

## UR20-16DO-N-PLC-INT

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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

### Product image



### Digital output modules P- or N-switching; short-circuit-proof; up to 3-wire + FE

Digital output modules are available in the following variants: 4 DO, 8 DO with 2- and 3-wire technology, 16 DO with or without PLC interface connection. They are mainly used for the incorporation of decentralised actuators. All outputs are designed for DC-13 actuators acc. to DIN EN 60947-5-1 and IEC 61131-2 specifications. As with the digital input modules, frequencies of up to 1 kHz are possible. Protection of the outputs ensures maximum system safety. This consists of an automatic restart following a short-circuit. Clearly visible LEDs signal the status of the entire module as well as the status of individual channels.

In addition to the standard applications of the digital output modules, the range also includes special variants such as the 4RO-SSR module for rapidly switching applications. Fitted with solid state technology, 0.5 A is available here to each output. Furthermore, there is also the 4RO-CO relay module for power-intensive applications. It is equipped with four CO contacts, optimised for a switching voltage of 255 V UC and designed for a switching current of 5 A.

The module electronics supply the connected actuators from the output current path ( $U_{OUT}$ ).

### General ordering data

|                   |  |
|-------------------|--|
| Version           | Remote I/O module, IP20, Digital signals, Output, PLC                            |
| Order No.         | <a href="#">1315450000</a>   |
| Type              | UR20-16DO-N-PLC-INT  |
| GTIN (EAN)        | 4050118118452  |
| Qty.              | 1 pc(s).   |
| Replacement parts | <a href="#">1350930000</a> <a href="#">1346990000</a> <a href="#">2000540000</a> |

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Catalogue status 09.09.2022 / We reserve the right to make technical changes.

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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 |
| Mounting dimension - height | 128 mm  | Net weight      | 87 g       |

## Temperatures

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

## Environmental Product Compliance

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

## digital outputs

|  |   |   |  |
|--|---|---|--|
| Actuator connection  | PLC-Interface                           |   |  |
| Feedback-free  | Yes                                     |   |  |
| Individual channel diagnosis                               | No                                      |   |  |
| Inductive load (DC 13)                                     | 0.2 Hz                                  |   |  |
| Lamp load (12 W)   | 10 Hz                                   |   |  |
| Max. response time, high                                   | 100 µs                                  |   |  |
| Max. response time, low                                    | 250 µs                                  |   |  |
| Module diagnosis   | Yes                                     |   |  |
| Number of digital outputs                                  | 16                                      |   |  |
| Output current as per application                          | max.                                    | 0 |  |
|  | nominal                                 | 0 |  |
|  | min.                                    | 0 |  |
| Output current per channel, max.                           | 500 mA                                  |   |  |
| Output current per module, max.                            | 8,000 mA                                |   |  |
| Output current per module, remark                          | 2 A with supply via a flat ribbon cable |   |  |
| Resistive load (min. 47 Ω)                                 | 1 kHz                                   |   |  |
| Response time of the protective circuit (current limiting) | < 100µs                                 |   |  |
| Short-circuit-proof  | Yes (thermal cut-out)                   |   |  |
| Switch-off energy (inductive)                              | < 150 mJ / channel                      |   |  |
| Type   | Lamp load, Ohmic, Inductive             |   |  |

## Connection data

|  |                                |  |                      |
|--|--------------------------------|--|----------------------|
| I/O plug-in connector                                | 20-pin ribbon cable connection | 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 |

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|                           |  |                    |              |
|---------------------------|--|--------------------|--------------|
| 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  |                    |              |
| Restricted area           | Type of restricted area  | thermal            |              |
|                           |  | Negative expansion | Y coordinate |
|                           |  | Z coordinate       | 0 mm         |
|                           |  | X coordinate       | -28 mm       |
|                           | Positive expansion   | Z coordinate       | 85 mm        |
|                           |  | X coordinate       | 43 mm        |
| Y coordinate              |  | 160 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>OUT</sub> (the respective power segment) | 30 mA                                    | Current consumption from I <sub>sys</sub> , typ. | 8 mA |
| Voltage supply   | 24 V DC +20 %/ -15 %, via the system bus |  |      |

## System data

|                    |   |  |                                    |
|--------------------|---|--|------------------------------------|
| Connection type    | PUSH IN   | Diagnostic data                        | 1 Bit                              |
| 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                     |                                    |
| Interface          | u-remote system bus   | Module type                            | Special module                     |
| Process data       | 2 Byte  | Transmission speed of system bus, max. | 48 Mbit                            |
|                    |   |  | 500 V DC between the current paths |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC001599    | ETIM 7.0    | EC001599    |
| ETIM 8.0    | 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 |

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## 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="#">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><br><a href="#">DEMKO 15ATEX1525X</a><br><a href="#">CCC certificate</a><br><a href="#">UKCA Declaration of Conformity - EN</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a><br><a href="#">Compatibility information – Combinability of UR20</a>  |
| Engineering Data                            | <a href="#">EPLAN, WSCAD, Zuken E3.S</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>  |

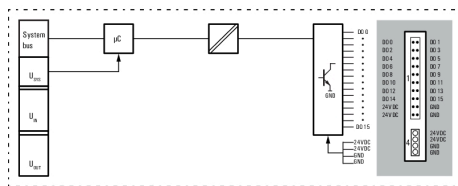
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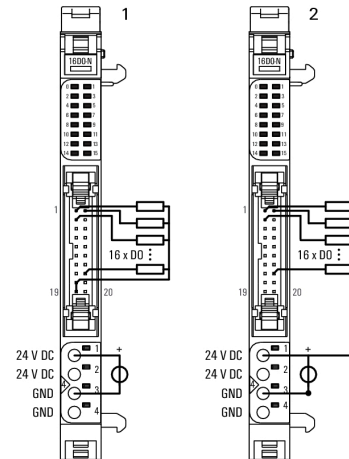
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**Drawings**

**Block diagram**



**Connection diagram**



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