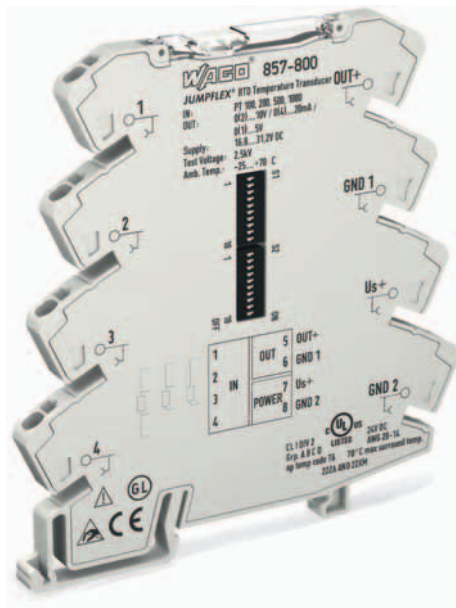
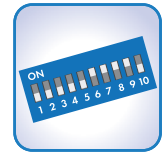


# JUMPFLEX® Signal Conditioners

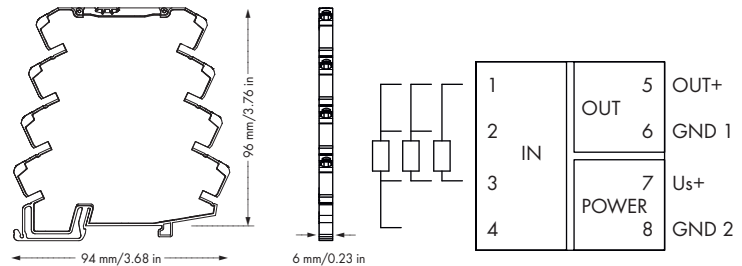
Temperature Signal Conditioner for Pt100, Pt200, Pt500 and Pt1000 \* as well as Resistors 0 ... 1 kΩ; 0 ... 4.5 kΩ



Configuration via:



DIP switch



### Short description:

The 857-801 Temperature Signal Conditioner records Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kΩ, converting the temperature signal into a standard analog signal on the output side..

### Characteristics:

- PC configuration interface
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kΩ
- 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, interface configuration software, interface configuration app
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 $V_s$	24V DC
Supply voltage range	16.8 V ... 31.2 V
Current consumption at 24 V DC	< 40 mA
Min. measuring span	50 K (50 Ω)
Transmission error	≤ 0.1 % at max. measuring span
Transmission error of set measuring span	((10 K / set measuring span [K]) + 0.1) %
Temperature coefficient	≤ 0.02 % /K

Description	Item No.	Pack. Unit
<b>JUMPFLEX® Signal Conditioner, for DIN 35</b>	<b>857-801</b>	<b>1</b>
Temperature Signal Conditioner for Pt 100, Pt 200, Pt 500 and Pt 1000 as well as Resistors *		
Technical Data		
<b>Environmental requirements:</b>		
Ambient operating temperature	-25 °C ... +70 °C	
Storage temperature	-40 °C ... +85 °C	
<b>Safety and protection:</b>		
Test voltage (input/output/supply)	2.5 kV AC, 50 Hz, 1 min	
<b>Connection and type of mounting:</b>		
Wire connection	CAGE CLAMP® S	
Cross sections	solid: 0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> / AWG 28 ... 14 fine-stranded: 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> / AWG 22 ... 14	
Strip lengths	9 ... 10 mm / 0.37 in	
<b>Dimensions and weight:</b>		
Dimensions (mm) W x H x L	6 x 96 x 94	
Weight	Height from upper-edge of DIN 35 rail 49.2 g	
<b>Standards and approvals:</b>		
Conformity marking	CE	
UL 508		
ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
Shipbuilding		
<b>Accessories</b>	see pages 226 ... 236	
( * Additional setting options as well as output signal inversion via PC configuration software or smartphone app)		

## DIP Switch Adjustability

● = ON

857-801

### 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	●				●	●	500	932	
	●			-175	-283		●					5	41		●					●	85	185		●			●	●	525	997	
		●		-150	-238	●	●					10	50	●	●					●	90	194	●	●			●	●	550	1022	
			●	-125	-193			●				15	59			●				●	95	203			●		●	●	575	1067	
●		●		-100	-148	●		●				20	68	●		●				●	100	212	●		●		●	●	600	1112	
	●	●		-90	-130		●	●				25	77		●	●				●	110	230		●	●		●	●	625	1157	
●	●	●		-80	-112	●	●	●				30	86	●	●	●				●	120	248	●	●	●		●	●	650	1202	
			●	-70	-94				●			35	95			●	●			●	130	266			●		●	●	675	1247	
●			●	-60	-76	●			●			40	104	●		●	●			●	140	284	●		●		●	●	700	1292	
	●		●	-50	-58		●		●			45	113		●	●	●			●	150	302		●	●		●	●	725	1337	
●	●		●	-40	-40	●	●	●				50	122	●	●	●	●			●	160	320	●	●	●		●	●	750	1382	
		●	●	-30	-22			●	●			55	131			●	●	●		●	170	338			●	●	●	●	775	1427	
●		●	●	-20	-4	●		●	●			60	140	●		●	●	●		●	180	356	●		●	●	●	●	800	1472	
	●	●	●	-10	14		●	●	●			65	149		●	●	●	●		●	190	374		●	●	●	●	●	825	1517	
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●		●	200	392	●	●	●	●	●	●	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.  
This is the position used to parameterize the device via PC configuration software.

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