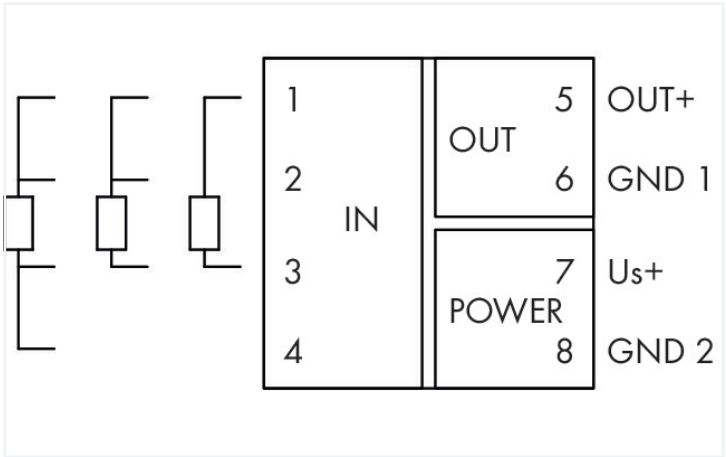
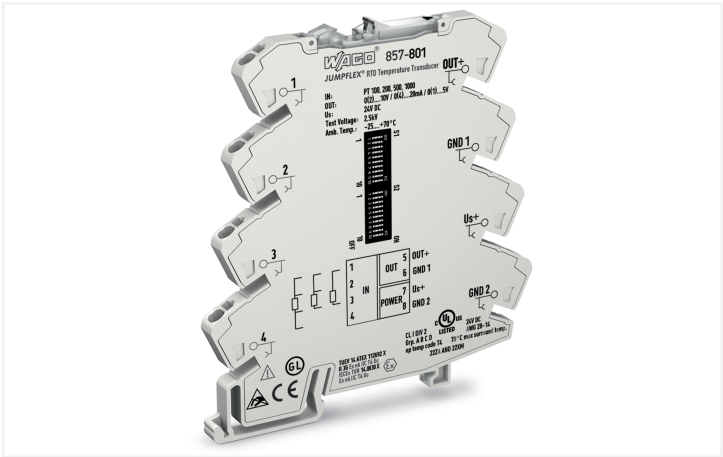


Data Sheet | Item Number: 857-801

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

<https://www.wago.com/857-801>



Color: ■ light gray

857-801
DIP Switch Adjustability

● = ON

Default

DIP Switch S1

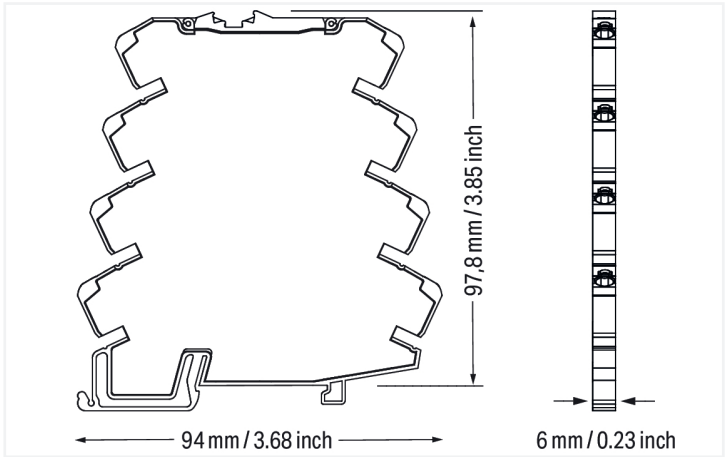
Wire Connection	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit			
1	2	3	4	5	6	7	8	9	10
● 3-wire	● PT100	● 4...20 mA	Lower limit of output range - 5 %	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range - 2.5 %			
● 4-wire	● PT200	● 0...10 mA	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range			
	● PT1000	● 0...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 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 %	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	Lower limit of output range	Upper limit of output range					
		● 1...5 V							

DIP Switch S2

Start Temperature					End Temperature				
1	2	3	4	5	6	7	8	9	10
°C	°C	°C	°C	°C	°C	°C	°C	°C	°C
°F	°F	°F	°F	°F	°F	°F	°F	°F	°F
● -200	● -328			● 0	● 32			● 75	● 167
● -175	● -283			● 5	● 41			● 80	● 176
● -150	● -238			● 10	● 50			● 85	● 185
● -125	● -193			● 15	● 59			● 90	● 194
● -100	● -148			● 20	● 68			● 95	● 203
● -90	● -130			● 25	● 77			● 100	● 212
● -80	● -112			● 30	● 86			● 110	● 230
● -70	● -94			● 35	● 95			● 120	● 248
● -60	● -76			● 40	● 104			● 130	● 266
● -50	● -58			● 45	● 113			● 140	● 284
● -40	● -40			● 50	● 122			● 150	● 302
● -30	● -22			● 55	● 131			● 160	● 320
● -20	● -4			● 60	● 140			● 170	● 338
● -10	● 14			● 65	● 149			● 180	● 356
● 0	● 32			● 70	● 158			● 190	● 374
								● 200	● 392

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.

* acc. to NAMUR NE 43



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:

- PC configuration interface
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3- and 4-wire connection technology
- Detects 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

Notes	
Note	Additional settings and inversion of the output signals can be configured using the WAGO Interface Configuration Software.



Technical data

Configuration	
Configuration options	DIP switch WAGO Interface Configuration Software

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
Measurement span (RTD) min.	50 K

Input (resistors)	
Input range (resistor)	0 ... 1 kΩ; 0 ... 4.5 kΩ
Measurement span (min.)	50 Ω

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	≤ 50 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 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		35.1 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		4045454502713
Customs tariff number		85437090300

Product classification		
UNSPSC		41113630
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)	05f3f3b8-0a15-4f60-9562-f07c8c9aedb6
SCIP notification number (Belgium)	0b91be23-06aa-417e-a8c2-3bf30774ed99
SCIP notification number (Bulgaria)	7315f2b8-26e9-4d3d-8f36-1808cd8e283f
SCIP notification number (Czech Republic)	eb77ace6-81f9-4b92-8742-2e644874c902
SCIP notification number (Denmark)	f4d34c3a-3b7a-45d1-9eb9-453cce66da71
SCIP notification number (Finland)	c3822dd5-0b0a-4b87-b750-fa5e876de096
SCIP notification number (France)	6a6d3328-7ad1-4ac8-8723-f4ff801e831f
SCIP notification number (Germany)	a6452dd4-84e9-41b3-a6a6-e215c79faa52
SCIP notification number (Hungary)	0ed82f30-ad55-46b1-afef-2972a2c4c660
SCIP notification number (Italy)	0b6a053f-6481-42ca-9519-aac8e90518f8
SCIP notification number (Netherlands)	fd93a37a-ab44-41d4-a41c-b1c88afee098
SCIP notification number (Poland)	3a0e53e4-8b02-490a-aca1-fd8709146416
SCIP notification number (Romania)	73bbe297-1659-4ff2-aaed-ded4d693e383
SCIP notification number (Sweden)	d037dc84-e2eb-4874-b372-fdf8fc8b8e03

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

 			   		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00001D1	IECEx TUEV Nord Cert GmbH	-	IECEX TUN14.0030X
			UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
			UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	ANSI/ISA 12.12.01	E198726



Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 857-801	↓

Documentation			
Manual		Bid Text	
WAGO Temperature Signal Conditioners	↓	857-801	19.02.2019xml6.32 KB↓
		857-801	20.02.2019docx17.29 KB↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf140.99 KB	↓
Messumformer und Trennverstärker		pdf2194.14 KB	↓

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 857-801	EPLAN Data Portal 857-801 ↓
	WSCAD Universe 857-801 ↓
	ZUKEN Portal 857-801 ↓

1 Compatible Products
1.1 Optional Accessories
1.1.1 Cables and connectors
1.1.1.1 Communication cable



Item No.: [750-923/000-001](#)
Configuration cable; USB connector;
Length: 5 m



1.1.2 Communication

1.1.2.1 Bluetooth



[Item No.: 750-921](#)
Bluetooth® Adapter

1.1.2.2 Communication cable



[Item No.: 750-923](#)
Configuration cable; USB connector;
Length: 2.5 m

1.1.3 Installation

1.1.3.1 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

1.1.4 Interface module

1.1.4.1 Interface adapters



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

1.1.5 Jumper

1.1.5.1 Jumper



[Item No.: 281-482](#)
Jumper; 2-way; insulated; gray



[Item No.: 859-410/000-006](#)
Jumper; for jumper slot; 10-way; insula-
ted; blue



[Item No.: 859-410](#)
Jumper; for jumper slot; 10-way; insula-
ted; light gray



[Item No.: 859-410/000-005](#)
Jumper; for jumper slot; 10-way; insula-
ted; red



[Item No.: 859-410/000-029](#)
Jumper; for jumper slot; 10-way; insula-
ted; 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



1.1.5.1 Jumper

 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			

1.1.6 Marking

1.1.6.1 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			

1.1.6.2 Marking strip



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

1.1.7 Power supply

1.1.7.1 Power Supply



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

1.1.8 Terminal blocks

1.1.8.1 Supply module



Item No.: 857-979
Supply and through module

1.1.8.2 Through terminal block



Item No.: 857-979
Supply and through module

1.1.9 Tool

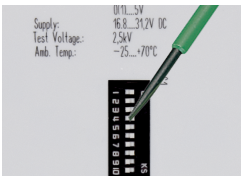
1.1.9.1 Operating tool



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

Installation Notes

Configuring

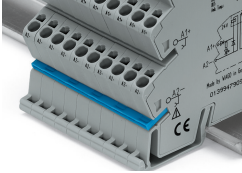


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

Commoning



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