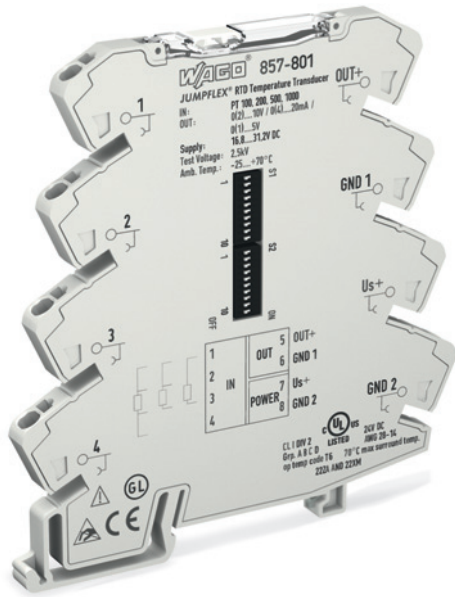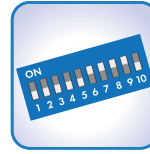# 857-801

JUMPFLEX® Signal Conditioners

Temperature Signal Conditioner for Pt100, Pt200, Pt500 and Pt1000 as well as Resistors

WAGO®

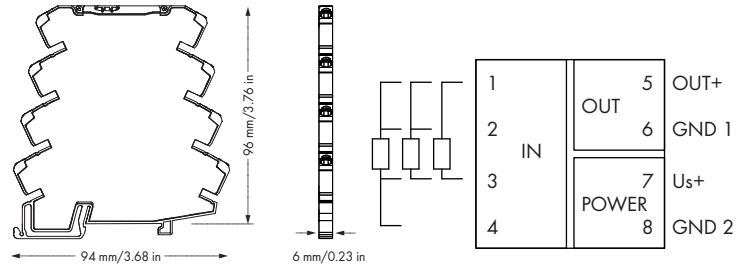**Configuration via:**

DIP switch

Interface configuration software

Interface configuration app

Short description:
The 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::
- PC configuration interface
- 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 acc. to EN 61140

Description	Item No.	Pack. Unit
JUMPFLEX® Signal Conditioner, for DIN 35	**857-801**	1
Temperature Signal Conditioner for		
Pt 100, Pt 200, Pt 500 and Pt 1000 as well as		
Resistors *		

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	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	((10 K / set measuring span [K]) + 0.1) %
Temperature coefficient	≤ 0.02 % /K

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	49.2 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

(* Additional setting options as well as output signal inversion via PC configuration software or smartphone app)

DIP Switch Adjustability

● = ON

DIP Switch S1

1	2	Wire connection	3	4	5	Sensor type	6	7	8	Output signal	9	10	Measuring range underflow	Measuring range overflow	Wire break	Short circuit
		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

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	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

Header groups: **Start temperature** (columns 1, 2, 3, 4, °C, °F) and **End temperature** (columns 5, 6, 7, 8, 9, 10, °C, °F — repeated four times).

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