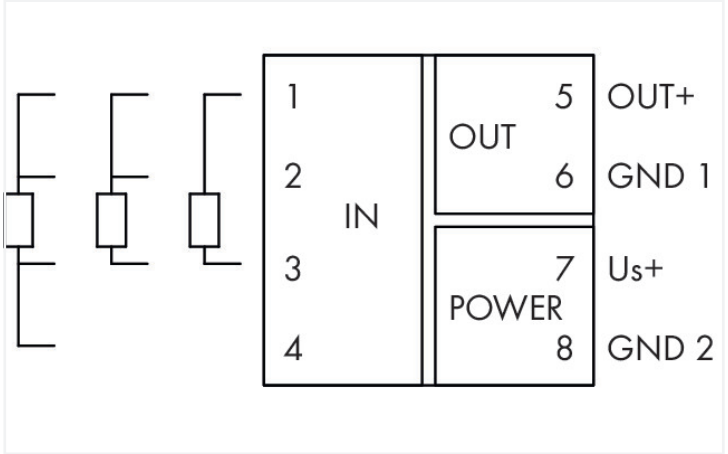
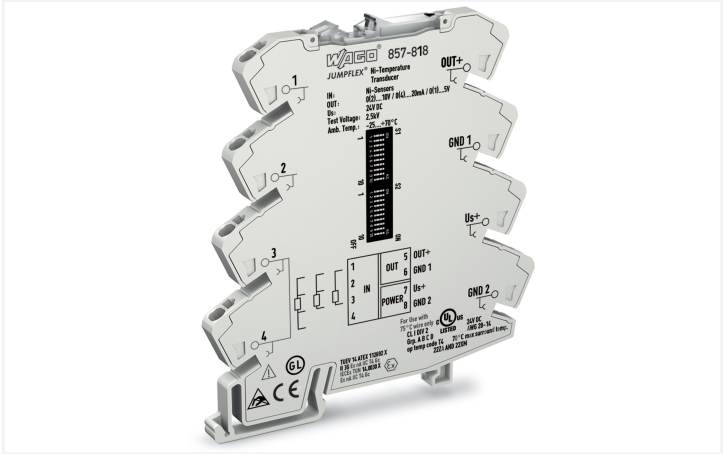


Data Sheet | Item Number: 857-818

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

<https://www.wago.com/857-818>



Color: light gray

857-818

DIP Switch Adjustability

• OK

Default

DIP Switch S1		Temperature Coefficient		Sensor Type	
1	2	3	4	5	6
•	2-wire	•	0.175 ppm/K	•	Ni100
•	3-wire	•	5000 ppm/K	•	Ni120
•	4-wire	•	8720 ppm/K	•	Ni200
		•	6370 ppm/K	•	Ni500
				•	Ni1000

DIP Switch S1

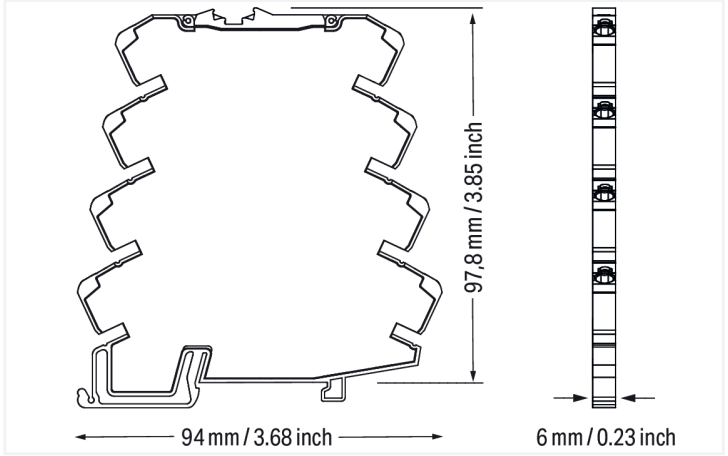
DIP Switch S2

Start Temperature		End Temperature	
1	2	3	4
•	-40	•	100
•	-30	•	110
•	-20	•	120
•	-10	•	130
•	0	•	140
		•	150
		•	160
		•	170
		•	180
		•	190
		•	200

Output Signal		Measurement Range		Wire Break		Short Circuit	
6	7	8	9	10	11	12	13
•	4 ... 20 mA	•	0 ... 20 mA	•	Lower limit of output range	•	Upper limit of output range
•	0 ... 10 mA	•	0 ... 10 mA	•	Lower limit of output range	•	Upper limit of output range
•	0 ... 10 V	•	0 ... 10 V	•	Lower limit of output range	•	Upper limit of output range
•	2 ... 10 V	•	2 ... 10 V	•	Lower limit of output range	•	Upper limit of output range
•	0 ... 5 V	•	0 ... 5 V	•	Lower limit of output range	•	Upper limit of output range
•	1 ... 5 V	•	1 ... 5 V	•	Lower limit of output range	•	Upper limit of output range

Not set when lower limit of output range = 0 V or 0 mA

acc. to NAMUR NE 43



Short description:

WAGO's Ni temperature signal conditioner (Ni = nickel) records signals from Ni sensors featuring all standard characteristics and converts the temperature signal into a standard analog signal at the output.

Features:

- For Ni100, Ni120, Ni200; Ni500 and Ni1000 sensors
- Calibrated measurement range switching
- 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 (RTD sensors)		Input	
Sensor types (RTD)		Input signal type	Ni sensors
Sensor connection		Input voltage (max.)	±31.2 VDC
		Output (analog)	
		Output signal type	Current Voltage
		Output signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V



Output (analog)	
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

Measurement error	
Transmission error (typ.)	≤ 0.1 % of upper-range value

Signal processing	
Step response (typ.)	60 ms (2-wire) 120 ms (3-wire) 30 ms (4-wire)

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
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 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm² / 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	33 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	4050821099789
Customs tariff number	85437090300

Product classification	
UNSPSC	41111970
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-21-01-20
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)	118c38f9-b8e5-41c1-9131-8af3ac0fafb3
SCIP notification number (Belgium)	9ebd3eb0-2ad8-46bb-8b1a-580a7f9239b3
SCIP notification number (Bulgaria)	5a1b6bfd-1f83-48fd-ae80-59d8b260abad
SCIP notification number (Czech Republic)	0c552cb9-09e4-4fed-897b-fca44ff0299b
SCIP notification number (Denmark)	11fa4f9c-5a96-4559-a2d8-150dc2292078
SCIP notification number (Finland)	4f77b6af-adde-4623-855e-2aafa9e36881
SCIP notification number (France)	aa30642a-2e3f-47a4-b9ed-bde974e48d7c
SCIP notification number (Germany)	30c0623d-92c8-434e-800e-93bd4bb348b0
SCIP notification number (Hungary)	bf8e9b2d-9463-4168-8878-753f768b7379
SCIP notification number (Italy)	752eb549-690f-4a7c-99fe-eb75c38a957b
SCIP notification number (Netherlands)	1a6f0c07-58a7-462b-acd3-0df46b12a99b
SCIP notification number (Poland)	7b8c44d0-329d-4b82-9375-83f912497bdd
SCIP notification number (Romania)	89b18d31-3e59-44a6-9354-8ffa1a6f8ac8



Environmental Product Compliance

SCIP notification number (Sweden) 7347a19a-1991-47de-ae3a-5813de7f9b89

Approvals / Certificates

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

Approvals for marine applications

 		
Approval	Standard	Certificate Name
BV	Rules for class. of Steel	40179_B0
Bureau Veritas S.A.	Ships	
DNV	DNV-CG-0339,Aug.2021	TAA00001D1
DNV Germany GmbH		

Approvals for hazardous areas

   		
Approval	Standard	Certificate Name
CCC	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
CNEX		
IECEx	-	IECEx TUN14.0030X
TUEV Nord Cert GmbH		
UKEx	EN 60079-0	WAGO22UKEX004X
WAGO GmbH & Co. KG		
UL	ANSI/ISA 12.12.01	E198726
Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)		

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 857-818	

Documentation

Bid Text				Instruction Leaflet			
857-818	19.02.2019	xml	5.49 KB	CCC Ex (Additional information)	26.04.2023	pdf	140.99 KB
							
857-818	20.02.2019	docx	17.20 KB	Messumformer und Trennverstärker		pdf	1523.50 KB
							



CAD/CAE-Data	
CAD data 2D/3D Models 857-818 ↓	CAE data EPLAN Data Portal 857-818 ↓
	WSCAD Universe 857-818 ↓
	ZUKEN Portal 857-818 ↓

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



1.1.3.1 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

1.1.4 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

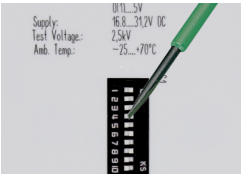
1.1.7.1 Operating tool



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

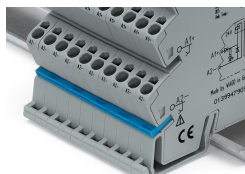
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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