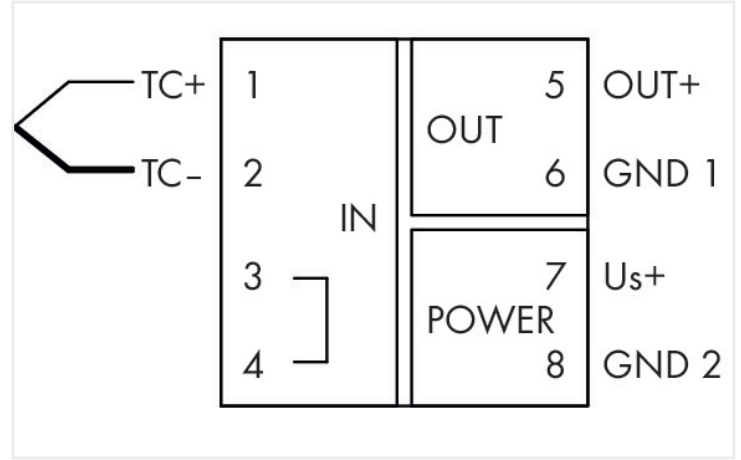
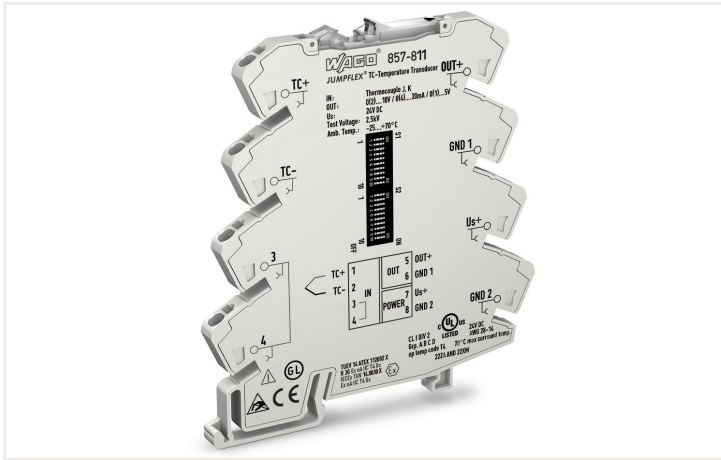


Data sheet | Item number: 857-811

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



857-811
DIP Switch Adjustability

DIP Switch S1

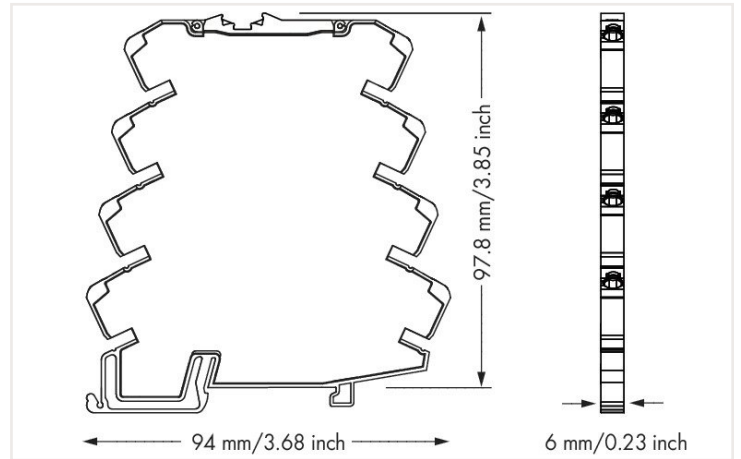
Gold Junction Compensation	Sensor Type	Output Signal	Measurement Range Underflow	Measurement Range Overflow	Wire Break
1	2	3	4	5	6
an	J, K	0...20 mA	Lower limit of output range - 5 %	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %
aus	K	4...20 mA	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %
		0...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %
		2...10 mA	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %
		0...10 V	Lower limit of output range	Upper limit of output range	Lower limit of output range
		2...10 V	Lower limit of output range	Upper limit of output range	Lower limit of output range
		0...5 V	Lower limit of output range	Upper limit of output range	Lower limit of output range
		1...5 V	Lower limit of output range	Upper limit of output range	Lower limit of output range

DIP 9 and 10 n.c.

DIP Switch S2

Start Temperature										End Temperature									
1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
0	32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	512	544	576	608
-200	-320	-440	-560	-680	-800	-920	-1040	-1160	-1280	-1400	-1520	-1640	-1760	-1880	-2000	-2120	-2240	-2360	-2480
-175	-260	-345	-430	-515	-600	-685	-770	-855	-940	-1025	-1110	-1195	-1280	-1365	-1450	-1535	-1620	-1705	-1790
-150	-200	-250	-300	-350	-400	-450	-500	-550	-600	-650	-700	-750	-800	-850	-900	-950	-1000	-1050	-1100
-125	-193	-261	-329	-397	-465	-533	-601	-669	-737	-805	-873	-941	-1009	-1077	-1145	-1213	-1281	-1349	-1417
-100	-148	-196	-244	-292	-340	-388	-436	-484	-532	-580	-628	-676	-724	-772	-820	-868	-916	-964	-1012
-80	-130	-180	-230	-280	-330	-380	-430	-480	-530	-580	-630	-680	-730	-780	-830	-880	-930	-980	-1030
-60	-112	-164	-216	-268	-320	-372	-424	-476	-528	-580	-632	-684	-736	-788	-840	-892	-944	-996	-1048
-40	-94	-146	-198	-250	-302	-354	-406	-458	-510	-562	-614	-666	-718	-770	-822	-874	-926	-978	-1030
-20	-76	-128	-180	-232	-284	-336	-388	-440	-492	-544	-596	-648	-700	-752	-804	-856	-908	-960	-1012
-10	-58	-110	-162	-214	-266	-318	-370	-422	-474	-526	-578	-630	-682	-734	-786	-838	-890	-942	-994
0	-40	-80	-120	-160	-200	-240	-280	-320	-360	-400	-440	-480	-520	-560	-600	-640	-680	-720	-760
-20	-4	-44	-84	-124	-164	-204	-244	-284	-324	-364	-404	-444	-484	-524	-564	-604	-644	-684	-724
-10	14	54	94	134	174	214	254	294	334	374	414	454	494	534	574	614	654	694	734
0	32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	512	544	576	608

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.



Short description:

WAGO's temperature signal conditioner records signals from thermocouples of type J and K (E, R, N, S, T, B, C) and converts the temperature signal into a standard analog signal.

Features:

- PC configuration interface
- For thermocouples of type J and K (E, R, N, S, T, B, C)
- Cold junction compensation (On/Off)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Clipping capability for analog signal limitation to output end values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Notes

Note	Additional setting options as well as output signal inversion via WAGO Interface Configuration Software or WAGO Interface Configuration App
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Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App
-----------------------	---

Input

Input signal type	TC sensors
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Input – TC sensors

Sensor types (TC)	Type J Type K
Temperature measurement range (TC)	-210 ... 1200 °C (Type J); -200 ... 1350 °C (Type K)
Measurement span (TC) min.	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (typ. 2 K)

Output – analog

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$

Signal processing

Step response (typ.)	60 ms (Cold junction compensation (Off)); 120 ms (Cold junction compensation (ON))
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Measurement error

Transmission error (typ.)	$\leq 0.1\%$ at max. measurement span (type J, K)
Transmission error for the set measurement range	$\leq (150 \text{ K}/\text{set measurement range [K]}) \%$
Temperature coefficient	$\leq 0.04 \%/K$

Supply

Power supply type	24 VDC
Nominal supply voltage U_s	DC 24 V
Supply voltage range	$\pm 30 \%$
Current consumption at nominal supply voltage	$\leq 40 \text{ mA}$

Safety and protection

Protection type	IP20
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Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
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Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 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	DIN-35 rail
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Material data

Color	light gray
Fire load	0.407 MJ
Weight	36 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °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
EMC emission of interference	EN 61000-6-4
Standards/specifications	DNV

Commercial data

Product Group	6 (Interface Electronics)
eCl@ss 10.0	27-21-01-29
eCl@ss 9.0	27-20-02-06
ETIM 8.0	EC002919
ETIM 7.0	EC002919
PU (SPU)	1 Stück
Packaging type	Bag
Country of origin VKOrg Germany	DE
GTIN	4045454502751
Customs tariff number VKOrg Germany	85437090300

Approvals and certificates

Ex-Approvals



Ex nA IIC T4 Gc

Ex-Approvals

UL	ANSI/ISA 12.12.01	E198726
Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)		

Approval	Standard	Certificate name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
CCCEX CQST/CNEx	CNCA-C23-01	2020312310000210 (Ex nA IIC T4 Gc)
EAC Brjansker Zertifizierungs- stelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00144/19 (2 Ex nA IIC T4 Gc X)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X

Country specific Approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

Ship Approvals



Approval	Standard	Certificate name
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAA00001D1
PRS Polski Rejestr Statków	-	TE/2186/880590/18

UL-Approvals



Approval	Standard	Certificate name
UL UL International Nether- lands B.V. (ORDINARY LO- CATIONS)	UL 508	E175199 Sec.4

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-811 ↓

Documentation





Additional Information			
Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 259.56 KB	↓

Bid Text			
857-811	19.02.2019	xml 6.22 KB	↓
857-811	20.02.2019	docx 17.43 KB	↓



Instruction Leaflet

Messumformer und Trennverstärker	pdf 2348.53 KB	↓
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CAD/CAE-Data

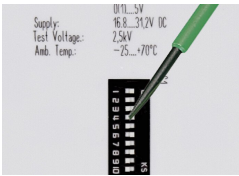
CAD data		CAE data	
2D/3D Models 857-811		EPLAN Data Portal 857-811	
		WSCAD Universe 857-811	
		ZUKEN Portal 857-811	

Engineering-Software

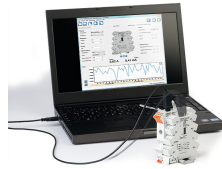
Software for Interface-Products			
WAGO Interface Configuration Software G2 FULL	1.0.8.6 20.01.2022	exe 111289.67 KB	
WAGO Interface Configuration Software G2 SMALL	1.0.8.6 20.01.2022	exe 29307.84 KB	

Installation notes

Configuring



Configuration via DIP switch

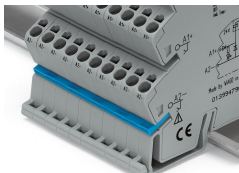


Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App

Commoning



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