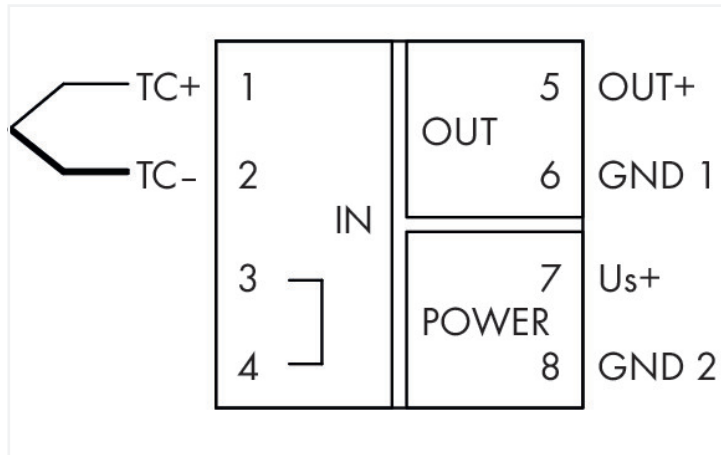
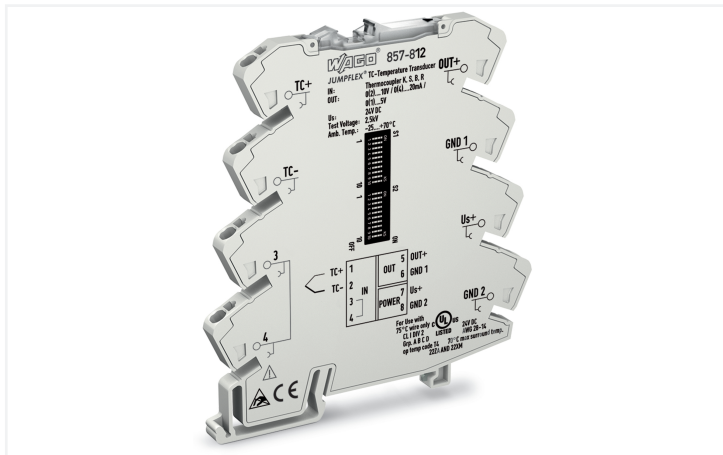


Data Sheet | Item Number: 857-812

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

<https://www.wago.com/857-812>



IBP-819

DIP Switch Adjustability

● = ON

□ = OFF

DIP Switch S-1

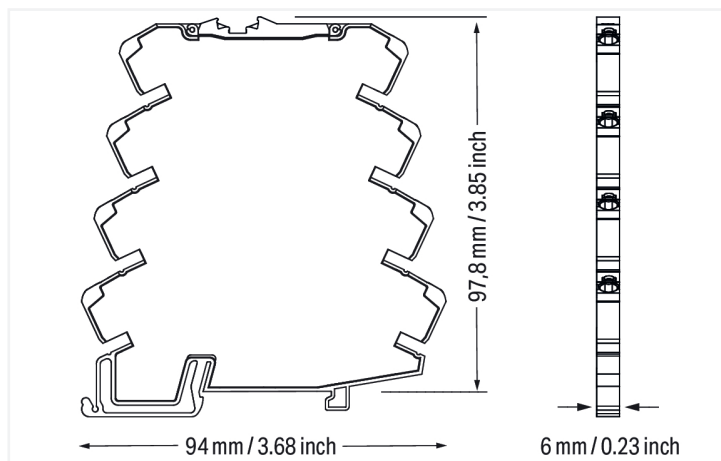
Cold Junction Compensation			Sensor Type		Output Signal			Measurement Range Underflow			Measurement Range Overflow	Wire Break
1	2	3	4	5	6	7	8	Underflow			Overflow	Wire Break
●	EN	●	●	●	4...20 mA	●	●	Lower limit of output range ± 5 %			Upper limit of output range ± 5 %	Upper limit of output range ± 5 %
●	●	●	●	●	0...10 mA	●	●	Lower limit of output range ± 5 %			Upper limit of output range ± 5 %	Upper limit of output range ± 5 %
●	●	●	●	●	2...10 mA	●	●	Lower limit of output range ± 5 %			Upper limit of output range ± 5 %	Upper limit of output range ± 5 %
●	●	●	●	●	0...15V	●	●	Lower limit of output range ± 5 %			Upper limit of output range ± 5 %	Upper limit of output range ± 5 %
●	●	●	●	●	2...10V	●	●	Lower limit of output range ± 5 %			Upper limit of output range ± 5 %	Upper limit of output range ± 5 %
●	●	●	●	●	0...5V	●	●	Lower limit of output range			Upper limit of output range	Lower limit of output range
●	●	●	●	●	1...5V	●	●					

DIP Switch S1 (b) (c)

* acc. to NAMUR NE 43

DIP Switch S2 1462

Start Temperature						End Temperature					
S1						S2					
10	1	2	3	4	5	6	7	8	9	10	Y
●	●	●	●	●	●	200	250	●	●	●	1000 1832
●	●	●	●	●	●	0	52	●	●	●	1000 1922
●	●	●	●	●	●	50	122	●	●	●	1100 2012
●	●	●	●	●	●	100	212	●	●	●	1100 2102
●	●	●	●	●	●	150	302	●	●	●	1200 1892
●	●	●	●	●	●	200	392	●	●	●	1200 2282
●	●	●	●	●	●	250	482	●	●	●	1300 2372
●	●	●	●	●	●	300	572	●	●	●	1300 2462
●	●	●	●	●	●	350	662	●	●	●	1400 2552
●	●	●	●	●	●	400	752	●	●	●	1400 2642
●	●	●	●	●	●	450	842	●	●	●	1500 2732
●	●	●	●	●	●	500	932	●	●	●	1500 2822
●	●	●	●	●	●	550	1022	●	●	●	1600 2912
●	●	●	●	●	●	600	1112	●	●	●	1600 3002
●	●	●	●	●	●	650	1202	●	●	●	1700 3092
●	●	●	●	●	●	700	1292	●	●	●	1700 3182
●	●	●	●	●	●	750	1382	●	●	●	1800 3272
●	●	●	●	●	●	800	1472	●	●	●	
●	●	●	●	●	●	850	1562	●	●	●	
●	●	●	●	●	●	900	1653	●	●	●	
●	●	●	●	●	●	950	1742	●	●	●	
●	●	●	●	●	●	1000	1832	●	●	●	



Short description:

WAGO's temperature signal conditioner records signals from thermocouples (type K, S, B, R) and converts the temperature signal into a standard analog signal at the output.

Features:

- For thermocouples of type K, S, B and R
- Cold junction compensation (On/Off)
- Calibrated measurement range switching
- Detects a sensor wire break
- 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

[illegible]

Input

Input signal type	TC sensors
-------------------	------------

Input (TC sensors)

Sensor types (TC)	Type K Type S Type B Type R

Input (TC sensors)

Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (typ. 2 K)

Temperature measurement range (TC)	0 ... 1200 °C (Type K) 0 ... 1600 °C (Type S) 600 ... 1800 °C (Type B) 0 ... 1600 °C (Type R)
------------------------------------	--



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

Measurement error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/K

Signal processing	
Step response (typ.)	60 ms (cold junction compensation off) 120 ms (cold junction compensation on)

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	
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.365 MJ
Weight	35.7 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

Commercial data	
Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821255291
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 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 (Belgium)	63246099-99c4-43a6-adfd-84430887f462
SCIP notification number (Bulgaria)	ea9a922d-f667-4a28-ba1e-c99ddf8dd7e8
SCIP notification number (Czech Republic)	3b1b251c-a971-41aa-9196-9ca50fd3018f
SCIP notification number (Denmark)	8ef75f62-a4f0-4596-82a0-b4e0cc314863
SCIP notification number (Finland)	07b2346b-c450-4ded-aea1-546be2e4f794
SCIP notification number (France)	ba213564-10e1-4d25-aad4-fd5d5dc2fae7
SCIP notification number (Germany)	574b5988-3161-4ef7-be2b-3d31e6c52d56
SCIP notification number (Hungary)	fb09612d-0901-430e-92ab-7b4c0d594307
SCIP notification number (Italy)	286c091b-d3d4-4e26-b2bc-770b2ca8b326
SCIP notification number (Netherlands)	0df3ea2a-7dc3-4942-ab8e-065df1295860
SCIP notification number (Romania)	32bb11c8-e3ce-4868-b1db-f95c88597e37
SCIP notification number (Sweden)	9fee1f9a-d1d7-47cd-9f94-9f08e1d83ded



Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081

Declarations of conformity and manufacturer's declarations

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

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-812



Documentation

Bid Text
857-812
19.02.2019
xml 5.69 KB
↓
857-812
20.02.2019
docx 17.33 KB
↓

Instruction Leaflet
Messumformer und Trennverstärker
pdf 1486.98 KB
↓

CAD/CAE-Data

CAD data
2D/3D Models 857-812



CAE data
EPLAN Data Portal 857-812
↓
WSCAD Universe 857-812
↓
ZUKEN Portal 857-812
↓



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



1.1.3.1 Jumper



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; blue	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

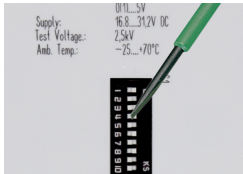
1.1.7.1 Operating tool



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

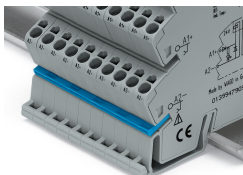
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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