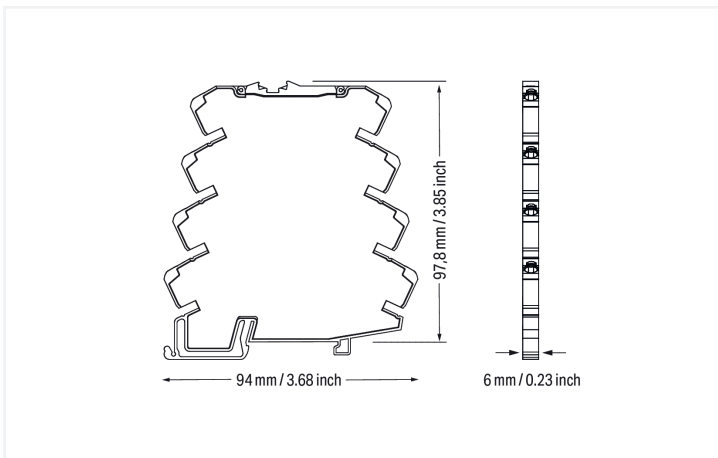
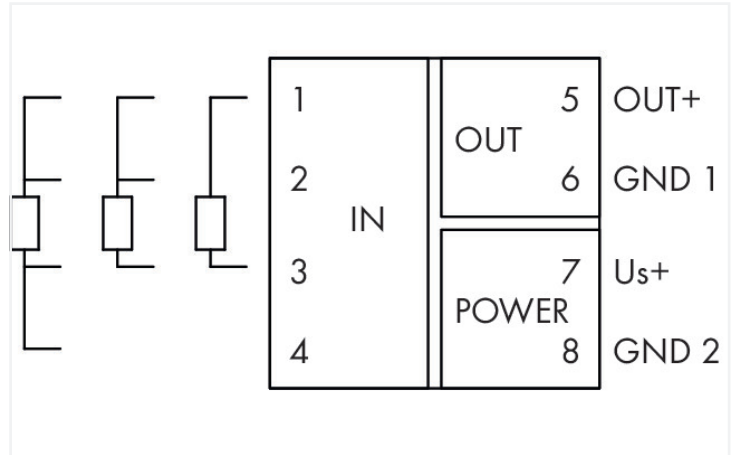
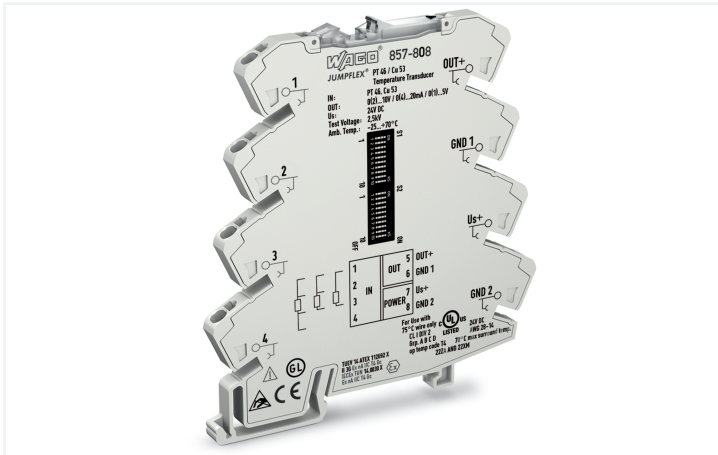


Data Sheet | Item Number: 857-808

Temperature signal conditioner for RTD sensors; Current and voltage output signal;

Supply voltage: 24 VDC; 6 mm module width

<https://www.wago.com/857-808>



857-808
DIP Switch Adjustability

● = ON **Default**

Wire Connection		Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1	2	3	4	5	6	7	8
●	3-wire	●	Pt46	●	0 ... 20 mA	●	Lower limit of output range - 5% ¹
●	4-wire	●	Cu53	●	4 ... 20 mA	●	Upper limit of output range + 5% ¹
				●	0 ... 10 mA	●	Lower limit of output range
				●	2 ... 10 mA	●	Upper limit of output range + 5%
				●	0 ... 10 V	●	Lower limit of output range
				●	2 ... 10 V	●	Upper limit of output range + 5%
				●	0 ... 5 V	●	Lower limit of output range
				●	1 ... 5 V	●	Upper limit of output range

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
●	●	●	●	200	392	●	●	●	●	●	●	75	167	●	●	●	●	●	●	210	410
●	●	●	●	-200	-328	●	●	●	●	●	●	80	176	●	●	●	●	●	●	220	428
●	●	●	●	-175	-283	●	●	●	●	●	●	5	41	●	●	●	●	●	●	230	446
●	●	●	●	-150	-238	●	●	●	●	●	●	10	50	●	●	●	●	●	●	240	464
●	●	●	●	-125	-193	●	●	●	●	●	●	15	59	●	●	●	●	●	●	250	482
●	●	●	●	-100	-148	●	●	●	●	●	●	20	68	●	●	●	●	●	●	260	500
●	●	●	●	-80	-130	●	●	●	●	●	●	25	77	●	●	●	●	●	●	270	518
●	●	●	●	-60	-112	●	●	●	●	●	●	30	86	●	●	●	●	●	●	280	536
●	●	●	●	-40	-94	●	●	●	●	●	●	35	95	●	●	●	●	●	●	290	554
●	●	●	●	-20	-6	●	●	●	●	●	●	40	104	●	●	●	●	●	●	300	572
●	●	●	●	-50	-58	●	●	●	●	●	●	45	113	●	●	●	●	●	●	150	302
●	●	●	●	-40	-40	●	●	●	●	●	●	50	122	●	●	●	●	●	●	160	320
●	●	●	●	-30	-22	●	●	●	●	●	●	55	133	●	●	●	●	●	●	170	328
●	●	●	●	-20	-4	●	●	●	●	●	●	60	140	●	●	●	●	●	●	180	356
●	●	●	●	-10	14	●	●	●	●	●	●	65	149	●	●	●	●	●	●	190	374
●	●	●	●	0	32	●	●	●	●	●	●	70	158	●	●	●	●	●	●	200	392

* acc. to NAMUR NE 43

Short description:

WAGO's temperature signal conditioner records signals from Pt46 and Cu53 sensors, converting a temperature signal into a standard analog signal at the output.

Features:

- 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	DIP switch
Configuration options	DIP switch
Input	
Input signal type	Pt sensors Cu sensors

Input (RTD sensors)

Sensor types (RTD)	Pt46 Cu53
Sensor connection	2-wire; 3-wire; 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +300 °C (Pt46) 0 ... 180 °C (Cu53)
Measurement span (RTD) min.	50 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.)	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
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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 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

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.363 MJ
Weight	35.4 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	4050821468929
Customs tariff number	85437090300

Product Classification

UNSPSC	41112109
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-21-01-29
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)	2c1579c0-c6f4-474e-a7c7-caa7110828ad3
SCIP notification number (Belgium)	f75ef945-81c3-417d-9f00-efd30c3fd9f1
SCIP notification number (Bulgaria)	0018f2cc-f61d-45d9-9c67-b40be6339a9d
SCIP notification number (Czech Republic)	34f39757-eea5-4d9d-9f10-9c3d4800de5f
SCIP notification number (Denmark)	9d762cdc-b416-4cf3-8c35-9d8afea75ea6
SCIP notification number (Finland)	8f318f07-fa79-4b58-8793-8ae11a876899

Environmental Product Compliance

SCIP notification number (France)	2da53d2d-747c-4ccd-9419-29aff8ebaeaa
SCIP notification number (Germany)	0b2f4d0c-24ca-485c-86ff-aa24e3f1af27
SCIP notification number (Hungary)	4af08aee-d2b5-4a73-b4b7-46525f9de1f7
SCIP notification number (Italy)	e7fb06f4-4f09-4c7f-b3a8-52e2ab9f2ef0
SCIP notification number (Netherlands)	c7440523-ca83-4d45-bd29-68b1d1db048f
SCIP notification number (Poland)	aa442ccd-9d69-4fec-8d22-b68cccbaf36d
SCIP notification number (Romania)	821241ef-4351-4814-8746-92fa9a8cd9c7
SCIP notification number (Sweden)	fcec4845-5efe-4681-87c2-8ed56a2c14fa

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 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 (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 857-808 

Documentation

Additional Information

Signal Conditioner	V 1.1.0 13.07.2020	pdf 1643.85 KB	↓
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Bid Text

857-808	19.02.2019	xml 5.68 KB	↓
857-808	20.02.2019	docx 17.41 KB	↓

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	↓
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CAD/CAE-Data

CAD data

2D/3D Models 857-808	↓
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CAE data

EPLAN Data Portal 857-808	↓
WSCAD Universe 857-808	↓
ZUKEN Portal 857-808	↓

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

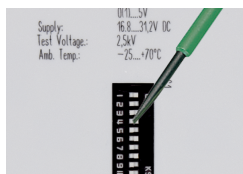


Item No.: 210-720

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

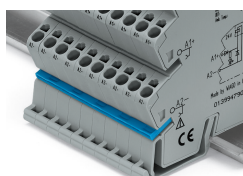
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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