UR20-16DI-P

Weidmüller

Product image

Digital input modules P- or N-switching; Reverse polarity protection, up to 3-wire +FE

Digital input modules from Weidmüller are available in different versions and are used primarily to receive binary control signals from sensors, transmitters, switches or proximity switches. Thanks to their flexible design, they will satisfy your need for well co-ordinated project planning with reserve potential.

All modules are available with 4, 8 or 16 inputs and comply fully with IEC 61131-2. The digital input modules are available as P- or N-switching variant. The digital inputs are for Type 1 and Type 3 sensors in accordance with the standard. With a maximum input frequency of up to 1 kHz, they are used in many different applications. The variant for PLC interface units enables rapid cabling to the proven Weidmüller interface sub-assemblies using system cables. This ensures rapid incorporation into your overall system. Two modules with a timestamp function are able to capture binary signals and to provide a timestamp in 1 µs resolution. Further solutions are possible with the module UR20-4DI-2W-230V-AC which works with accurant current up to 230V as an input signal.

The module electronics supply the connected sensors from the input current path (UIN).

General ordering data

Version	Remote I/O module, IP20, Digital signals, Input, 16-channel
Order No.	1315200000
Type	UR20-16DI-P
GTIN (EAN)	4050118118346
Qty.	1 ST

UR20-16DI-P

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	44 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

digital inputs

Reverse polarity protection	Yes	Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2	Sensor supply	No
Input filter	3 ms	Input voltage, high	> 11 V
Module diagnosis	Yes	Input voltage, low	<5 V
Individual channel diagnosis	No	Sensor connection	Single-conductor

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 mm²
Wire cross-section, solid, min.	0.14 mm²	Wire connection cross section, finely stranded, max.	1.5 mm²
Wire connection cross section, finely stranded, min.	0.14 mm²		

Creation date 05.07.2025 07:35:14 MEZ

Catalogue status / Drawings

UR20-16DI-P

Technical data

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	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	Yes	Voltage supply	24 V DC +20 %/ -15 %, via the system bus
Current consumption from IIN (the respective power segment)	<25 mA	Current consumption from Isys, typ.	8 mA

System data

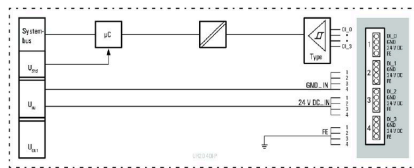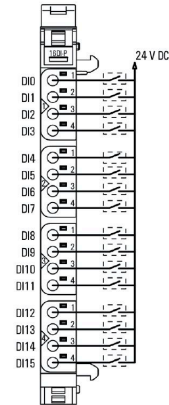|			
Module type	Digital input module	Interface	u-remote system bus
Galvanic isolation	500 V DC between the current paths	Process data	2 Byte
Field bus protocol	PROFINET IRT, PROFINET RT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, CANopen, DeviceNet, POWERLINK, CC-Link, CC-Link IE TSN, IEC 61162-450	Possible connection	Single-conductor
Transmission speed of system bus, max.	48 Mbit	Diagnostic data	1 Bit

Classifications

ETIM 6.0	EC001599	ETIM 7.0	EC001599
ETIM 8.0	EC001599	ETIM 9.0	EC001599
ETIM 10.0	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
ECLASS 15.0	27-24-26-04		

Drawings

Block diagram

Connection diagram

Explanation of abbreviations

dules
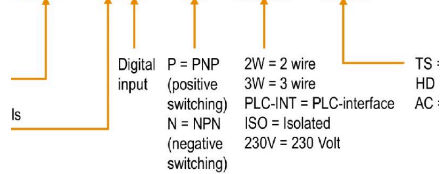
		P = PNP (positive switching)	2W = 2 wire	TS
	Digital input		3W = 3 wire	HD
			PLC-INT = PLC-interface	AC
ls		N = NPN (negative switching)	ISO = Isolated	
			230V = 230 Volt	

UR20-16DI-P

Accessories

Accessories
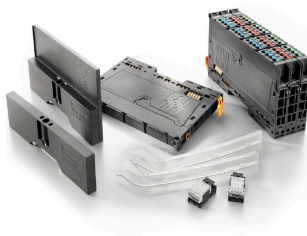
System accessory
Discover a wide range of accessories for your u-remote system - the ideal addition to make your applications even more efficient and flexible.

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
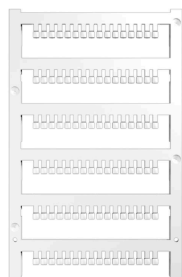
General ordering data

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
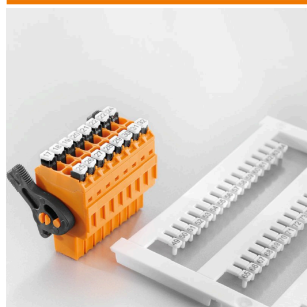
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Accessories

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	
GTIN (EAN)	4050118126761	in mm (P): 3.50 Weidmueller, To customer specification	
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	
GTIN (EAN)	4050118146059	Weidmueller, To customer specification	
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	
GTIN (EAN)	4050118145946	Weidmueller, white	
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,	
GTIN (EAN)	4008190100650	Height: 35 mm, Depth: 7.5 mm	
Qty.	40 M		

Creation date 05.07.2025 07:35:14 MEZ

UR20-16DI-P

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.	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		

UR20-16DI-P

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	0.14mm², 2.5mm², 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
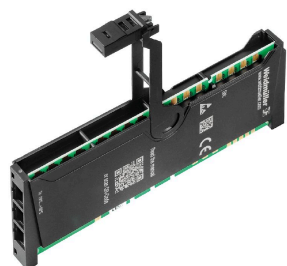
General ordering data

Type	UR20-EM-1315200000-SP	Version	
Order No.	1346680000	Replacement part	
GTIN (EAN)	4050118248487		
Qty.	1 ST		

Creation date 05.07.2025 07:35:14 MEZ

UR20-16DI-P

Accessories

Plugkit
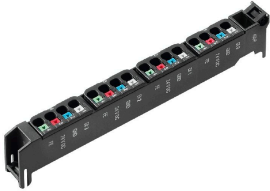
General ordering data

Type	UR20-PK-1315200000-SP	Version	
Order No.	1346400000	Replacement part, Plug-in connector, ,	
GTIN (EAN)	4050118151428		
Qty.	5 ST		