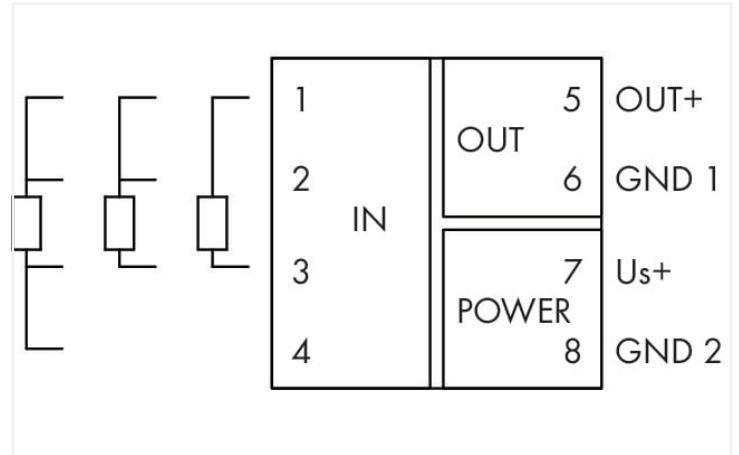
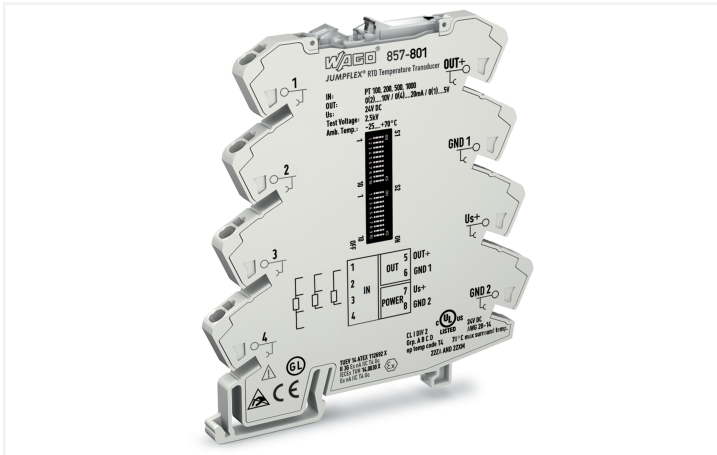


Data Sheet | Item Number: 857-801

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

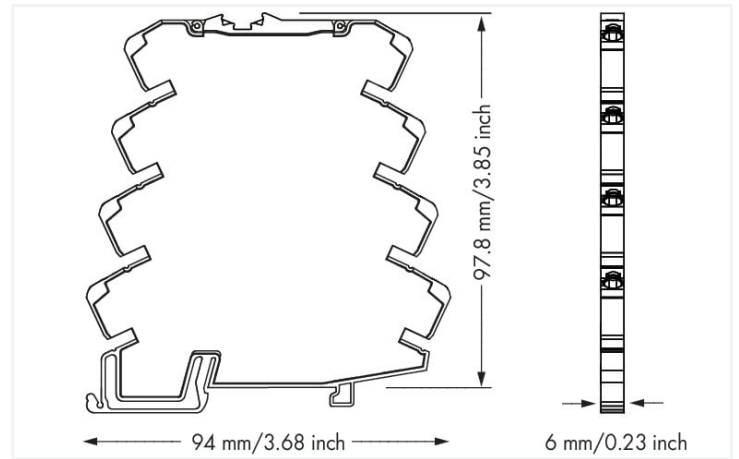
DIP Switch S1

Wire Connection	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
3-wire	Pt200	4...20 mA	Lower limit of output range -15%	Upper limit of output range +2.5%	Upper limit of output range +5%	Lower limit of output range
4-wire	Pt500	0...10 mA	Lower limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 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 %	Upper limit of output range + 5 %
	1 kΩ	0...10 V	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
	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	Start Temperature	End Temperature
-200	-328	75	187
-175	-283	80	176
-150	-238	85	185
-125	-193	90	194
-100	-148	95	203
-80	-112	100	212
-70	-94	110	230
-60	-76	120	248
-50	-58	130	266
-40	-40	140	284
-30	-22	150	302
-20	-4	160	320
-10	14	170	338
0	32	180	356
		190	374
		200	392
		210	410
		220	428
		230	446
		240	464
		250	482
		260	500
		270	518
		280	536
		290	554
		300	572
		325	617
		350	662
		375	707
		400	752
		425	797
		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.



Dimensions in mm

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 setting options as well as output signal inversion via WAGO Interface Configuration Software or WAGO Interface Configuration App

Technical data

Configuration

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

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	DC 24 V
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA

Safety and protection

Protection type	IP20
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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	35.1 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)
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	4045454502713
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

Environmental Product Compliance

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-fff8fc8b8e03

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


Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

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 (Exec 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 857-801	↓

Documentation

Manual	
WAGO Temperature Signal Conditioners	↓

Bid Text			
857-801	19.02.2019	xml 6.32 KB	↓
857-801	20.02.2019	docx 17.29 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	↓
Messumformer und Trennverstärker		pdf 2194.14 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 857-801	↓

CAE data	
EPLAN Data Portal 857-801	↓
WSCAD Universe 857-801	↓
ZUKEN Portal 857-801	↓

Engineering-Software

Configuration and Commissioning Software			
WAGO Interface Configuration Software G2 FULL	1.00.10.01 20.01.2022	exe 112213.07 KB	↓
WAGO Interface Configuration Software G2 SMALL	1.00.10.01 20.01.2022	exe 30238.22 KB	↓

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; 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; signal 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 unit

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

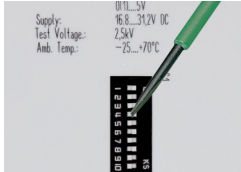


Item No.: 210-720

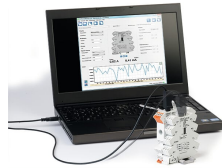
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch

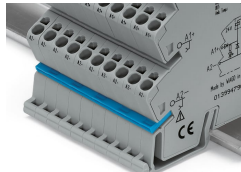


Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App

Commoning



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