UR20-8AI-RTD-DIAG-2W

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

www.weidmueller.com

Product image

Available for TC and RTD; 16-bit resolution; 50/60 Hz suppression

The involvement of thermocouple and resistance-temperature sensors is indispensable for a variety of applications. Weidmüller's 4-channel input modules are suited for all common thermocouple elements and resistance temperature sensors. With an accuracy of 0.2% of the measurement-range end value and a resolution of 16 bit, cable break and values above or below the limit value are detected by means of individual channel diagnostics. Additional features such as an automatic 50 Hz to 60 Hz suppression or external as well as internal cold-junction compensation, as available with the RTD module, round off the scope of function.

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

General ordering data

Version	Remote I/O module, IP20, Analog signals, Temperature, RTD
Order No.	2555940000
Type	UR20-8AI-RTD-DIAG-2W
GTIN (EAN)	4050118566062
Qty.	1 pc(s).

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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
Mounting dimension - height	128 mm	Net weight	91 g
Width	11.5 mm	Width (inches)	0.453 inch

Temperatures

Storage temperature	-40 °C ... +85 °C	Operating temperature	-20 °C ... +60 °C

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

analogue inputs

Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10	Conversion time	80 ms
Individual channel diagnosis	Yes	Measured temperature value, max.	850 °C
Measured temperature value, min.	-200 °C	Module diagnosis	Yes
Number of analogue inputs	8	Resolution	16 Bit
Reverse polarity protection	Yes	Sensor connection	2-wire
Temperature coefficient	≤ 50 ppm/K	Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ

Connection data

Type of connection	PUSH IN	Wire connection cross section, finely stranded, max.	1.5 mm²
Wire connection cross section, finely stranded, min.	0.14 mm²	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 mm²
Wire cross-section, solid, max. (AWG)	AWG 16	Wire cross-section, solid, min.	0.14 mm²
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

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Restricted area	Positive expansion	Y coordinate	160 mm
		X coordinate	43 mm
		Z coordinate	85 mm
	Negative expansion	Y coordinate	-40 mm
		Z coordinate	0 mm
		X coordinate	-28 mm
	Type of restricted area	thermal	
Shock	15 g over 11 ms, half sinus wave, acc. to IEC 60068-2-27		
Surge voltage category	II		
Test voltage	500 V		
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_{IN} (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I_{IN} (power segment of the fieldbus coupler), typ.	min.	8 mA
	max.	8 mA
	nominal	8 mA
Current consumption from I_{IN} (the respective power segment)	< 20 mA	
Current consumption from I_{IN} (the respective power segment)	min.	20 mA
	max.	20 mA
	nominal	20 mA
Reverse polarity protection	Yes	
Voltage supply	24 V DC +20 %/ -15 %, via the system bus	

System 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	Galvanic isolation	500 V DC between the current paths
Interface	u-remote system bus	Module type	Temperature module
Transmission speed of system bus, max.	48 Mbit		

Classifications

ETIM 6.0	EC001596	ETIM 7.0	EC001596
ECLASS 9.0	27-24-26-01	ECLASS 9.1	27-24-26-01
ECLASS 10.0	27-24-26-01	ECLASS 11.0	27-24-26-01

Approvals

Approvals	
UL File Number Search	E141197

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Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration_of_Conformity
Engineering Data	STEP
User Documentation	MAN_U-REMOTE_DE MAN_U-REMOTE_EN
Brochure/Catalogue	Catalogues in PDF-format