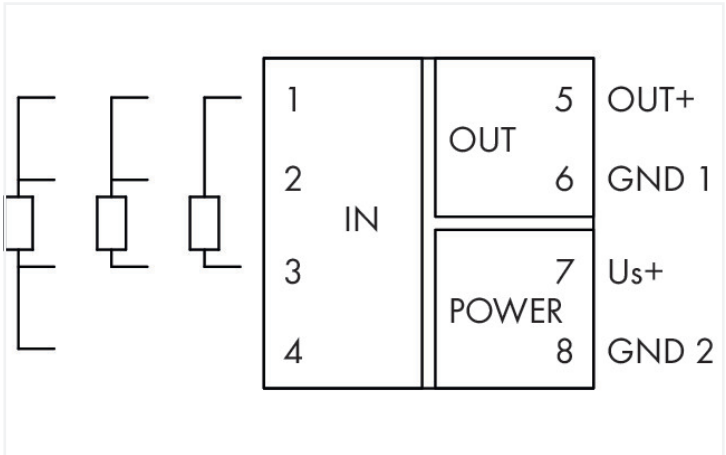
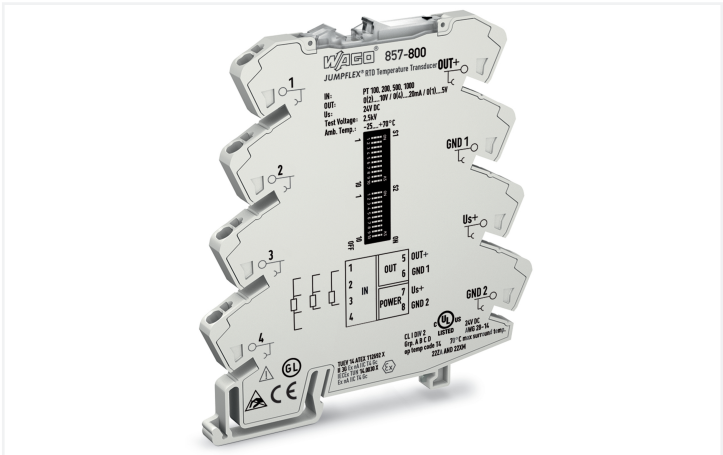


Data Sheet | Item Number: 857-800

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>



Color: light gray

857-800
DIP Switch Adjustability

ON

Default

DIP Switch S1

Wire Connection	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1 2 3 4 5 6 7 8 9 10	Pt100	0...20mA	Lower limit of output range -5.8%	Upper limit of output range +5.8%	Upper limit of output range +5.5%	Lower limit of output range
• 3-Letter	• Pt200	• 4...20mA	Lower limit of output range	Upper limit of output range +5.5%	Upper limit of output range	Lower limit of output range
• 4-Letter	• Pt500	• 0...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range +5.5%	Lower limit of output range
	• Pt1000	• 2...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range +5.5%	Lower limit of output range
	• 1 kΩ	• 0...10 V	Lower limit of output range	Upper limit of output range	Upper limit of output range +5.5%	Lower limit of output range
	• 4.5 kΩ	• 2...10 V	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
		• 0...5 V				
		• 1...5 V				

DIP Switch S2

Start Temperature										End Temperature									
1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C
• -200	• -238	•	•	•	•	•	•	•	•	• 75	• 167	•	•	•	•	•	•	• 210	• 410
•	•	•	•	•	•	•	•	•	•	• 80	• 176	•	•	•	•	•	•	• 220	• 428
•	• -175	• -283	•	•	•	•	•	•	•	• 85	• 185	•	•	•	•	•	•	• 230	• 446
•	• -150	• -238	•	•	•	•	•	•	•	• 90	• 194	•	•	•	•	•	•	• 240	• 464
•	• -125	• -193	•	•	•	•	•	•	•	• 95	• 203	•	•	•	•	•	•	• 250	• 482
•	• -100	• -148	•	•	•	•	•	•	•	• 100	• 212	•	•	•	•	•	•	• 260	• 500
•	• -80	• -130	•	•	•	•	•	•	•	• 110	• 230	•	•	•	•	•	•	• 270	• 518
•	• -80	• -112	•	•	•	•	•	•	•	• 120	• 248	•	•	•	•	•	•	• 280	• 536
•	• -70	• -94	•	•	•	•	•	•	•	• 130	• 266	•	•	•	•	•	•	• 290	• 554
•	• -60	• -76	•	•	•	•	•	•	•	• 140	• 284	•	•	•	•	•	•	• 300	• 572
•	• -50	• -58	•	•	•	•	•	•	•	• 150	• 302	•	•	•	•	•	•	• 325	• 617
•	• -40	• -40	•	•	•	•	•	•	•	• 160	• 320	•	•	•	•	•	•	• 350	• 662
•	• -30	• -22	•	•	•	•	•	•	•	• 170	• 338	•	•	•	•	•	•	• 375	• 707
•	• -20	• -4	•	•	•	•	•	•	•	• 180	• 356	•	•	•	•	•	•	• 400	• 752
•	• -10	• 14	•	•	•	•	•	•	•	• 190	• 374	•	•	•	•	•	•	• 425	• 797
•	• 0	• 32	•	•	•	•	•	•	•	• 200	• 392	•	•	•	•	•	•	• 450	• 842

The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (°C) scale or 122K degrees on the Fahrenheit (°F) scale.

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
Input (RTD sensors)	
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	24 VDC
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)	2.5 kVAC; 50 Hz; 1 min

Connection data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm² / 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)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454470128
Customs tariff number	85437090300

Product classification	
UNSPSC	41112109
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-20-02-06
ETIM 9.0	EC002919
ETIM 8.0	EC002919
ECCN	NO US CLASSIFICATION

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



Environmental Product Compliance	
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

Approvals / Certificates		
General approvals		Declarations of conformity and manufacturer's declarations
		
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

Approvals for marine applications		
		
Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00001D1

Approvals for hazardous areas		
		
Approval	Standard	Certificate Name
CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	-	IECEX TUN14.0030X
UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 857-800	



Documentation			
Manual		Bid Text	
WAGO Temperature Si- gnal Conditioners		857-800	19.02.2019 xml 5.96 KB 
		857-800	20.02.2019 docx 16.85 KB 

Instruction Leaflet			
CCC Ex (Additional in- formation)	26.04.2023	pdf 140.99 KB	
Messumformer und Trennverstärker		pdf 2194.14 KB	

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 857-800 	EPLAN Data Portal 857-800 
	WSCAD Universe 857-800 
	ZUKEN Portal 857-800 

1 Compatible Products
1.1 Optional Accessories
1.1.1 Installation
1.1.1.1 Mounting accessories



[Item No.: 249-117](#)
Screwless end stop; 10 mm wide; for DIN-
rail 35 x 15 and 35 x 7.5; gray



[Item No.: 249-197](#)
Screwless end stop; 14 mm wide; for DIN-
rail 35 x 15 and 35 x 7.5; gray



[Item No.: 249-116](#)
Screwless end stop; 6 mm wide; for DIN-
rail 35 x 15 and 35 x 7.5; gray

1.1.2 Interface module
1.1.2.1 Interface adapters



[Item No.: 857-980](#)
Interface adapter; 16-pole; analog



1.1.3 Jumper

1.1.3.1 Jumper

 Item No.: 281-482 Jumper; 2-way; insulated; gray	 Item No.: 859-410/000-006 Jumper; for jumper slot; 10-way; insulated; blue	 Item No.: 859-410 Jumper; for jumper slot; 10-way; insulated; light gray	 Item No.: 859-410/000-005 Jumper; for jumper slot; 10-way; insulated; red
 Item No.: 859-410/000-029 Jumper; for jumper slot; 10-way; insulated; yellow	 Item No.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue	 Item No.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray	 Item No.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red
 Item No.: 859-402/000-029 Jumper; for jumper slot; 2-way; insulated; yellow	 Item No.: 859-403/000-006 Jumper; for jumper slot; 3-way; insulated; blue	 Item No.: 859-403 Jumper; for jumper slot; 3-way; insulated; light gray	 Item No.: 859-403/000-005 Jumper; for jumper slot; 3-way; insulated; red
 Item No.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow	 Item No.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue	 Item No.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray	 Item No.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red
 Item No.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow	 Item No.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue	 Item No.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray	 Item No.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red
 Item No.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow	 Item No.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue	 Item No.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray	 Item No.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red
 Item No.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; yellow	 Item No.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue	 Item No.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray	 Item No.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red
 Item No.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow	 Item No.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue	 Item No.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray	 Item No.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red
 Item No.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow	 Item No.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue	 Item No.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray	 Item No.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red
 Item No.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow			



1.1.4 Marking

1.1.4.1 Marker



Item No.: 793-5501
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 793-502
WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-566
WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-503
WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-504
WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-505
WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-506
WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.4.2 Marking strip



Item No.: 2009-110
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.5 Power supply

1.1.5.1 Power supply



Item No.: 787-2852
Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.6 Terminal blocks

1.1.6.1 Supply module



Item No.: 857-979
Supply and through module

1.1.6.2 Through terminal block



Item No.: 857-979
Supply and through module

1.1.7 Tool

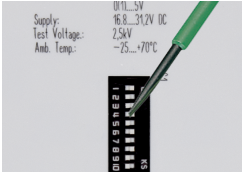
1.1.7.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

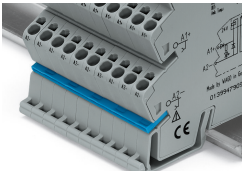
Installation Notes

Configuring



Configuration via DIP switch

Commoning



Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.