

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

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

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



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 items

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## 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	83 g

### Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C...60 °C
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### 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		
Product Carbon Footprint	Cradle to gate	8,704 kg CO2 eq.	

### digital inputs

Short-circuit-proof	Yes	Reverse polarity protection	No, Input voltage below -10 V can destroy the module
Number of digital inputs	8	Type	PNP switched
Sensor supply	≥ 0.3 A per connector, limited electronically	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	Protective circuit	Constant current with thermal switch-off and automatic restart
Input voltage, high	> + 11 V referred to 0 V of the output power supply UOUT	Module diagnosis	Yes
Input voltage, low	<+ 5 V referred to 0 V of the output power supply UOUT	Individual channel diagnosis	only auxiliary voltage output
Sensor connection	2-wire, 3-wire		

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## Technical data

## digital outputs

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

## 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

Reverse polarity protection	No, Input voltage below -10 V can destroy the module	Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption from IIN (the respective power segment)	8 mA	Current consumption from I <sub>sys</sub> , typ.	8 mA
Current consumption from IOUT (the respective power segment)	32 mA + I-Last		

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## Technical data

### System data

Module type	Digital input module, Digital output module	Interface	u-remote system bus
Galvanic isolation	500 V DC between the current paths	Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, CANopen, DeviceNet, POWERLINK, CC-Link, CC-Link IE TSN
Possible connection	2-wire, 3-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		

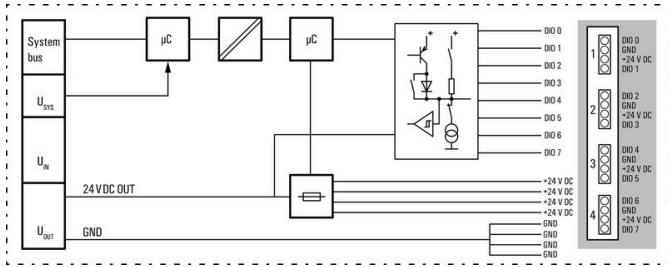
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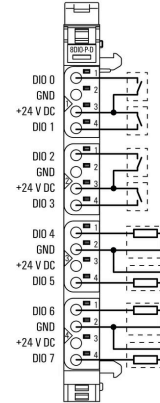
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**Drawings**

**Block diagram**

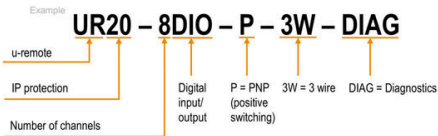


**Connection diagram**



**Explanation of abbreviations**

**Digital input and 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.	<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



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## 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		

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**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		

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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.	<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-2456530000-SP	Version	
Order No.	<a href="#">2593330000</a>		Replacement part
GTIN (EAN)	4050118605426		
Qty.	1 ST		

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## Accessories

### Plugkit



### General ordering data

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