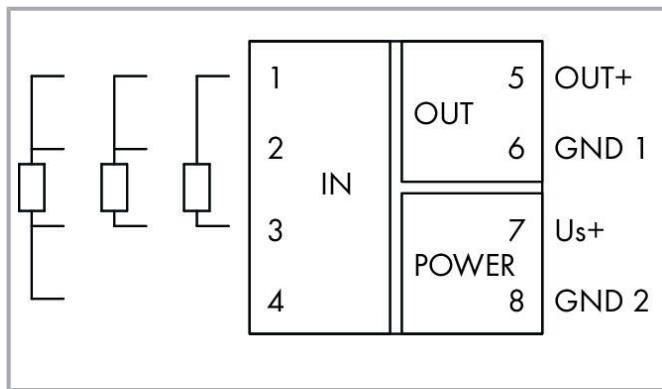
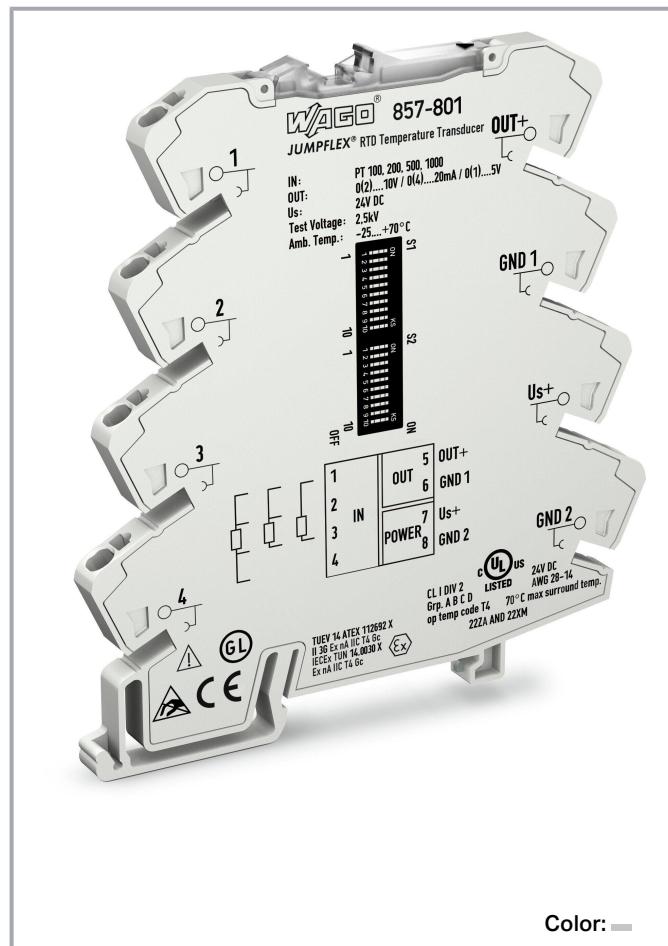


Data sheet | Item number: 857-801

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



www.wago.com/857-801

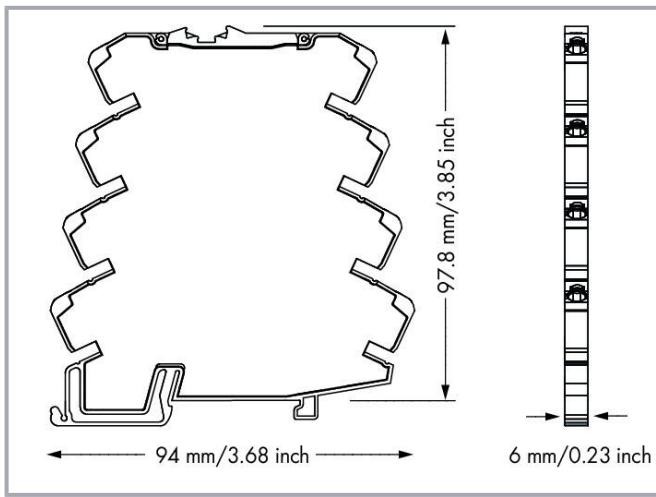


Color: ■■■■■

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
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We are always happy to take your call at +49 (571) 887-44222.



857-801									
DIP Switch Adjustability									
DIP Switch S1									
Wire Connection	1	2	3	4	5	Sensor Type	6	7	8
2-wire	•	•	•	•	•	Pt100	•	•	0 ... 20 mA
3-wire	•	•	•	•	•	Pt200	•	•	4 ... 20 mA
4-wire	•	•	•	•	•	Pt500	•	•	0 ... 10 mA
	•	•	•	•	•	Pt1000	•	•	2 ... 10 mA
	•	•	•	•	•	1 kΩ	•	•	0 ... 10 V
	•	•	•	•	•	4.5 kΩ	•	•	2 ... 10 V
	•	•	•	•	•	0 ... 5 V	•	•	0 ... 5 V
	•	•	•	•	•	1 ... 5 V	•	•	1 ... 5 V
Output Signal	9	10					Measurement Range Underflow	Measurement Range Overflow	
							Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *
							Upper limit of output range + 2.5 %	Lower limit of output range	Lower limit of output range
							Upper limit of output range + 5 %	Upper limit of output range + 5 %	Upper limit of output range
							Upper limit of output range + 5 % *	Upper limit of output range + 5 % *	Upper limit of output range
Wire Break									
Short Circuit									

DIP Switch S2																			
Start Temperature					End Temperature														
1	2	3	4	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F
•	•	0	32	•	100	212	•	•	•	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	1057
•	•	-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.

Item description

Short description:

WAGO's 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 at the output.

Features:

- 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
- Detects calibrated measurement range switching
- Detects a sensor wire break/short circuit
- Measurement range underflow/overflow
- Clipping capability for analog signal limitation to output end values
- 3-way electrical isolation with 2.5 kV test voltage

Data Notes

Note

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

Technical data

Subject to changes. Please also observe the further product documentation!

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Configuration

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

Input

Input signal type	Resistance Pt sensors Resistor
-------------------	--------------------------------------

Input (RTD sensors)

Sensor types (RTD)	Pt100 Pt200 Pt500 Pt1000
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... 850°C
Measurement span (RTD) min.	50 K

Input (resistors)

Input range (resistor)	0 ... 1 kΩ; 0 ... 4.5 kΩ
Measurement span (min.)	50 Ω

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)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal Processing

Step response (typ.)	180 ms (2-wire); 360 ms (3-wire)
----------------------	----------------------------------

Measurement Error

Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ ((10 K/set measurement range [K]) + 0.1) %

Subject to changes. Please also observe the further product documentation!

Temperature coefficient	≤ 0.02 %/K
-------------------------	------------

Supply

Power supply type	24 VDC
Nominal supply voltage U_S	DC 24 V
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA

Safety and protection

Protection type	IP20
-----------------	------

Test voltage

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

Connection data

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 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
---------------	-------------

Material Data

Color	light gray
Fire load	0.418 MJ
Weight	35.1 g

Subject to changes. Please also observe the further product documentation!

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient 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 ELECTRONIC)
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 pcs
Packaging type	bag
Country of origin	DE
GTIN	4045454502713
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	05f3f3b8-0a15-4f60-9562-f07c8c9aedb6
SCIP notification number (Belgium)	0b91be23-06aa-417e-a8c2-3bf30774ed99

Subject to changes. Please also observe the further product documentation!

SCIP notification number (Bulgaria)	7315f2b8-26e9-4d3d-8f36-1808cd8e283f
SCIP notification number (Czech Republic)	eb77ace6-81f9-4b92-8742-2e644874c902
SCIP notification number (Denmark)	f4d34c3a-3b7a-45d1-9eb9-453cce66da71
SCIP notification number (Finland)	c3822dd5-0b0a-4b87-b750-fa5e876de096
SCIP notification number (France)	6a6d3328-7ad1-4ac8-8723-f4ff801e831f
SCIP notification number (Germany)	a6452dd4-84e9-41b3-a6a6-e215c79faa52
SCIP notification number (Hungary)	0ed82f30-ad55-46b1-afef-2972a2c4c660
SCIP notification number (Italy)	0b6a053f-6481-42ca-9519-aac8e90518f8
SCIP notification number (Netherlands)	fd93a37a-ab44-41d4-a41c-b1c88afee098
SCIP notification number (Poland)	3a0e53e4-8b02-490a-aca1-fd8709146416
SCIP notification number (Romania)	73bbe297-1659-4ff2-aaed-ded4d693e383
SCIP notification number (Sweden)	d037dc84-e2eb-4874-b372-fdf8fc8b8e03

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
	DNV	DNV-CG-0339,Aug.2021	TAA00001D1

Subject to changes. Please also observe the further product documentation!



DNV Germany GmbH


PRS
 Polski Rejestr Statków

 TE/2186
 /880590/18

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	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
	UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Optional accessories

Jumpers

Jumper



Item no.: 859-408

Jumper; for jumper slot; 8-way; insulated; light gray

www.wago.com/859-408

Subject to changes. Please also observe the further product documentation!

Item no.: 281-482
Jumper; 2-way; insulated; gray www.wago.com/281-482



Item no.: 859-404/000-005
Jumper; for jumper slot; 4-way; insulated; red www.wago.com/859-404/000-005



Item no.: 859-404/000-006
Jumper; for jumper slot; 4-way; insulated; blue www.wago.com/859-404/000-006



Item no.: 859-405/000-005
Jumper; for jumper slot; 5-way; insulated; red www.wago.com/859-405/000-005



Item no.: 859-405/000-029
Jumper; for jumper slot; 5-way; insulated; yellow www.wago.com/859-405/000-029



Item no.: 859-405
Jumper; for jumper slot; 5-way; insulated; light gray www.wago.com/859-405



Item no.: 859-404/000-029
Jumper; for jumper slot; 4-way; insulated; yellow www.wago.com/859-404/000-029



Item no.: 859-406
Jumper; for jumper slot; 6-way; insulated; light gray www.wago.com/859-406



Item no.: 859-405/000-006
Jumper; for jumper slot; 5-way; insulated; blue www.wago.com/859-405/000-006



Item no.: 859-406/000-005
Jumper; for jumper slot; 6-way; insulated; red www.wago.com/859-406/000-005



Item no.: 859-409/000-029
Jumper; for jumper slot; 9-way; insulated; yellow www.wago.com/859-409/000-029



Item no.: 859-410/000-005
Jumper; for jumper slot; 10-way; insulated; red www.wago.com/859-410/000-005



Item no.: 859-410/000-029
Jumper; for jumper slot; 10-way; insulated; yellow www.wago.com/859-410/000-029

Subject to changes. Please also observe the further product documentation!

	Item no.: 859-410 Jumper; for jumper slot; 10-way; insulated; light gray	www.wago.com/859-410
	Item no.: 859-410/000-006 Jumper; for jumper slot; 10-way; insulated; blue	www.wago.com/859-410/000-006
	Item no.: 859-403/000-005 Jumper; for jumper slot; 3-way; insulated; red	www.wago.com/859-403/000-005
	Item no.: 859-402/000-029 Jumper; for jumper slot; 2-way; insulated; yellow	www.wago.com/859-402/000-029
	Item no.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow	www.wago.com/859-403/000-029
	Item no.: 859-403/000-006 Jumper; for jumper slot; 3-way; insulated; blue	www.wago.com/859-403/000-006
	Item no.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red	www.wago.com/859-408/000-005
	Item no.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow	www.wago.com/859-408/000-029
	Item no.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray	www.wago.com/859-409
	Item no.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue	www.wago.com/859-408/000-006
	Item no.: 859-403 Jumper; for jumper slot; 3-way; insulated; light gray	www.wago.com/859-403
	Item no.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red	www.wago.com/859-409/000-005
	Item no.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray	www.wago.com/859-404
	Item no.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue	www.wago.com/859-409/000-006

Subject to changes. Please also observe the further product documentation!

	Item no.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue	www.wago.com/859-402/000-006
	Item no.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray	www.wago.com/859-402
	Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red	www.wago.com/859-402/000-005
	Item no.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue	www.wago.com/859-406/000-006
	Item no.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow	www.wago.com/859-406/000-029
	Item no.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue	www.wago.com/859-407/000-006
	Item no.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red	www.wago.com/859-407/000-005
	Item no.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow	www.wago.com/859-407/000-029
	Item no.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray	www.wago.com/859-407
Communication		
Bluetooth		
	Item no.: 750-921 Bluetooth® Adapter	www.wago.com/750-921
Communication cable		
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m	www.wago.com/750-923
Marking accessories		
Marking strip		
	Item no.: 2009-110 Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	www.wago.com/2009-110
Marker		

Subject to changes. Please also observe the further product documentation!

	Item no.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
	Item no.: 793-502 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-502
	Item no.: 793-503 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; www.wago.com/793-503	white
	Item no.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; www.wago.com/793-504	white
	Item no.: 793-505 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; www.wago.com/793-505	white
	Item no.: 793-506 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; www.wago.com/793-506	white
	Item no.: 793-566 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-566
	Item no.: 793-5501 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/793-5501

Mounting

Mounting accessories

	Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-116
	Item no.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-117
	Item no.: 249-197 Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-197

Terminal blocks

Supply module

	Item no.: 857-979 Supply and through module	www.wago.com/857-979
--	---	--

Interface module

Subject to changes. Please also observe the further product documentation!

Interface adapters



Item no.: 857-980

Interface adapter; 16-pole; analog

www.wago.com/857-980

Power supplies

Power supply unit



Item no.: 787-2852

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

www.wago.com/787-2852

Tool

Operating tool



Item no.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

www.wago.com/210-720

Cables and pluggable connectors

Communication cable



Item no.: 750-923/000-001

Configuration cable; USB connector; Length: 5 m

www.wago.com/750-923/000-001

Downloads

Documentation

Bid Text

857-801	2019 Feb 20	docx 17.7 kB	Download
docx - Datei			
857-801	2019 Feb 19	xml 6.5 kB	Download
X81 - Datei			

Instruction Leaflet

CCC Ex (Additional information)	2023 Apr 26	pdf 144.4 kB	Download
857-***			
Messumformer und Trennverstärker		pdf 2.2 MB	Download
Temperaturmessumformer Pt100, Pt200, Pt500, Pt1000, Widerstände 0 ... 1 kOhm, 0 ... 4,5 kOhm DIP-Schalter / FDT/DTM Software			

Additional Information

Disposal and Recycling	V 1.1.0	pdf	Download
Electrical and electronic equipment, Batteries, Packaging	2022 Aug 18	2.2 MB	

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

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Engineering-Software

Configuration and Commissioning Software

WAGO Interface Configuration Software G2 SMALL The full setup only includes the WAGO Interface Configuration Software G2.	1.00.10.01 2022 Jan 20	exe 31.0 MB	Download
WAGO Interface Configuration Software G2 FULL The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	1.00.10.01 2022 Jan 20	exe 114.9 MB	Download

CAD/CAE-Data

CAE data

EPLAN Data Portal 857-801	URL	Download
ZUKEN Portal 857-801	URL	Download
WSCAD Universe 857-801	URL	Download
CAD data		
2D/3D Models 857-801	URL	Download

Environmental Product Compliance

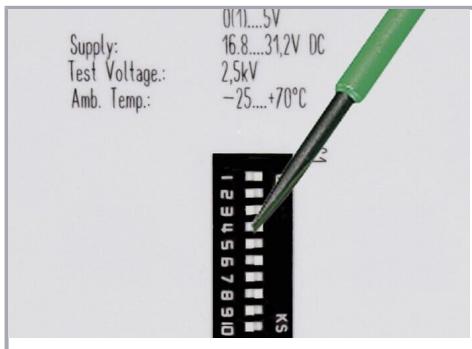
Compliance Search

Environmental Product Compliance 857-801 Temperature signal conditioner for RTD sensors; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; light gray	URL	Download
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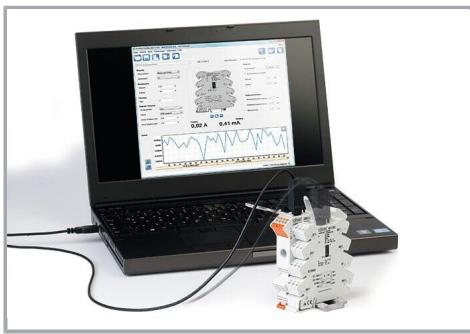
Installation Notes

Configuring

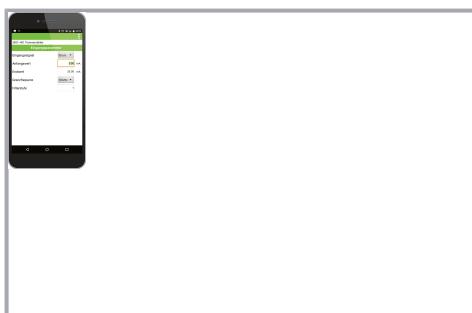
Subject to changes. Please also observe the further product documentation!



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.

Subject to changes. Please also observe the further product documentation!