIO-P-3W-DIAG</a><br><a href="#">Firmware – Archive firmware UR20-8DIO-P-3W-DIAG</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>   |

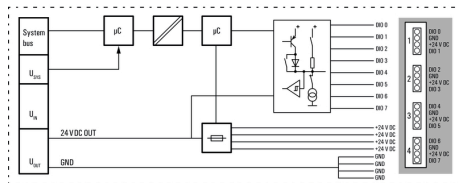
# UR20-8DIO-P-3W-DIAG

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

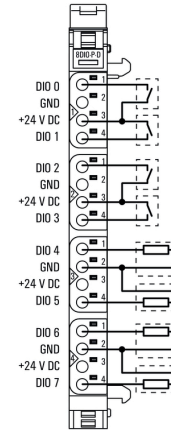
www.weidmueller.com

## Drawings

### Block diagram

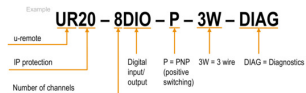


### Connection diagram



### Explanation of abbreviations

#### Digital input and output modules



## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

## Custom printing



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 SDR        | Version   |
| Order No.  | <a href="#">1341610000</a> | Dekafix, Terminal marker, 5 x 8 mm, Pitch in mm (P): 8.00 |
| GTIN (EAN) | 4050118146059              | Weidmueller, To customer specification                    |
| Qty.       | 100 pc(s).                 |   |

## Custom printing



## 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 |
| GTIN (EAN) | 4050118126761              | mm (P): 3.50 Weidmueller, To customer specification                 |
| Qty.       | 192 pc(s).                 |   |

## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

## 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/LL 2M/ST/SZ      | Version  |
| Order No.  | <a href="#">7915060000</a> | Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width: |
| GTIN (EAN) | 4032248296279              | 5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and        |
| Qty.       | 2 m                        | passivated   |
| Type       | TS 35X7.5/LL 2M/ST/ZN      | Version  |
| Order No.  | <a href="#">0514500000</a> | Terminal rail, with slot, Accessories, 35 x 7.5 x 2000 mm, Slit width: |
| GTIN (EAN) | 4008190046019              | 5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and        |
| Qty.       | 2 m                        | passivated   |
| Type       | TS 35X7.5 2M/ST/ZN         | Version  |
| Order No.  | <a href="#">0383400000</a> | Terminal rail, without slot, Accessories, 35 x 7.5 x 2000 mm, Steel,   |
| GTIN (EAN) | 4008190088026              | galvanic zinc plated and passivated                                    |
| Qty.       | 2 m                        |  |
| Type       | TS 35X7.5/LL 1M/ST/ZN      | Version  |
| Order No.  | <a href="#">0514510000</a> | Terminal rail, with slot, Accessories, 35 x 7.5 x 1000 mm, Slit width: |
| GTIN (EAN) | 4008190116620              | 5.20 mm, Slit length: 25.00 mm, Steel, galvanic zinc plated and        |
| Qty.       | 1 m                        | passivated   |

## 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, without slot, Accessories, 35 x 7.5 x 2000 mm, |
| GTIN (EAN) | 4008190100650              | Aluminium, untreated  |
| Qty.       | 2 m                        |   |

**UR20-8DIO-P-3W-DIAG****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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 pc(s).                   |                |
| Type       | UR20-SM-ACC                | Version        |
| Order No.  | <a href="#">1339920000</a> | Cover, ,       |
| GTIN (EAN) | 4050118144727              |                |
| Qty.       | 20 pc(s).                  |                |

**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 in |
| GTIN (EAN) | 4050118126778              | mm (P): 3.50 Weidmueller, white                                     |
| Qty.       | 960 pc(s).                 |   |



## UR20-8DIO-P-3W-DIAG

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

## 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 |
| GTIN (EAN) | 4050118145946              | Weidmueller, white  |
| Qty.       | 500 pc(s).                 |   |

## 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, without slot, Accessories, 35 x 7.5 x 2000 mm,  |
| GTIN (EAN) | 4032248003372              | Stainless steel, rust-proof, Stainless steel 1.4301, untreated |
| Qty.       | 2 m                        |  |

**UR20-8DIO-P-3W-DIAG**

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

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

**Replacement parts****Plugkit****General ordering data**

|            |                            |                  |
|------------|----------------------------|------------------|
| Type       | UR20-PK-2456530000-SP      | Version          |
| Order No.  | <a href="#">2593320000</a> | Replacement part |
| GTIN (EAN) | 4050118605419              |                  |
| Qty.       | 5 pc(s).                   |                  |

**Basic modules****General ordering data**

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