

## UR20-16DI-N

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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

### 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  $\mu$ s resolution. Further solutions are possible with

the module UR20-4DI-2W-230V-AC which works with accurate current up to 230V as an input signal.

The module electronics supply the connected sensors from the input current path ( $U_{IN}$ ).

### General ordering data

Version	Remote I/O module, IP20, Digital signals, Input, 16-channel
Order No.	<a href="#">1315390000</a>
Type	UR20-16DI-N
GTIN (EAN)	4050118118582
Qty.	1 pc(s).
Replacement parts	<a href="#">1350930000</a> <a href="#">1346920000</a> <a href="#">1559790000</a>

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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	86 g

## Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C ... +60 °C
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1	SCIP	82327f13-cd27-455a-ab5b-a62e1996dcf8
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## digital inputs

Individual channel diagnosis	No	Input filter	3 ms
Input voltage, high	< - 11 V referred to +24 V of the input power supply $U_{IN}$	Input voltage, low	> - 5 V referred to +24 V of the input power supply $U_{IN}$
Module diagnosis	Yes	Number of digital inputs	16
Reverse polarity protection	Yes	Sensor connection	Single-conductor
Sensor supply	No	Type	Types 1 and 3, EN 61131-2

## 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		

## 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		
Restricted area	Type of restricted area	Negative expansion	thermal
			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		

Creation date September 16, 2022 3:21:21 AM CEST

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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)	< 15 mA	Current consumption from I <sub>sys</sub> , typ.	8 mA
Reverse polarity protection	Yes	Voltage supply	24 V DC +20 %/ -15 %, via the system bus

### System data

Diagnostic 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, IEC 61162-450
	1 Byte		
Galvanic isolation	500 V DC between the current paths	Interface	u-remote system bus
Module type	Digital input module	Possible connection	Single-conductor
Transmission speed of system bus, max. 48 Mbit			

### 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

### Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

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Approval/Certificate/Document of Conformity	<a href="#">Declaration of Conformity</a> <a href="#">Compass safe distance certificate</a> <a href="#">Lloyds Register certificate</a> <a href="#">DNV/GL certificate</a> <a href="#">ABS certificate</a> <a href="#">RINA certificate</a> <a href="#">Bureau Veritas - Type Approval Certificate</a> <a href="#">PRS (Polish Register of Shipping)</a> <a href="#">NIPPON KAIJI KYOKAI Certificate</a> <a href="#">DEMKO 15ATEX1525X</a> <a href="#">CCC certificate</a> <a href="#">UKCA Declaration of Conformity - EN</a>
Engineering Data	<a href="#">CAD data – STEP</a> <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> <a href="#">MAN_U-REMOTE_EN</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

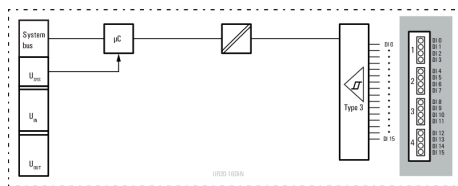
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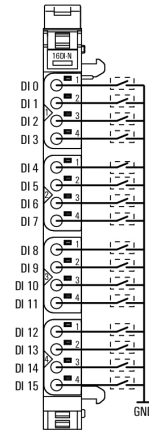
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**Drawings**

**Block diagram**



**Connection diagram**



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