Data sheet

UR20-4DI-P-TS

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

www.weidmueller.com



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, 4-channel, Digital signals, Input
Order No.	1460150000
Type	UR20-4DI-P-TS
GTIN (EAN)	4050118266306
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	87 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	8,319 kg CO2 eq.

digital inputs

Reverse polarity protection	Yes	
Number of digital inputs	4	
Type	Types 1 and 3, EN 61131-2	
Hysteresis	> 1 V	
Sensor supply	Yes	
Input filter	configurable	
Sensor supply	min.	0 mA
	nominal	750 mA
	max.	8000 mA
Input voltage, high	> 11 V	
Module diagnosis	Yes	
Input voltage, low	<5 V	
Individual channel diagnosis	No	
Time stamp resolution	1 µs	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Time stamp data width	16 Bit	

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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
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

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	Yes	Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption from IIN (the respective power segment)	10 mA + load	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	Field bus protocol	PROFINET IRT, PROFIBUS DP-V1, EtherCAT, Modbus/TCP, EtherNet/IP, POWERLINK
Possible connection	2-wire, 3-wire, 3 conductor FES, Single-conductor	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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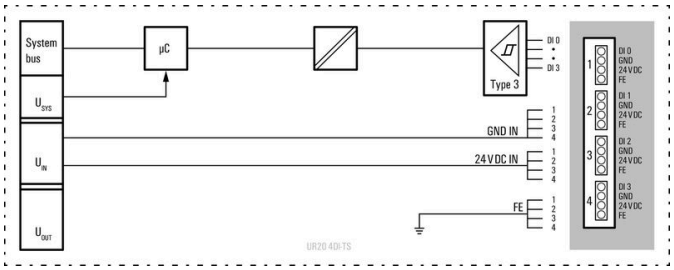
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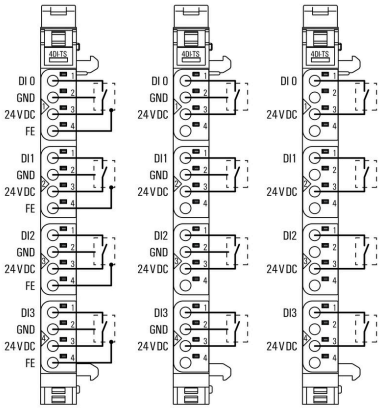
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Drawings

Block diagram

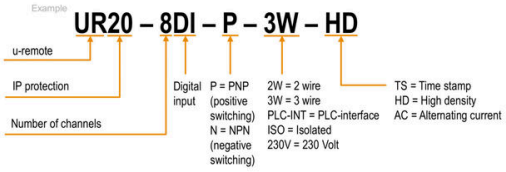


Connection diagram



Explanation of abbreviations

Digital input modules



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