Temperature signal conditioner for thermocouples; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

Item No.: 857-811

Temperature signal conditioner for thermocouples; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width

Marking

RoHS ✓
Compliant

Business data

Supplier	*WAGO*
Item no.	*857-811*
GTIN / EAN	*4045454502751*
Content	*1*

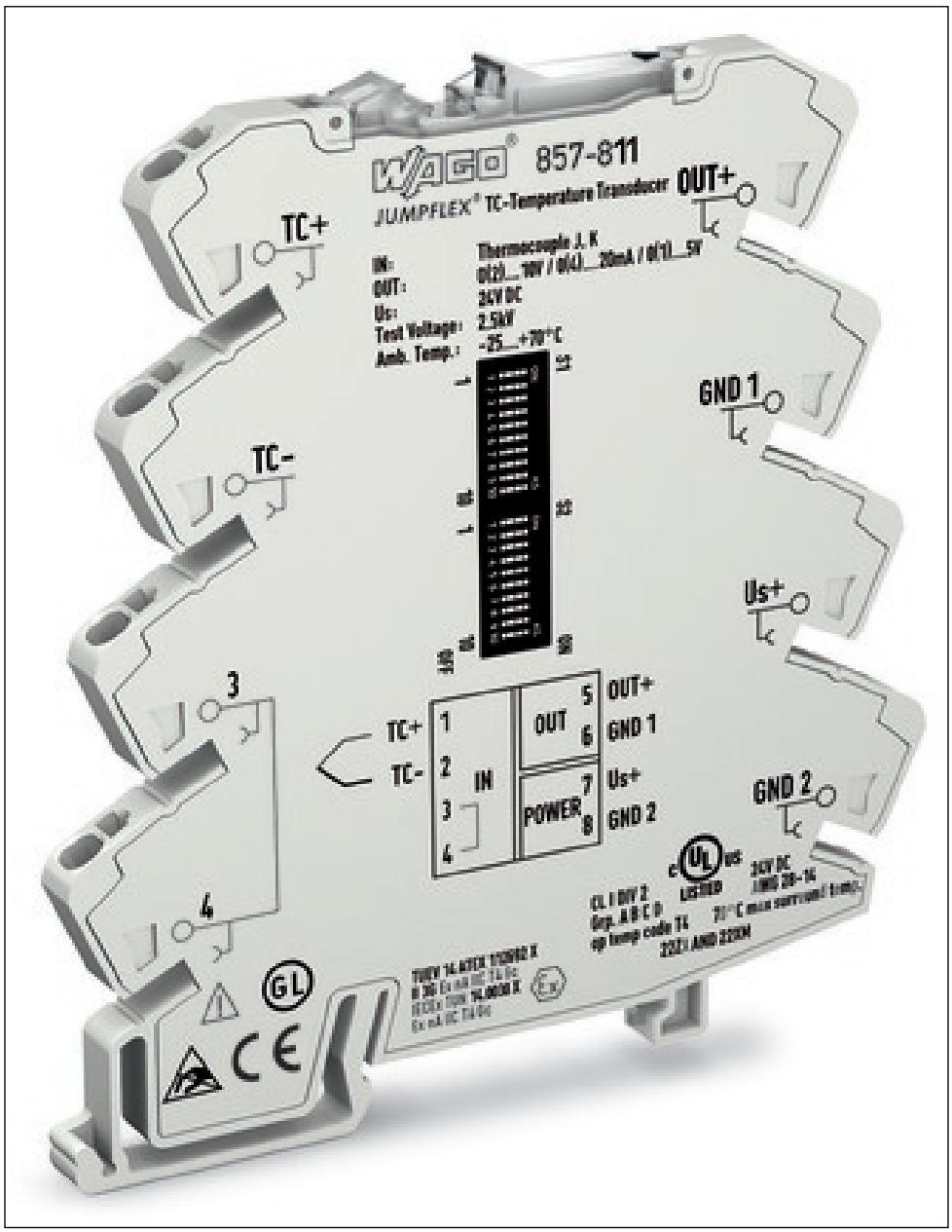
Notes

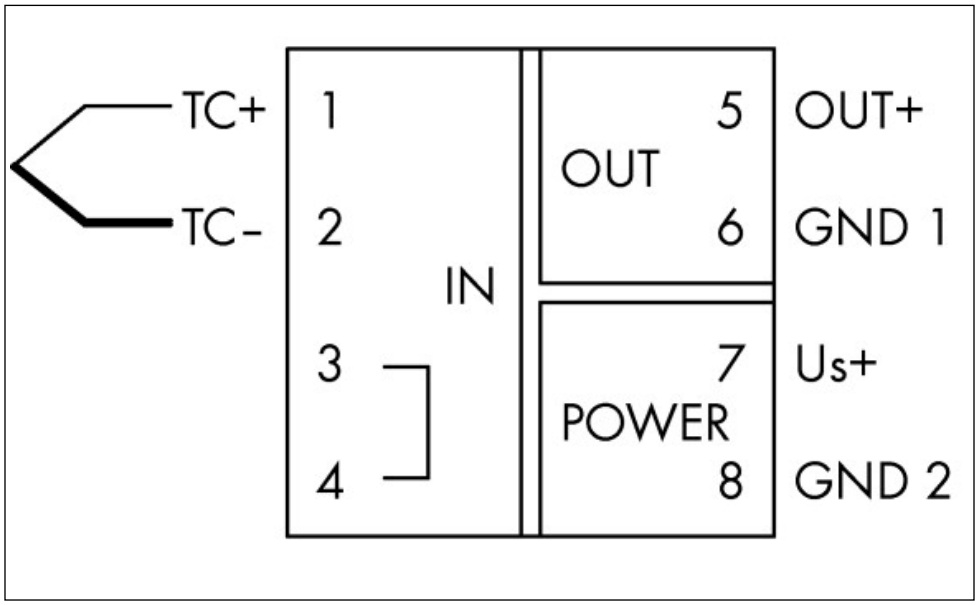
*Item description:Short description:This temperature signal conditioner records signals from type J and K (E, R, N, S, T, B, C) thermocouples and converts the temperature signal into a standard analog signal.Features:PC configuration interfaceFor type J and K (E, R, N, S, T, B, C) thermocouplesCold junction compensation (on/off)Switching between measurement ranges is calibratedDetect sensor's wire breakDetect measurement range underflow/measurement range overflowIntegrate a switchable clipping function to limit the standard analog signal to the upper range values Safe 3-way isolation with 2.5 kV test voltage per EN 61140Note:(* Additional setting options as well as output signal inversion via interface configuration software or interface configuration app)Step response: 60 ms without cold junction compensation/120 ms with cold junction compensationOutput signal voltage: 0 … 5 V; 1 … 5 V; 0 … 10 V; 2 … 10 VOutput signal current: 0 … 10 mA; 2 … 10 mA; 0 … 20 mA; 4 … 20 mA*

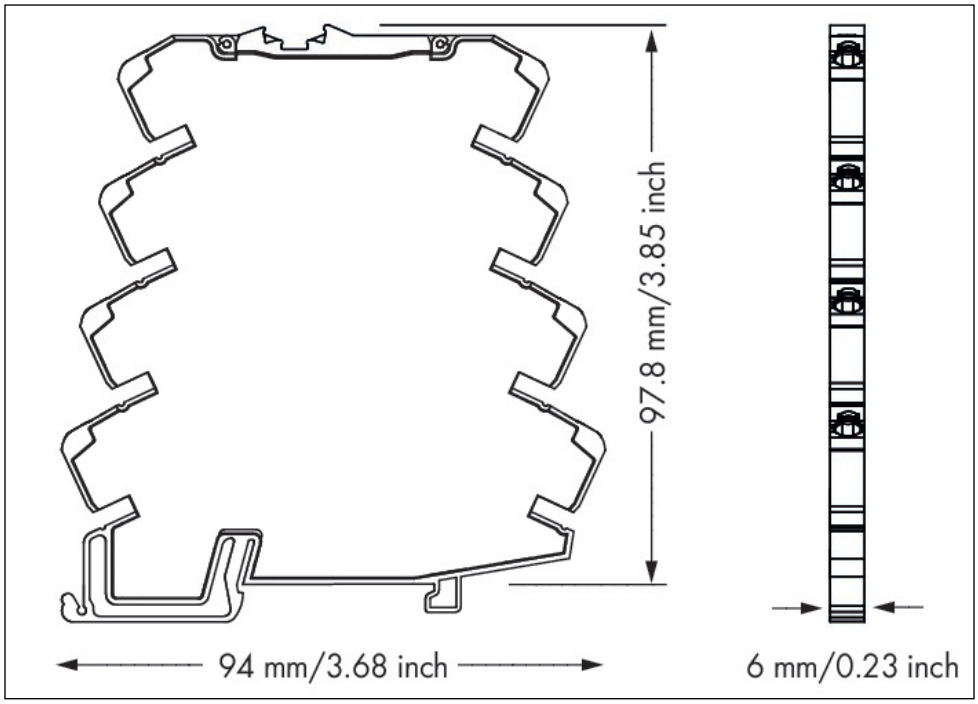
Technical data

Miscellaneous	
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 Inch*
Width	*6 mm / 0.236 Inch*
Height from upper-edge of DIN-35 rail	*97.8 mm / 3.85 Inch*
Depth	*94 mm / 3.701 Inch*
Type of mounting	*DIN-35 rail*
Color	*light gray*
Fire load [MJ]	*0.598 [MJ]*
Weight [g]	*36 [g]*
Ambient temperature (operation)	*-25 … 70 °C*
Ambient temperature (storage)	*-40 … 85 °C*
Conformity marking	*CE*
EMC immunity to interference	*EN 61000-6-2*
EMC emission of interference	*EN 61000-6-4*
Product Family	*JUMPFLEX Signal Conditioners*
Main product function	*Temperature signal conditioners*
Product type	*Signal conditioners*
Type of power supply	*24 VDC*
Configuration options	*DIP switches*
Measured variable	*Temperature*

Images & drawings




TC+
TC–
1
2
IN
3
4
OUT
5
6
OUT+
GND 1
POWER
7
8
Us+
GND 2


97.8 mm/3.85 inch
94 mm/3.68 inch
6 mm/0.23 inch

857-811

DIP Switch Adjustability

● = ON

DIP Switch S1

Cold junction compensation	Sensor type			Output signal					Measuring range underflow	Measuring range overflow	Wire break
1	2	3		4	5	6		7 8			
on			J				0 ... 20 mA		Lower limit of output range -5 %*	Upper limit of output range +2,5 %*	Upper limit of output range +5 %*
off	●		K	●			4 ... 20 mA				
						●	0 ... 10 mA	●	Lower limit of output range	Upper limit of output range +2,5 %	Upper limit of output range +5 %
					●	●	2 ... 10 mA				
							0 ... 10 V	●	Lower limit of output range	Upper limit of output range	Upper limit of output range +5 %
				●		●	2 ... 10 V				
					●	●	0 ... 5 V	● ●	Lower limit of output range	Upper limit of output range	Lower limit of output range
				●	●	●	1 ... 5 V				

DIP 9 and 10 n.c.

*acc. to NAMUR NE 43

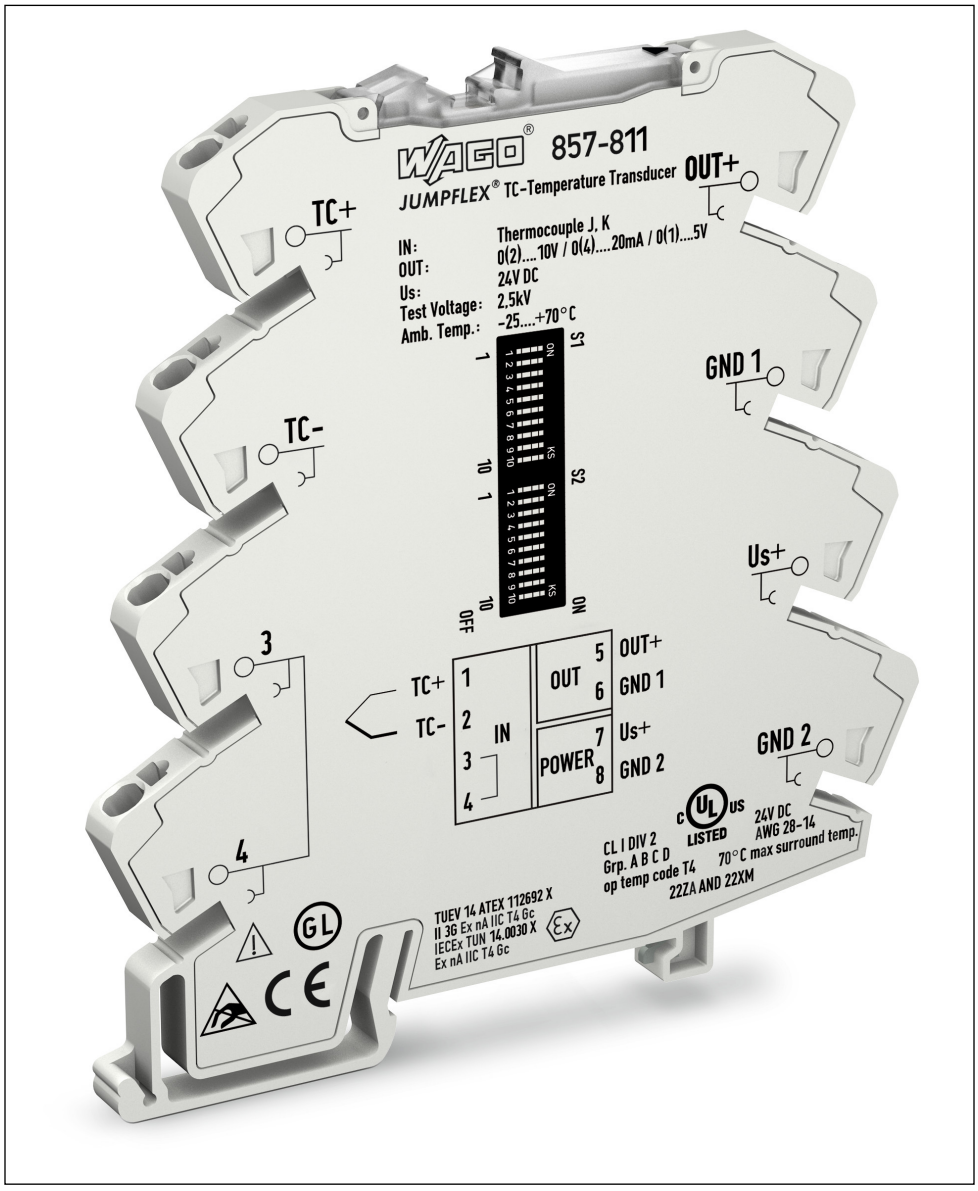
DIP Switch S2

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
																		●		225	437						●	625	1157					●	●	1025	1877
●				-200	-328	●						0	32	●				●		250	482	●					●	650	1202	●				●	●	1050	1922
	●			-175	-283		●					10	50		●			●		275	527		●				●	675	1247		●			●	●	1075	1967
●	●			-150	-238	●	●					20	68	●	●			●		300	572	●	●				●	700	1292	●	●			●	●	1100	2012
		●		-125	-193			●				30	86			●		●		325	617			●			●	725	1337			●		●	●	1125	2057
●		●		-100	-148	●		●				40	104	●		●		●		350	662	●		●			●	750	1382	●		●		●	●	1150	2102
	●	●		-90	-130		●	●				50	122		●	●		●		375	707		●	●			●	775	1427		●	●		●	●	1175	2147
●	●	●		-80	-112	●	●	●				60	140	●	●	●		●		400	752	●	●	●			●	800	1472	●	●	●		●	●	1200	2192
			●	-70	-94				●			70	158				●	●		425	797				●		●	825	1517				●	●	●	1225	2237
●			●	-60	-76	●			●			80	176	●			●	●		450	842	●			●		●	850	1562	●			●	●	●	1250	2282
	●		●	-50	-58		●		●			90	194		●		●	●		475	887		●		●		●	875	1607		●		●	●	●	1275	2327
●	●		●	-40	-40	●	●		●			100	212	●	●		●	●		500	932	●	●		●		●	900	1652	●	●		●	●	●	1300	2372
		●	●	-30	-22			●	●			125	257			●	●	●		525	977			●	●		●	925	1697			●	●	●	●	1325	2417
●		●	●	-20	-4	●		●	●			150	302	●		●	●	●		550	1022	●		●	●		●	950	1742	●		●	●	●	●	1350	2462
	●	●	●	-10	14		●	●	●			175	347		●	●	●	●		575	1067		●	●	●		●	975	1787		●	●	●	●	●	1375	2507
●	●	●	●	0	32	●	●	●	●			200	392	●	●	●	●	●		600	1112	●	●	●	●		●	1000	1832	●	●	●	●	●	●	1400	2552

The minimum distance from the start temperature to the end temperature may not fall short of 100K degrees on the Celsius (C) scale or 212K 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.	
Cold junction compensation	on
Thermocouple	Type J
Start temperature	0 °C
End temperature	1000 °C
Output signal	0 ... 20 mA
Measuring range underflow	0 mA
Measuring range overflow	20,5 mA
Wire break	21 mA



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