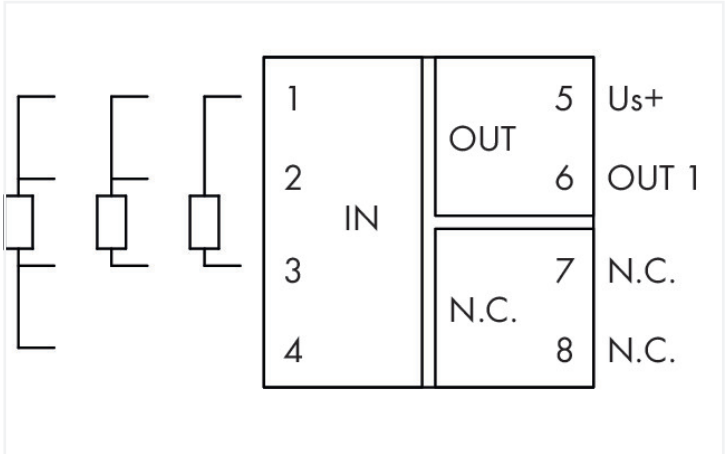
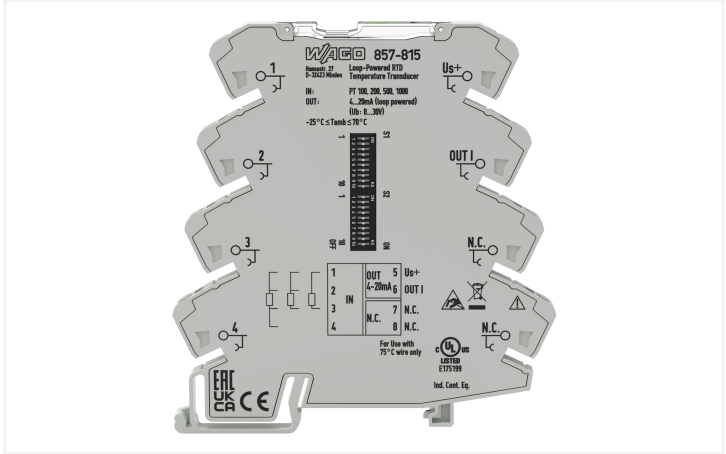






857-815

DIP Switch Adjustability

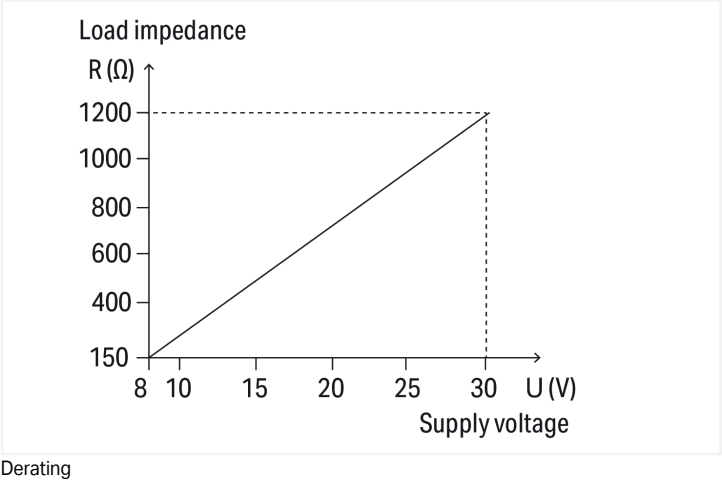
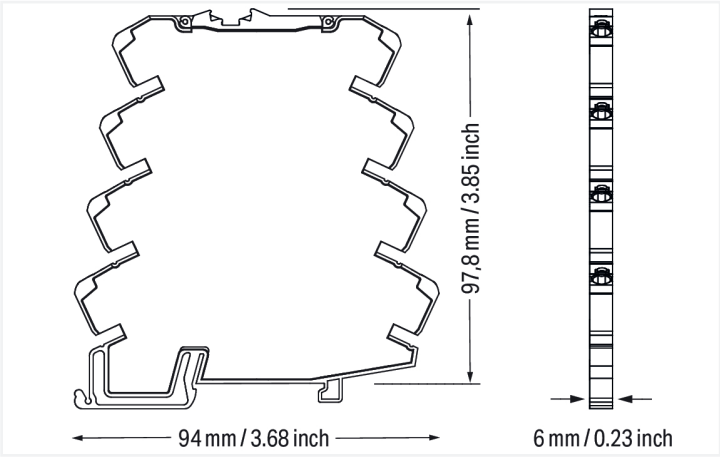
• ON

Output

DIP Switch S1									
Sensor Connection		Sensor Type		Output Signal		N.C.		Measurement Range	
R	S	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
•	3-wire	•	PL200	•	20...4mA	•		•	
•	4-wire	•	PL500	•		•		•	
•	2-wire	•	PL1000	•		•		•	
		•	1 kΩ			•		•	
		•	4.5 kΩ			•		•	

DIP Switch S2														
Output Signal					Output Signal									
Start Temperature					End Temperature									
R	S	3	4	5	6	7	8	9	10					
1	2	3	4	5	6	7	8	9	10					
•	-200	-328	•	0	32	•	75	167	•	210	410	•	475	887
•	-175	-283	•	5	41	•	85	185	•	230	446	•	500	932
•	-150	-238	•	10	50	•	90	194	•	240	454	•	525	997
•	-125	-193	•	15	59	•	95	203	•	250	482	•	550	1022
•	-100	-148	•	20	68	•	100	212	•	260	500	•	575	1067
•	-80	-130	•	25	77	•	110	230	•	270	518	•	600	1112
•	-60	-112	•	30	86	•	120	248	•	280	536	•	625	1157
•	-40	-94	•	35	95	•	130	266	•	290	554	•	650	1202
•	-20	-76	•	40	104	•	140	284	•	300	572	•	675	1247
•	-58	•	45	113	•	150	302	•	325	617	•	700	1292	
•	-40	•	50	122	•	160	320	•	350	662	•	725	1337	
•	-20	•	55	131	•	170	338	•	375	707	•	750	1382	
•	-4	•	60	140	•	180	356	•	400	752	•	775	1427	
•	14	•	65	149	•	190	374	•	425	797	•	800	1472	
•	32	•	70	158	•	200	392	•	450	842	•	825	1517	

The measurement span must have the following min. magnitude:
• in the Celsius scale (°C): 50 K
• in the Fahrenheit scale (°F): 90 K





Short description:

WAGO's loop-powered RTD temperature signal conditioner records sensors (Pt100, Pt200, Pt500, Pt1000) and resistors up to 4.5 kΩ, converting the temperature signal into a standard analog signal at the output.
The loop-powered RTD temperature signal conditioner provides safe isolation between input and output with 3 kV test voltage per EN 61010-1.

Features:

- No additional supply voltage required
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects a sensor wire break/short circuit

Notes	
Safety Information	The signal conditioner must only be configured with the DIP switch in the de-energized state.
Note	Use shielded signal cables! Only use shielded signal cables for analog input and output signals. This ensures the device maintains its specified accuracy and immunity to interference, even when external disturbances affect the signal cable.



Technical data

Configuration	
Configuration options	DIP switch

Input	
Input signal type	Pt sensors Resistance

Input (RTD sensors)	
Sensor types (RTD)	Pt100 Pt200 Pt500 Pt1000
Sensor connection	2-wire; 3-wire; 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	−200 ... +850 °C
Measurement span (RTD) min.	50 K

Input (resistors)	
Input range (resistor)	0 ... 1 kΩ; 0 ... 4.5 kΩ

Output (analog)	
Output signal type	Current
Output signal (current)	4 ... 20 mA 20 ... 4 mA
Load impedance (current output)	See derating graphic

Signal processing	
Step response (typ.)	1000 ms

Measurement error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ ((40 K/set measurement range [K]) + 0.1) %
Transmission error (under interference)	≤ 5 %
Temperature coefficient	≤ 0.02 %/K

Power supply	
Power supply type	Loop-powered (via output)
Supply voltage	8 ... 30 VDC (Power is derived from the output circuit.)
Power loss (max.) P _{I(max)}	0.7 W

Safety and protection

Rated Voltage	300 V; 150 V (UL)
Measurement category per EN/UL 61010-2-030	CAT II (input)
Protection type	IP20

Test voltage	
Test voltage (input/analog output)	3 kVAC; 50 ... 60 Hz; 1 min

Insulation coordination (UL)	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output)	Reinforced insulation (safe isolation)

Insulation coordination	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply)	Reinforced insulation (safe isolation)

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	Mounting type	DIN-35 rail

Material data		
Insulation material (main housing)		Polyamide (PA66)
Flammability class per UL94		V0
Fire load		0.013 MJ
Weight		38.9 g

Environmental requirements		
Ambient temperature (operation)		-25 ... +70 °C
Ambient temperature (storage)		-40 ... +85 °C
Temperature range of connection cable		≥ (T _{ambient} + 10 K)
Temperature range of the connection cable (UL)		75 °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; EN 61326-1; EN 50121-3-2
EMC emission of interference		EN 61000-6-3; EN 61326-1; EN 50121-3-2
Standards/specifications		EN 61010-1 EN 61373

Commercial data		
PU (SPU)		1 pcs
Packaging type		Bag
Country of origin		DE
GTIN		4055143475648
Customs tariff number		85437090300

Product classification		
UNSPSC		41111970
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	
RoHS Compliance Status	Compliant, No Exemption
SCIP notification number (Austria)	830a7e26-28ea-4705-ab6e-226f9c633520
SCIP notification number (Belgium)	63788937-7a1f-4563-936a-f01960202294
SCIP notification number (Bulgaria)	7573483d-d923-4363-9064-ce0784b75504
SCIP notification number (Czech Republic)	17fdd5aa-0c9d-4035-8fac-fb4e34ddac7f
SCIP notification number (Denmark)	f6a88738-2c30-4e26-8f7e-78d92a8961e5
SCIP notification number (Finland)	b4ce184e-8252-4b06-b805-6aa2c771805f
SCIP notification number (France)	7d65f4e8-4b0d-4e4d-922c-5b4b37ec9f15
SCIP notification number (Germany)	7eda7375-97a9-4708-8499-ee382843832f
SCIP notification number (Hungary)	eef5d1bb-60c8-4a7b-815f-42f57a0b5106
SCIP notification number (Italy)	9d811551-d172-4095-9c09-acc10881822b
SCIP notification number (Netherlands)	5b4bce60-08c5-43bc-b361-c0de92c2e4da
SCIP notification number (Poland)	05d900c2-b348-49b3-9862-d1595b7b0a8f
SCIP notification number (Romania)	5914960a-62a8-45a9-95fc-a9ee80aab951
SCIP notification number (Sweden)	d4592a7f-9ffa-4c4d-9de5-be795739849b

Approvals / Certificates		
General approvals		Declarations of conformity and manufacturer's declarations
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03078
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199
		Approval
		EU-Declaration of Conformity WAGO GmbH & Co. KG
		UK-Declaration of Conformity WAGO GmbH & Co. KG

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 857-815	

Documentation			
Manual		Bid Text	
WAGO Temperature Signal Conditioners		857-815	
		19.02.2019	xml 5.60 KB
		857-815	
		20.02.2019	docx 17.98 KB



Instruction Leaflet			
Temperature signal conditioner for RTD sensors; Current output signal; Power via output	V 2.0.0 29.09.2020	pdf 2278.39 KB	

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 857-815	EPLAN Data Portal 857-815
	WSCAD Universe 857-815
	ZUKEN Portal 857-815

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



1.1.3.1 Jumper

 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

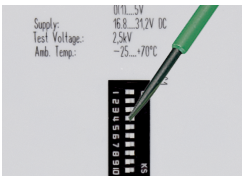
1.1.7.1 Operating tool



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

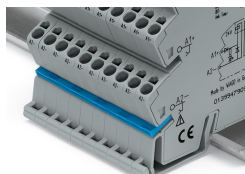
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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