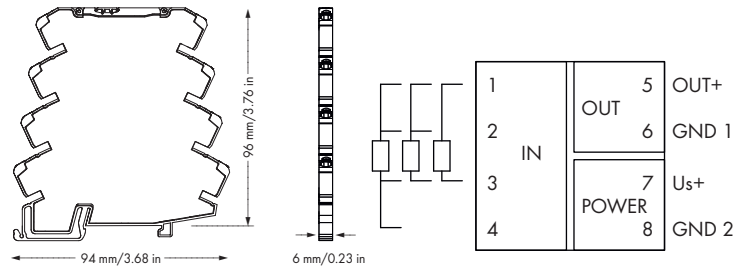
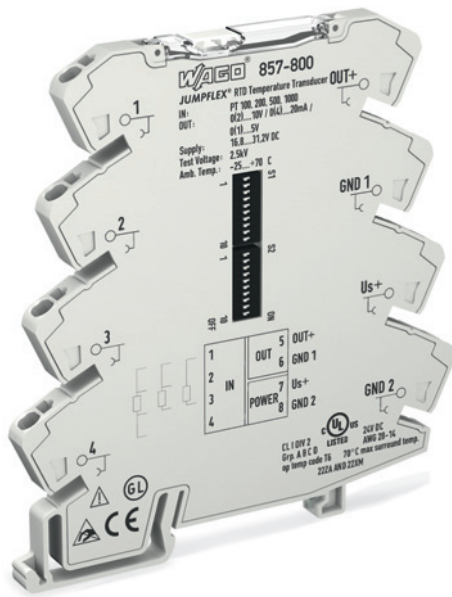
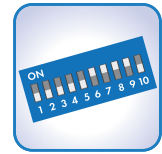


JUMPFLEX® Signal Conditioners

Temperature Signal Conditioner for Pt 00, Pt200, Pt500 and Pt1000 as well as Resistors



Configuration via:



DIP switch

Short description:

The 857-800 Temperature Signal Conditioner records Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm, converting the temperature signal into a standard analog signal on the output side.

Characteristics:

- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3-, and 4-wire connection technology
- Calibrated scale switching
- Sensor's wire break/short circuit
- Measuring range underflow/overflow
- Clipping capability allows analog standard signal limitation to upper range values
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

Technical Data

Configuration:

Configuration DIP switch

Input:

Input signal PT sensors and resistors
 Sensor types Pt100, Pt200, Pt500, Pt1000
 Sensor connection 2-wire, 3-wire, 4-wire (switchable)
 Temperature range -200 °C ... +850 °C
 Sensorspeisestrom < 0.5 mA
 Resistor input 0 ... 1 kΩ , 0 ... 4.5 kΩ

Output:

Output signal 0 ... 20 mA, 4 ... 20 mA,
 0 ... 10 V, 2 ... 10 V,
 0... 5 V, 1 ... 5 V,
 0 ... 10 mA, 2 ... 10 mA
 Load impedance ≤ 600 Ω (Out = mA)
 ≥ 2 kΩ (Out = V)
 Step response 180 ms (360 ms at 3-wire)

General specifications:

Nominal supply voltage V_s 24 VDC
 Supply voltage range V_s -30 % ... +30 %
 Current consumption at 24 VDC < 40 mA
 Min. measuring span 50 K (50 Ω)
 Transmission error ≤ 0.1 % at max. measuring span
 Transmission error of set measuring span
 measuring span $((10 \text{ K} / \text{set measuring span [K]} + 0.1) \%$
 Temperature coefficient ≤ 0.02 % /K

Description

JUMPFLEX® Signal Conditioner, for DIN 35 857-800
 Temperature Signal Conditioner for Pt 100, Pt 200, Pt 500 and
 Pt 1000 as well as Resistors 0 ... 1 kΩ; 0 ... 4.5 kΩ

Item No.

857-800

Pack. Unit

1

Technical Data

Environmental requirements:

Ambient operating temperature -25 °C ... +70 °C
 Storage temperature -40 °C ... +85 °C

Safety and protection:

Test voltage (input/output/supply) 2.5 kV AC, 50 Hz, 1 min

Connection and type of mounting:

Wire connection Push-in CAGE CLAMP®
 Cross sections solid:
 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
 fine-stranded:
 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
 Strip lengths 9 ... 10 mm / 0.35 ... 0.39 in

Dimensions and weight:

Dimensions (mm) W x H x L 6 x 96 x 94
 Height from upper-edge of DIN 35 rail
 Weight 42 g

Standards and approvals:

Conformity marking CE
 UL 508
 ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4
 Shipbuilding GL, PRS, NKK, DNV, BV
 EMC immunity of interference EN 61000-6-2
 EMC emission of interference EN 61000-6-4

Accessories

see pages 226 ... 236

DIP Switch Adjustability

● = ON

857-800

DIP Switch S1

Wire connection		Sensor type			Output signal					Measuring range underflow	Measuring range overflow	Wire break	Short circuit
1	2	3	4	5	6	7	8	9	10				
	2-wire			Pt100			0 ... 20 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 % *
●	3-wire	●		Pt200	●		4 ... 20 mA						
	4-wire		●	Pt500		●	0 ... 10 mA			Lower limit of output range	Upper limit of output range + 2,5 %	Upper limit of output range + 5 %	Lower limit of output range
		●	●	Pt1000	●	●	2 ... 10 mA	●					
				1 kΩ			0 ... 10 V			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
			●	4.5 kΩ	●		2 ... 10 V	●					
						●	0 ... 5 V			Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
					●	●	1 ... 5 V	●	●				

* acc. to NAMUR NE 43

DIP Switch S2

Start temperature				End temperature																															
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F						
														●	75	167					●	210	410					●	475	887					
●				-200	-328	●						0	32	●						●	80	176	●				●	220	428	●		●	500	932	
	●			-175	-283		●					5	41		●					●	85	185		●			●	230	446		●		●	525	997
●	●			-150	-238	●	●					10	50	●	●					●	90	194	●	●			●	240	464	●	●		●	550	1022
		●		-125	-193			●				15	59			●				●	95	203			●		●	250	482			●	575	1067	
●		●		-100	-148	●		●				20	68	●		●				●	100	212	●		●		●	260	500	●		●	600	1112	
	●	●		-90	-130		●	●				25	77		●	●				●	110	230		●	●		●	270	518		●	●	625	1157	
●	●	●		-80	-112	●	●	●				30	86	●	●	●				●	120	248	●	●	●		●	280	536	●	●	●	650	1202	
			●	-70	-94				●			35	95			●	●			●	130	266			●		●	290	554			●	675	1247	
●			●	-60	-76	●			●			40	104	●		●	●			●	140	284	●		●		●	300	572	●		●	700	1292	
	●		●	-50	-58		●		●			45	113		●	●	●			●	150	302		●	●		●	325	617		●	●	725	1337	
●	●		●	-40	-40	●	●	●				50	122	●	●	●	●			●	160	320	●	●	●		●	350	662	●	●	●	750	1382	
		●	●	-30	-22			●	●			55	131			●	●	●		●	170	338			●		●	375	707			●	775	1427	
●		●	●	-20	-4	●		●	●			60	140	●		●	●	●		●	180	356	●		●	●	●	400	752	●		●	800	1472	
	●	●	●	-10	14		●	●	●			65	149		●	●	●	●		●	190	374		●	●	●	●	425	797		●	●	825	1517	
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●		●	200	392	●	●	●	●	●	450	842	●	●	●	850	1562	

The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

Default Settings

All DIP switches are in „OFF“ position for delivery.	
Sensor connection	2-wire
Sensor type	Pt 100
Start temperature	0 °C
End temperature	100 °C
Output signal	0 ... 20 mA
Measuring range underflow	0 mA
Measuring range overflow	20.5 mA
Wire break	21 mA
Short circuit	0 mA