

Data Sheet | Item Number: 857-811

Temperature signal conditioner for thermocouples; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; light gray



<https://www.wago.com/857-811>

Short description:

WAGO's temperature signal conditioner records signals from thermocouples of type J and K (E, R, N, S, T, B, C) and converts the temperature signal into a standard analog signal.

Features:

- PC configuration interface
- For thermocouples of type J and K (E, R, N, S, T, B, C)
- Cold junction compensation (On/Off)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Clipping capability for analog signal limitation to output end values
- 3-way electrical isolation with 2.5 kV test voltage

Notes

Note	Additional setting options as well as output signal inversion via WAGO Interface Configuration Software or WAGO Interface Configuration App
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Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App
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Input

Input signal type	TC sensors
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Input (TC sensors)

Sensor types (TC)	Type J Type K
Temperature measurement range (TC)	-210 ... 1200 °C (Type J) -200 ... 1350 °C (Type K)
Measurement span (TC) min.	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (typ. 2 K)

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V
Output signal (current)	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal processing

Step response (typ.)	60 ms (cold junction compensation Off) 120 ms (cold junction compensation On)
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Measurement error

Transmission error (typ.)	≤ 0.1% at max. measurement span (type J, K)
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/K

Power supply

Power supply type	24 VDC
Nominal supply voltage U_s	DC 24 V
Supply voltage range	$\pm 30\%$
Current consumption at nominal supply voltage	≤ 40 mA

Safety and protection

Protection type	IP20	Test voltage	
		Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min

Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	light gray
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.365 MJ
Weight	36 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DNV

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-20-02-06
ETIM 9.0	EC002919
ETIM 8.0	EC002919
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454502751
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7
REACH Candidate List Substance	Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)- 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	39d60789-37a2-4a66-a06f-7c7f8a10d8cc
SCIP notification number (Belgium)	839765f2-15bb-40bd-b39c-8a73199934de
SCIP notification number (Bulgaria)	1cde91b8-5091-408d-9093-f1d3008820c6
SCIP notification number (Czech Republic)	4d65e327-26db-44fc-93c9-6946bd1b15fb
SCIP notification number (Denmark)	661a195a-7a2b-4aef-80eb-6e99479e1e20
SCIP notification number (Finland)	b053dd87-750c-413a-8616-fc696f129101
SCIP notification number (France)	f94ba55d-8b7b-4d76-9739-3324614e69e4
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SCIP notification number (Italy)	2f3a6dab-0c74-4463-98c9-b502e68634c5
SCIP notification number (Netherlands)	285ec729-31c3-4eec-9db3-11d1ee0192b0
SCIP notification number (Poland)	13f7b5dc-ea69-4da8-b142-e157d6158392
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