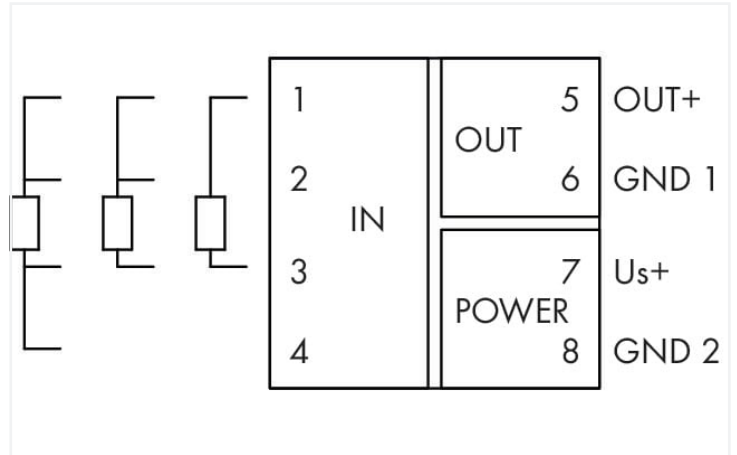
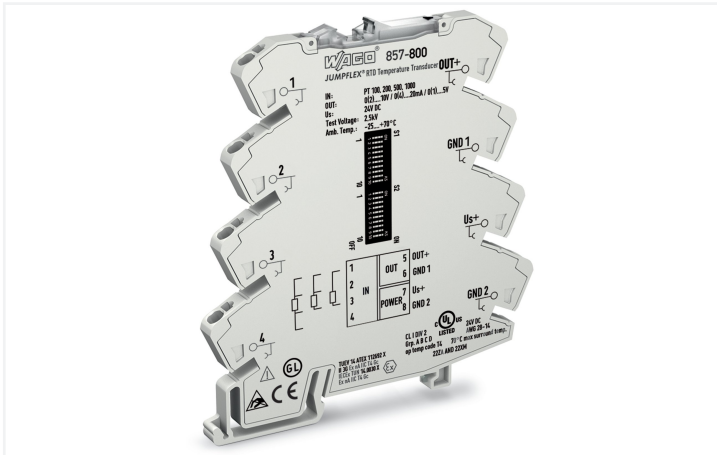


# Data Sheet | Item Number: 857-800

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

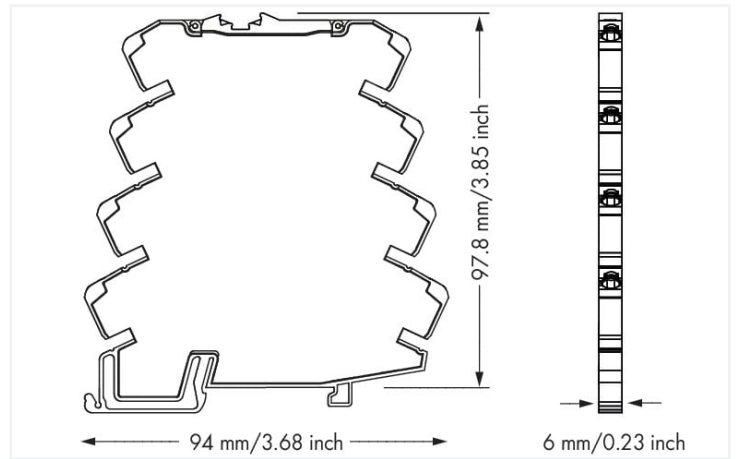
DIP Switch S1

Wire Connection	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1 2 3 4 5	Pt100	0 ... 20 mA	Lower limit of output range -18%	Upper limit of output range +2.5%	Upper limit of output range +5%	Lower limit of output range
• 3-Leiter	Pt200	4 ... 20 mA	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
• 4-Leiter	Pt500	0 ... 10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
	Pt1000	2 ... 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	Lower limit of output range	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	11	12
°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
• -200	-328	•	•	•	•	•	•	•	•	•	•
• -175	-283	•	•	•	•	•	•	•	•	•	•
• -150	-238	•	•	•	•	•	•	•	•	•	•
• -125	-193	•	•	•	•	•	•	•	•	•	•
• -100	-148	•	•	•	•	•	•	•	•	•	•
• -80	-112	•	•	•	•	•	•	•	•	•	•
• -70	-94	•	•	•	•	•	•	•	•	•	•
• -40	-76	•	•	•	•	•	•	•	•	•	•
• -50	-58	•	•	•	•	•	•	•	•	•	•
• -40	-40	•	•	•	•	•	•	•	•	•	•
• -30	-22	•	•	•	•	•	•	•	•	•	•
• -20	-4	•	•	•	•	•	•	•	•	•	•
• -10	14	•	•	•	•	•	•	•	•	•	•
• 0	32	•	•	•	•	•	•	•	•	•	•

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:**

- 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)
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### 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
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### Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 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	0.363 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

**Environmental Product Compliance**

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


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 857-800	
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## Documentation

Manual	
WAGO Temperature Signal Conditioners	<a href="#">↓</a>

Bid Text			
857-800	19.02.2019	xml 5.96 KB	<a href="#">↓</a>
857-800	20.02.2019	docx 16.85 KB	<a href="#">↓</a>

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	<a href="#">↓</a>
Messumformer und Trennverstärker		pdf 2194.14 KB	<a href="#">↓</a>

## CAD/CAE-Data

CAD data	
2D/3D Models 857-800	<a href="#">↓</a>

CAE data	
EPLAN Data Portal 857-800	<a href="#">↓</a>
WSCAD Universe 857-800	<a href="#">↓</a>
ZUKEN Portal 857-800	<a href="#">↓</a>

## 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; 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

### 1.1.4 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 unit

**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

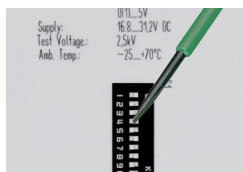


#### Item No.: 210-720

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

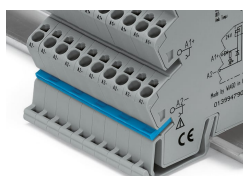
## Installation Notes

### Configuring



Configuration via DIP switch

### Commoning



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