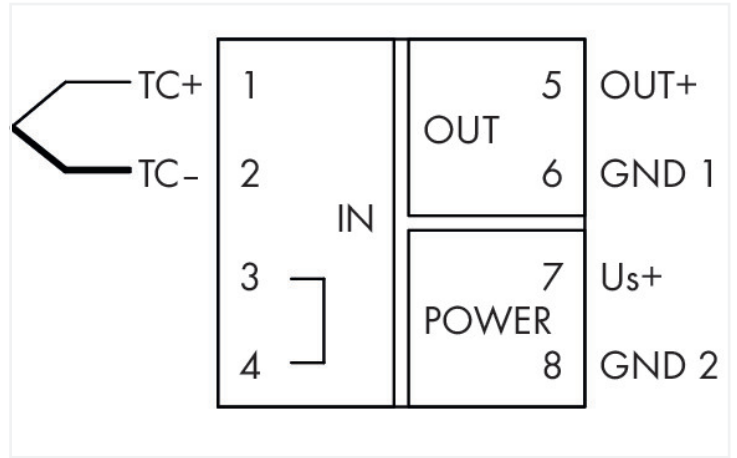
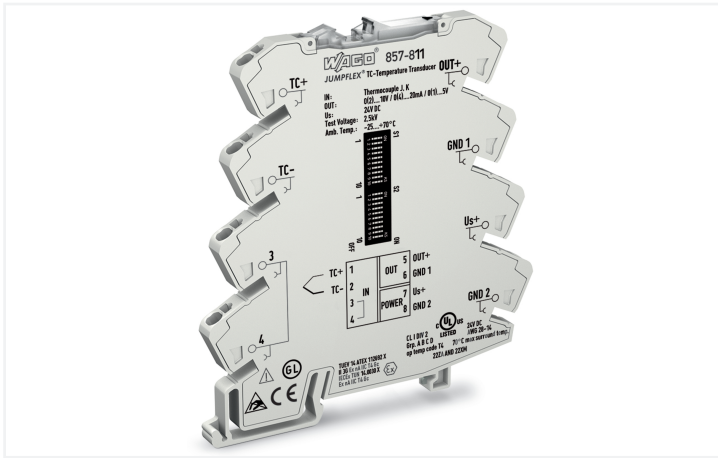


# Data Sheet | Item Number: 857-811

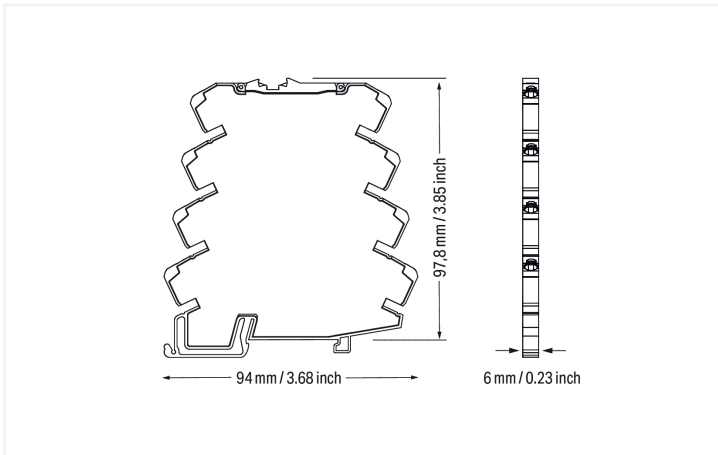
Temperature signal conditioner for thermocouples; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; light gray



<https://www.wago.com/857-811>



Color: ■ light gray



857-811  
DIP Switch Adjustability

DIP Switch S1

Cold Junction Compensation	Sensor Type				Output Signal	Measurement Range		Measurement Range		Wire Break
	2	3	4	5		Underflow	Overflow	Underflow	Overflow	
on	•	•	•	•	0 ... 20 mA	•	•	•	•	•
off	•	•	•	•	0 ... 10 mA	•	•	•	•	•
	•	•	•	•	2 ... 10 mA	•	•	•	•	•
	•	•	•	•	0 ... 10 V	•	•	•	•	•
	•	•	•	•	2 ... 10 V	•	•	•	•	•
	•	•	•	•	0 ... 5 V	•	•	•	•	•
	•	•	•	•	1 ... 5 V	•	•	•	•	•

DIP Switch S2

Start Temperature										End Temperature												
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	
•	•	•	•	0	32	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-200	-328	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-175	-283	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-150	-253	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-125	-193	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-100	-148	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-80	-130	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-60	-112	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-40	-94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	-20	-6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	0	32	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

\* acc. to NAMUR NE 43  
The minimum distance from the start temperature to the end temperature may not fall short of 100K degrees on the Celsius (C) scale or 212K degrees on the Fahrenheit (F) scale.

### Short description:

This temperature signal conditioner records signals from thermocouples of type J and K (E, R, N, S, T, B, C) and converts the temperature signal into a standard analog signal.

### Features:

- PC configuration interface
- For thermocouples of type J and K (E, R, N, S, T, B, C)
- Cold junction compensation (On/Off)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Clipping capability: Limitation of the standard analog signal to the upper-range 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.
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## Technical data

## Configuration

Configuration options	DIP switch WAGO Interface Configuration Software
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## Input

Input signal type	TC sensors
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## Input (TC sensors)

Sensor types (TC)	Type J Type K
Temperature measurement range (TC)	-210 ... 1200 °C (Type J) -200 ... 1350 °C (Type K)
Measurement span (TC) min.	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (typ. 2 K)

## 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.)	60 ms (cold junction compensation off) 120 ms (cold junction compensation on)
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## Measurement Error

Transmission error (typ.)	≤ 0.1% at max. measurement span (type J, K)
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/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
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## 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 <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	0.365 MJ
Weight	36 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	4045454502751
Customs tariff number	85437090300

### Product Classification

UNSPSC	41112209
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-20-02-06
ETIM 9.0	EC002919
ETIM 10.0	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)	39d60789-37a2-4a66-a06f-7c7f8a10d8cc
SCIP notification number (Belgium)	839765f2-15bb-40bd-b39c-8a73199934de
SCIP notification number (Bulgaria)	1cde91b8-5091-408d-9093-f1d3008820c6
SCIP notification number (Czech Republic)	4d65e327-26db-44fc-93c9-6946bd1b15fb
SCIP notification number (Denmark)	661a195a-7a2b-4aef-80eb-6e99479e1e20
SCIP notification number (Finland)	b053dd87-750c-413a-8616-fc696f129101
SCIP notification number (France)	f94ba55d-8b7b-4d76-9739-3324614e69e4
SCIP notification number (Germany)	14efcac0-8b3d-4124-8001-b3362fc49162
SCIP notification number (Hungary)	0a14abcc-c9cb-4f3c-8927-c68a11ef1679
SCIP notification number (Italy)	2f3a6dab-0c74-4463-98c9-b502e68634c5
SCIP notification number (Netherlands)	285ec729-31c3-4eec-9db3-11d1ee0192b0
SCIP notification number (Poland)	13f7b5dc-ea69-4da8-b142-e157d6158392
SCIP notification number (Romania)	7267164b-dd29-4c11-a609-6329ebd49ec0
SCIP notification number (Sweden)	96f6098d-e2d4-40c2-95b8-4a0614b313a4

**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

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

**Approvals for marine applications**      **Approvals for hazardous areas**



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



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 LOCA- TIONS)	ANSI/ISA 12.12.01	E198726

## Downloads

### Environmental Product Compliance

#### Compliance Search

Environmental Product Compliance 857-811



## Documentation

### Bid Text

857-811	19.02.2019	xml 6.22 KB	
857-811	20.02.2019	docx 17.43 KB	

### Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	
Messumformer und Trennverstärker		pdf 2348.53 KB	

## CAD/CAE-Data

### CAD data

2D/3D Models 857-811



### CAE data

EPLAN Data Portal 857-811



WSCAD Universe 857-811



ZUKEN Portal 857-811



## 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

### 1.1.3 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; 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

### 1.1.5.1 Jumper



**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

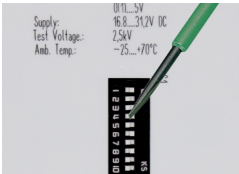


Item No.: 210-720

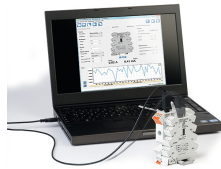
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

## Installation Notes

### Configuring

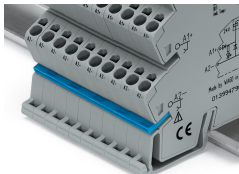


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

### Commoning



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