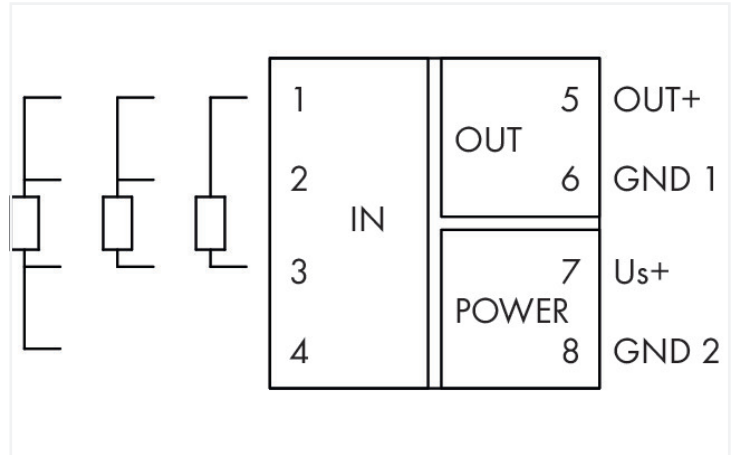
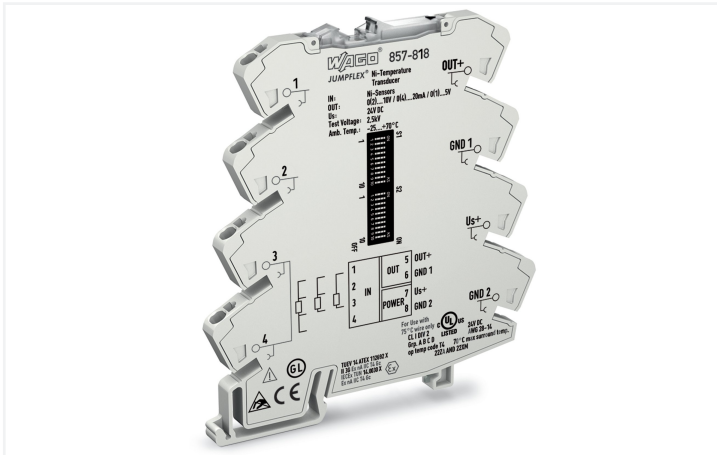


Data Sheet | Item Number: 857-818

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

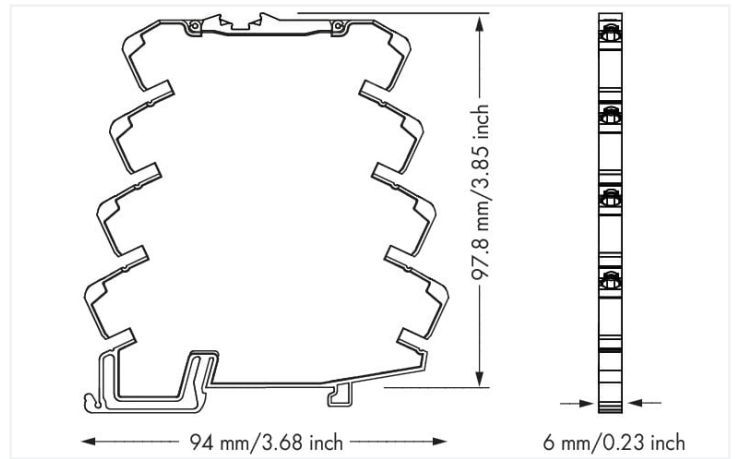
| DIP Switch S1 | | | | |
|-----------------------|-------------------------|-------------|-------|--------|
| Connection Technology | Temperature Coefficient | Sensor Type | | |
| 2-wire | 5.178 ppm/K* | Ni100 | Ni120 | Ni200 |
| 3-wire | 5.000 ppm/K | Ni200 | Ni500 | Ni1000 |
| 4-wire | 8.720 ppm/K | Ni200 | Ni500 | Ni1000 |
| | 6.370 ppm/K | Ni200 | Ni500 | Ni1000 |

* 6.178 ppm/K acc. to DIN 4376

| DIP Switch S2 | | | | | | | | | |
|-------------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|
| Start Temperature | | | | | End Temperature | | | | |
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 |
| 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 |
| 300 | 310 | 320 | 330 | 340 | 350 | 360 | 370 | 380 | 390 |

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

*not within lower limit of output range = 0 V or 0 mA
**acc. to NAMUR NE 43



Dimensions in mm

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 | |
|----------------------|------------|
| Input signal type | Ni sensors |
| Input voltage (max.) | ±31.2 VDC |

| Input (RTD sensors) | |
|---------------------|--|
| Sensor types (RTD) | Ni100 Ni120 Ni200 Ni500 Ni1000 |
| Sensor connection | 2-wire; 3-wire; 4-wire (switchable) |

| 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 (2-wire); 120 ms (3-wire); 30 ms (4-wire) |
|----------------------|---|

Measurement error

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

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 |
|-----------------|------|

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 | 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) |
| eCl@ss 10.0 | 27-21-01-29 |
| eCl@ss 9.0 | 27-21-01-20 |
| ETIM 9.0 | EC002919 |
| ETIM 8.0 | EC002919 |
| PU (SPU) | 1 pcs |
| Packaging type | Bag |
| Country of origin | DE |
| GTIN | 4050821099789 |
| 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) | 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 |
| SCIP notification number (Sweden) | 7347a19a-1991-47de-ae3a-5813de7f9b89 |

Approvals / Certificates

General approvals



| 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 |

Declarations of conformity and manufacturer's declarations

| 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 857-818 | ↓ |
|--|-------------------|

Documentation

Bid Text

| | | | |
|---------|------------|------------------|-------------------|
| 857-818 | 19.02.2019 | xml 5.49 KB | ↓ |
| 857-818 | 20.02.2019 | docx 17.20 KB | ↓ |

Instruction Leaflet

| | | | |
|----------------------------------|------------|-------------------|-------------------|
| CCC Ex (Additional information) | 26.04.2023 | pdf 140.99 KB | ↓ |
| Messumformer und Trennverstärker | | pdf 1523.50 KB | ↓ |

CAD/CAE-Data

| CAD data | CAE data |
|----------------------|---------------------------|
| 2D/3D Models 857-818 | 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; 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

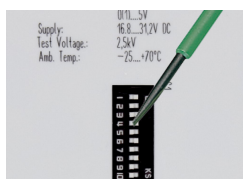


Item No.: 210-720

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

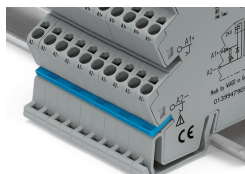
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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