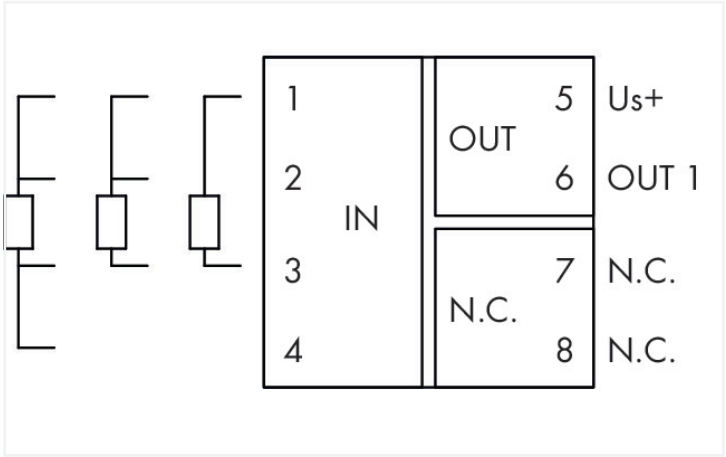
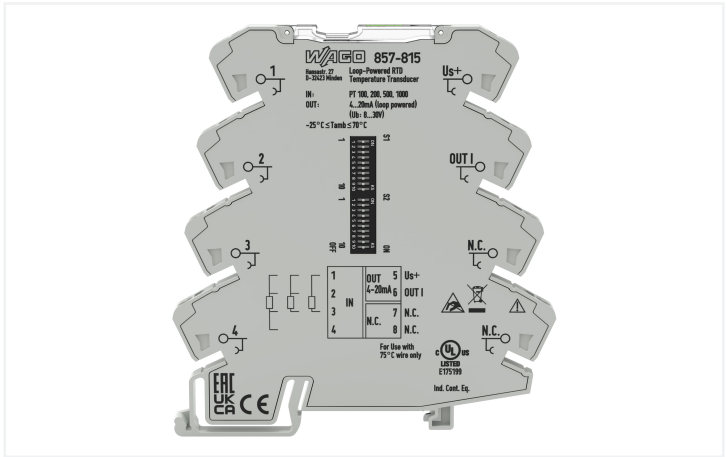


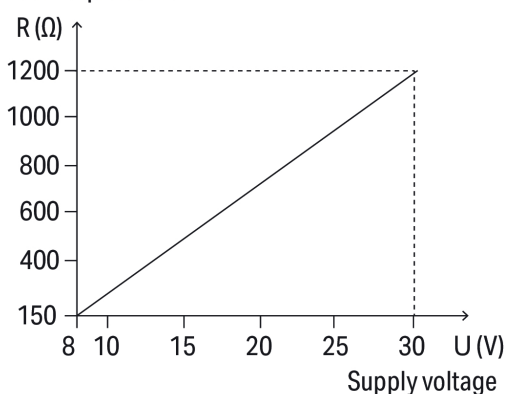
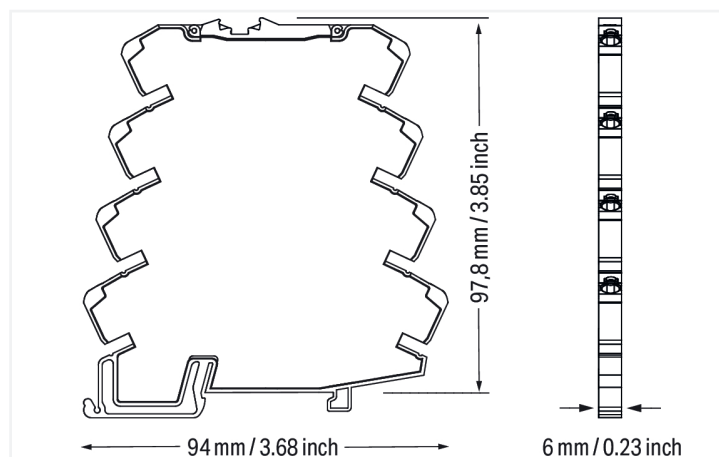


DIP Switch 5										
Sensor Connection		Sensor Type	Output Signal	N.C.	Measurement Range Underflow		Measurement Range Overflow		Wire Break	Short Circuit
1	2	3	4	5	6	7	8	9	10	
• 3 wire	•	P2000	20...4 mA			Lower limit of output range - 5%	Upper limit of output range + 2.5%	Upper limit of output range - 5%	Lower limit of output range - 12.5%	
• 4 wire	•	P1500	0...20 mA			Lower limit of output range	Upper limit of output range	Upper limit of output range	Lower limit of output range	
• 2 wire	•	P1500	0...20 mA			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5%	Lower limit of output range	
		• 4.5 kΩ				Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range	

Output Signal										Output Signal									
Star Temperature										Star Temperature									
1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
-200	-180	-160	-140	-120	-100	-80	-60	-40	-20	75	167	260	353	446	539	632	725	818	911
-175	-155	-135	-115	-95	-75	-55	-35	-15	5	85	185	278	371	464	557	650	743	836	929
-150	-130	-110	-90	-70	-50	-30	-10	10	30	90	194	287	380	473	566	659	752	845	938
-125	-105	-85	-65	-45	-25	-5	15	35	55	95	203	296	389	482	575	668	761	854	947
-100	-80	-60	-40	-20	0	20	40	60	80	100	212	305	398	491	584	677	770	863	956
-75	-55	-35	-15	5	25	45	65	85	105	105	221	314	407	500	593	686	779	872	965
-50	-30	-10	10	30	50	70	90	110	130	110	230	323	416	509	602	695	788	881	974
-25	-5	15	35	55	75	95	115	135	155	115	239	332	425	518	611	704	797	890	983
0	20	40	60	80	100	120	140	160	180	120	248	341	434	527	620	713	806	899	992
25	45	65	85	105	125	145	165	185	205	125	257	350	443	536	629	722	815	908	1001
50	70	90	110	130	150	170	190	210	230	130	266	359	452	545	638	731	824	917	1010
75	95	115	135	155	175	195	215	235	255	135	275	368	461	554	647	740	833	926	1019
100	120	140	160	180	200	220	240	260	280	140	284	377	470	563	656	749	842	935	1028
125	145	165	185	205	225	245	265	285	305	145	293	386	479	572	665	758	851	944	1037
150	170	190	210	230	250	270	290	310	330	150	302	395	488	581	674	767	860	953	1046
175	195	215	235	255	275	295	315	335	355	155	311	404	497	590	683	776	869	962	1055
200	220	240	260	280	300	320	340	360	380	160	320	413	506	599	692	785	878	971	1064
225	245	265	285	305	325	345	365	385	405	165	329	422	515	608	701	794	887	980	1073
250	270	290	310	330	350	370	390	410	430	170	338	431	524	617	710	803	896	989	1082
275	295	315	335	355	375	395	415	435	455	175	347	440	533	626	719	812	905	998	1091
300	320	340	360	380	400	420	440	460	480	180	356	449	542	635	728	821	914	1007	1100
325	345	365	385	405	425	445	465	485	505	185	365	458	551	644	737	830	923	1016	1109
350	370	390	410	430	450	470	490	510	530	190	374	467	560	653	746	839	932	1025	1118
375	395	415	435	455	475	495	515</												

The measurement span must have the following min. magnitude:

- in the Celsius scale (°C): 50 K
- in the Fahrenheit scale (°F): 90 K



Derating



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 lines! Only use shielded signal lines for analog input and output signals. Only then can you ensure that the accuracy and interference immunity specified for the device can be achieved, even in the presence of interference acting on the signal cable.



Technical data

Configuration		Input	
Configuration options	DIP switch	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

		Test voltage	
Rated Voltage	300 V; 150 V (UL)	Test voltage (input/analog output)	3 kVAC; 50 ... 60 Hz; 1 min
Measurement category per EN/UL 61010-2-030	CAT II (input)		
Protection type	IP20		

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

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

Documentation			
Manual		Bid Text	
WAGO Temperature Si- gnal 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

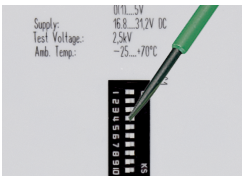
1.1.7.1 Operating tool



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

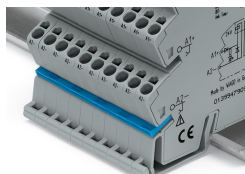
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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