

**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 pièce(s)                                                         |
| Replacement parts | <a href="#">1350930000</a> <a href="#">2593320000</a>              |

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## Caractéristiques techniques

## 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               |                                                      |                      |

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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)  | ≥ 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 |
| ECLASS 14.0 | 27-24-26-04 |             |             |

## Environmental Product Compliance

|                                      |                                                                   |
|--------------------------------------|-------------------------------------------------------------------|
| RoHS Compliance Status               | Compliant with exemption                                          |
| RoHS Exemption (if applicable/known) | 7a, 7cl                                                           |
| REACH SVHC                           | Lead 7439-92-1 Diboron trioxide 1303-86-2 Lead monoxide 1317-36-8 |
| SCIP                                 | b5ed5bad-cbfe-4ad3-903c-fc3d1093a415                              |

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## Caractéristiques techniques

## Approvals

Approvals



|                           |            |
|---------------------------|------------|
| ROHS                      | Conform    |
| 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 certificate</a><br><a href="#">RINA certificate</a><br><a href="#">DEMKO15ATEX1525X</a><br><a href="#">CCC certificate</a><br><a href="#">CCS certificate</a><br><a href="#">CCS 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="#">Handbuch u-remote DE</a><br><a href="#">Manual u-remote EN</a>                                                                                                                                                                                                                                                                                                                                    |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                                                                                                                                                                                                                                                                                                      |

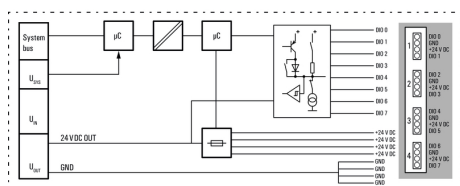
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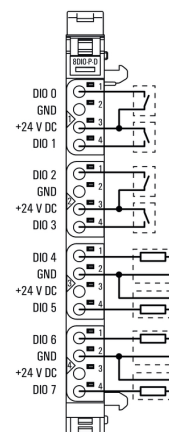
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## Dessins

### Block diagram



### Connection diagram



### Explanation of abbreviations

#### Digital input and output modules

