

UR20-8DO-N

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



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 (UOUT).

General ordering data

| | |
|------------|---|
| Version | Remote I/O module, IP20, Digital signals, Output, 8-channel |
| Order No. | 1315430000 |
| Type | UR20-8DO-N |
| GTIN (EAN) | 4050118118704 |
| Qty. | 1 items |

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Technical data

Approvals

Approvals



| | |
|---------------------------|----------------------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| 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 | 86.4 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 | 8,704 kg CO2 eq. | |

digital outputs

| | | | |
|-----------------------------------|-----------------------------|---------|--|
| Short-circuit-proof | Yes | | |
| Leakage current | <0.1 mA | | |
| Number of digital outputs | 8 | | |
| Type | Lamp load, Ohmic, Inductive | | |
| Feedback-free | Yes | | |
| Max. response time, low | 250 µs | | |
| Resistive load (min. 47 Ω) | 1 kHz | | |
| Output current per channel, max. | 500 mA | | |
| Simultaneity factor | min. | 0 % | |
| | nominal | 100 % | |
| | max. | 100 % | |
| Module diagnosis | Yes | | |
| Individual channel diagnosis | No | | |
| Output current as per application | min. | 0 mA | |
| | nominal | 4000 mA | |
| | max. | 4000 mA | |
| Max. response time, high | 100 µs | | |

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| Switch-off energy (inductive) | <150 mJ / channel |
| Response time of the protective circuit (current limiting) | <100µs |
| Actuator connection | 2-wire |
| Lamp load (12 W) | 10 Hz |
| Inductive load (DC13) | 2 Hz |
| Output current per module, max. | 4000 mA |

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 ² |
| Wire cross-section, solid, min. | 0.14 mm ² | Wire connection cross section, finely stranded, max. | 1.5 mm ² |
| Wire connection cross section, finely stranded, min. | 0.14 mm ² | | |

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 +20 %/ -15 %, via the system bus | Current consumption from I _{sys} , typ. | 8 mA |
| Current consumption from IO _{UT} (the respective power segment) | 15 mA + load | | |

System data

| | | | |
|--|------------------------------------|---------------------|---------------------|
| Module type | Digital output module | Interface | u-remote system bus |
| Galvanic isolation | 500 V DC between the current paths | Possible connection | 2-wire |
| Transmission speed of system bus, max. | 48 MBit/s | | |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC001599 | ETIM 9.0 | EC001599 |
| ETIM 10.0 | EC001599 | ECLASS 14.0 | 27-24-26-04 |
| ECLASS 15.0 | 27-24-26-04 | | |

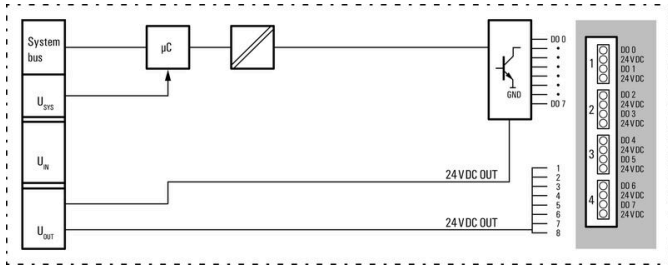
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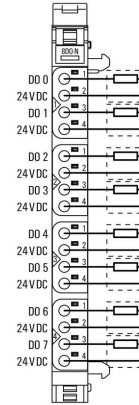
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Drawings

Block diagram



Connection diagram



Explanation of abbreviations

Digital output modules



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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. | 1346610000 | End bracket, , |
| GTIN (EAN) | 4050118151596 | |
| Qty. | 5 ST | |

| | | |
|------------|----------------------------|----------|
| Type | UR20-SM-ACC | Version |
| Order No. | 1339920000 | Cover, , |
| GTIN (EAN) | 4050118144727 | |
| Qty. | 20 ST | |

Blank



General ordering data

| | | |
|------------|----------------------------|--|
| Type | PM 2.7/2.6 MC NE WS | Version |
| Order No. | 1323710000 | 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



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Accessories

General ordering data

| | | | |
|------------|----------------------------|---|--|
| Type | PM 2.7/2.6 MC SDR | Version | |
| Order No. | 1323700000 | 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. | 1341610000 | 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. | 1341630000 | 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. | 0330800000 | Terminal rail, Accessories, Aluminium, untreated, Width: 2000 mm, Height: 35 mm, Depth: 7.5 mm | |
| GTIN (EAN) | 4008190100650 | | |
| Qty. | 40 M | | |

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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. | 1747350000 | 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. | 0383400000 | 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. | 0514500000 | 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. | 0514510000 | 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. | 7915060000 | 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 | | |

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Accessories

Crimping tools



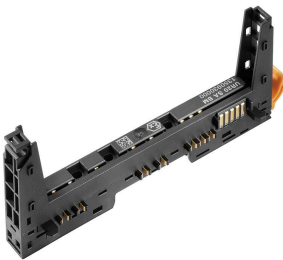
Crimping tools for wire end ferrules, with and without plastic collars

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

General ordering data

| | | | |
|------------|----------------------------|---------|--|
| Type | PZ 2.5 S | Version | |
| Order No. | 2903690000 | | 0.14mm ² , 2.5mm ² , Trapezoidal crimp |
| GTIN (EAN) | 4099986027008 | | |
| Qty. | 1 ST | | |

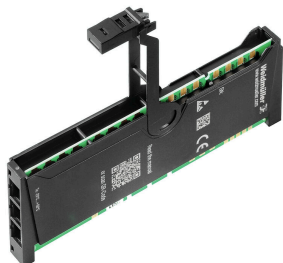
Basic modules



General ordering data

| | | | |
|------------|----------------------------|---------|---|
| Type | UR20-BM-SP | Version | |
| Order No. | 1350930000 | | Replacement part , Flange-mounted housing |
| GTIN (EAN) | 4050118402735 | | |
| Qty. | 5 ST | | |

Electronic modules



General ordering data

| | | | |
|------------|----------------------------|---------|------------------|
| Type | UR20-EM-1315430000-SP | Version | |
| Order No. | 1346970000 | | Replacement part |
| GTIN (EAN) | 4050118151640 | | |
| Qty. | 1 ST | | |

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Accessories

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Plugkit



General ordering data

| | | | |
|------------|----------------------------|------------------|--|
| Type | UR20-PK-1315430000-SP | Version | |
| Order No. | 1984770000 | Replacement part | |
| GTIN (EAN) | 4050118398700 | | |
| Qty. | 5 ST | | |