

Data Sheet | Item Number: 857-800

Temperature signal conditioner for RTD sensors; Current and voltage output signal;
Configuration via DIP switch; Supply voltage: 24 VDC; 6 mm module width; light gray

<https://www.wago.com/857-800>



Short description:

WAGO's temperature signal conditioner records Pt100, Pt200, Pt500, and Pt1000 sensors, as well as resistors up to 4.5 kOhm, converting the temperature signal into a standard analog signal at the output. **Features:**

- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects a sensor wire break/short circuit
- 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

Technical data

Configuration

Configuration options DIP switch

Input

Input signal type Pt sensors
Resistance

Input (RTD sensors)

Sensor types (RTD) Pt100
Pt200
Pt500
Pt1000

Sensor connection 2-wire; 3-wire; 4-wire (switchable)

Sensor power supply (RTD) max. ≤ 0.5 mA

Temperature measurement range (RTD) -200 ... 850 °C

Input (resistors)

Input range (resistor) 0 ... 1 kΩ; 0 ... 4.5 kΩ

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.) 180 ms (2-wire)
360 ms (3-wire)

Measurement error

Transmission error (typ.) ≤ 0.1 % at full measurement span

Transmission error for the set measurement range ≤ ((10 K/set measurement range [K]) + 0.1) %

Temperature coefficient ≤ 0.02 %/K

Power supply

Power supply type 24 VDC

Nominal supply voltage U_s DC 24 V

Supply voltage range ±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
---------------	-------------

Material data

Color	light gray
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.363 MJ
Weight	35.3 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	4045454470128
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	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	18d0a87d-bb35-4b42-bba2-e1971d4739b1
SCIP notification number (Belgium)	1f2fe9d0-536a-4644-aa00-574d7a086709
SCIP notification number (Bulgaria)	6eb8b90b-e755-4cdf-9d9f-85f513b2f530
SCIP notification number (Czech Republic)	03108352-4dba-454f-a6f1-d4e09f8cc18d
SCIP notification number (Denmark)	26a58e4c-5504-4e78-9b49-eb746565ddd1
SCIP notification number (Finland)	4e48f299-96d8-4f28-9c0f-d3b571642d51
SCIP notification number (France)	13292952-78df-4879-8c6e-21dcd8da9daf
SCIP notification number (Germany)	4f8414b3-3970-470e-8a6d-e6b490c7716a
SCIP notification number (Hungary)	c7c0edf4-0baa-4704-bf79-5e09253a732b
SCIP notification number (Italy)	63af3c96-c94e-457c-94e9-0491f5c3e31f
SCIP notification number (Netherlands)	fe840f60-0242-44fe-9a9d-212ece7599cf
SCIP notification number (Poland)	ea6a54b1-1413-4f99-b8a2-510158b8a5d9
SCIP notification number (Romania)	202d51cb-6c22-4e4c-a67c-2542b8e82bd1
SCIP notification number (Sweden)	95ed46b3-c0f7-472f-987f-304709c7024f