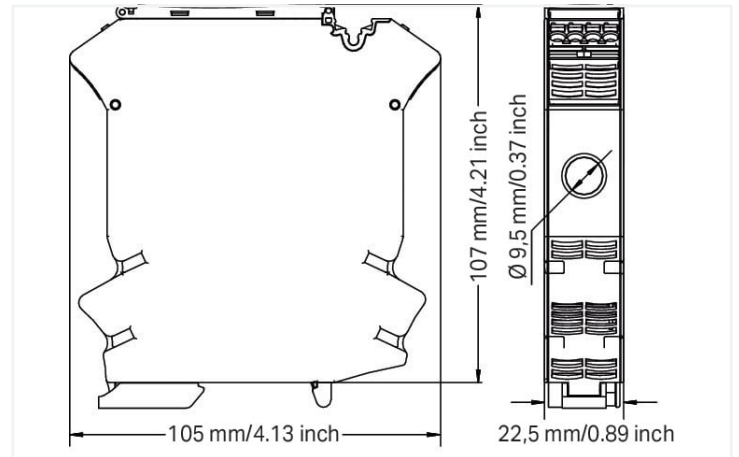
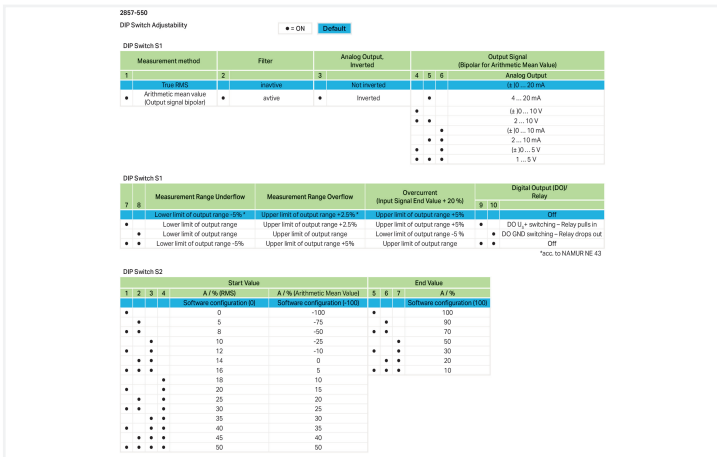
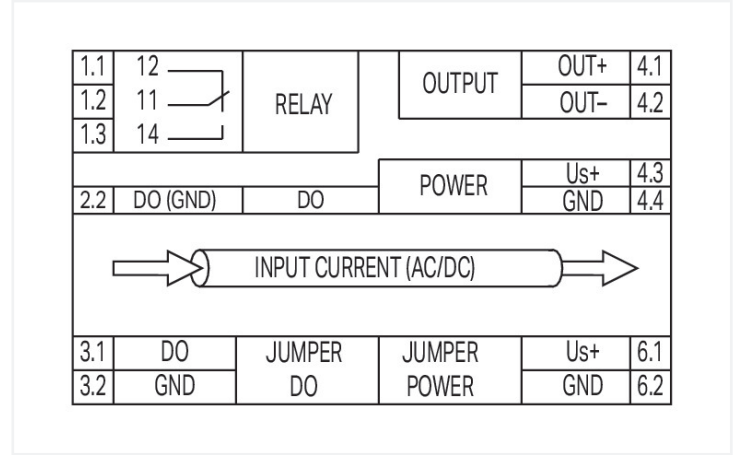
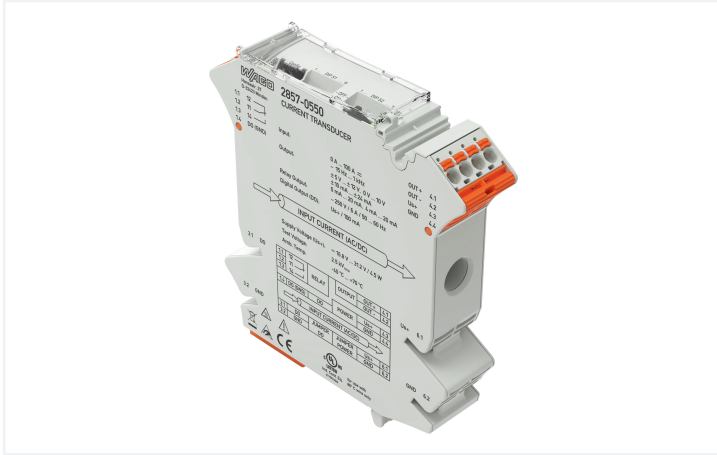


Data Sheet | Item Number: 2857-550

Current signal conditioner; Current input signal; Current and voltage output signal; Digital and relay output; Configuration via software; Supply voltage: 24 VDC; 22.5 mm module width



<https://www.wago.com/2857-550>



Dimensions in mm

Short description:

WAGO's current signal conditioner measures AC/DC currents up to 100 A, while converting the measured current into an analog standard signal at the output.

Features:

- Both digital signal output and relay with changeover contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Clipping capability for analog signal limitation to output end values
- Adjustable software filter
- Input/output response simulation via configuration display
- Safe 3-way isolation with 3 kV test voltage per EN 61010-1

Notes

Note

This product is supplied with 24 VDC, which can be commoned using lateral push-in type jumper bars: (6.1) U_S+ (BR) and (6.2) GND 2 (BR). With this variant, it is necessary to ensure that the maximum permissible total current of 6 A is not exceeded. Additional setting options via WAGO Interface Configuration Software or WAGO Configuration Display

Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App WAGO Configuration Display
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Input

Input signal type	Current
Input signal (current)	AC 0.5 ... 100 A DC \pm 100 A
Frequency range	15 ... 1000 Hz
Input current (max.)	100 A AC/DC
Response threshold	500 mA (AC); 250 mA (DC)
Resolution (current)	10 mA

Output (analog)

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

Output (digital)

Switching voltage (DO) max.	Supply voltage (applied): -0.3 V
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Output (relay)

Number of changeover/switchover contacts	1
Contact material (relay)	AgNi + Au
Switching voltage (max.)	AC 250 V
Dielectric strength (open contact) (AC, 1 min)	1 kVrms
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	8 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Signal processing

Measurement method	True RMS measurement; Arithmetic mean value
Limit frequency	3.3 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (DC; for software filter 3/default setting); 250 ms (AC); 1 ms (DC/AC for signals < 0.5 A)

Measurement error

Transmission error (max.)	\leq 1 % (of the full scale value)
Temperature coefficient	\leq 0.01 %/K

Power 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 50 mA (+ I_{D0})

Safety and protection

Rated voltage	300 V
Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	The digital output (DO) is at the potential of the supply.
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min
Test voltage (measurement circuit/relay output/supply/analog output)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (measurement circuit/relay output/supply/service interface)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (analog output/service interface)	2 kVAC; 50 ... 60 Hz; 1 min

Insulation coordination (UL)

Overvoltage category	II
Pollution degree	2
Insulation type (measurement circuit/relay output, supply, analog output and service interface)	Double insulation (safe isolation)
Insulation type (analog output/service interface)	Basic insulation
Insulation type (relay output/supply/analog output and service interface)	Reinforced insulation (safe isolation)

Connection data

Connection technology	Push-in CAGE CLAMP®
WAGO connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Feedthrough for measurement conductor	9.5 mm Ø

Physical data

Width	22.5 mm / 0.886 inches
Height	105 mm / 4.134 inches
Depth from upper-edge of DIN-rail	107 mm / 4.213 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	1.791 MJ
Weight	102.8 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	≥ (T _{ambient} + 10 K)
Temperature range of connection cable (UL)	80 °C

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1 EN 61373 EN 50121-3-2

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-23
eCl@ss 9.0	27-21-01-23
ETIM 8.0	EC002475
ETIM 7.0	EC002475
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821676997
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Perfluorobutane sulfonic acid (PFBS) and its salts Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	a9da4d7e-c362-48c9-b365-16c96b3e1576
SCIP notification number (Belgium)	4903aab4-ec9d-422a-b0b2-73c8b611cfdc
SCIP notification number (Bulgaria)	722fa4c0-c880-415e-8c2a-dd365342643d
SCIP notification number (Czech Republic)	aa9f0fda-b2e1-4639-b6fb-061687397b29
SCIP notification number (Denmark)	e9c7dbc7-1077-47de-a91a-bc7b222707ed
SCIP notification number (Finland)	f90327c8-eee8-4ea0-ad4e-55438db00e5f
SCIP notification number (France)	89eb3d4b-04a5-4aee-ba79-125fca3d022f
SCIP notification number (Germany)	61796aa8-692d-4b07-b95e-a4e98c7cad2f
SCIP notification number (Hungary)	ad4fac5-8aaa-4d10-a4d5-3846aa90e8a4
SCIP notification number (Italy)	8890fdc6-2a54-4720-a239-1e68e0fe8c12
SCIP notification number (Netherlands)	604da37d-2e98-4406-945e-8a36338b1f40
SCIP notification number (Poland)	dff5a515-3b9b-4b48-8f82-f04002ca852b
SCIP notification number (Romania)	681d533f-f33c-4c20-9062-7107db671054
SCIP notification number (Sweden)	e2864b11-4440-44bc-835b-1dc8cf6550e0

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19
EAC Brjansker Zertifizierungs- stelle	TP TC 004/2011	EAC RU C-DE.AM02. B.00122/19
UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	UL 61010-2-201	E175199

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2857-550	↓

Documentation

Manual	
WAGO Current and Voltage Signal Conditioners and Power Measurement Modules	↓

Additional Information		
Messumformer, Strommessumformer AC/DC 100 A	pdf 1486.50 KB	↓
2857-550, Additional Information	pdf 71.51 KB	↓

Bid Text			
2857-550	15.07.2019	xml 8.44 KB	↓
2857-550	15.07.2019	docx 21.59 KB	↓
2857-550	15.07.2019	pdf 81.83 KB	↓

Instruction Leaflet			
Current Signal Conditioner AC/DC 100 A	V 2.0.0 30.09.2020	pdf 2838.74 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 2857-550	↓

CAE data	
EPLAN Data Portal 2857-550	↓
WSCAD Universe 2857-550	↓
ZUKEN Portal 2857-550	↓

Engineering-Software

Configuration and Commissioning Software			
WAGO Interface Configuration Software G2 FULL	1.00.10.01 20.01.2022	exe 112213.07 KB	↓
WAGO Interface Configuration Software G2 SMALL	1.00.10.01 20.01.2022	exe 30238.22 KB	↓

Runtime Software

Firmware

2857-0550, Strommes-sumformer	V 04 01.03.2022	zip 582.66 KB	
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1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 Bluetooth



[Item No.: 750-921](#)
Bluetooth® Adapter

1.1.1.2 Communication cable



[Item No.: 750-923](#)
Configuration cable; USB connector;
Length: 2.5 m



[Item No.: 750-923/000-001](#)
Configuration cable; USB connector;
Length: 5 m

1.1.1.3 Configuration display



[Item No.: 2857-900](#)
Configuration display

1.2 Installation

1.1.2.1 Mounting accessories



[Item No.: 249-117](#)
Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray



[Item No.: 249-197](#)
Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray



[Item No.: 249-116](#)
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.1.3 Jumper

1.1.3.1 Jumper



[Item No.: 281-482](#)
Jumper; 2-way; insulated; gray



[Item No.: 859-402/000-006](#)
Jumper; for jumper slot; 2-way; insulated; blue



[Item No.: 859-402](#)
Jumper; for jumper slot; 2-way; insulated; light gray



[Item No.: 859-402/000-005](#)
Jumper; for jumper slot; 2-way; insulated; red



[Item No.: 859-402/000-029](#)
Jumper; for jumper slot; 2-way; insulated; yellow

1.1.4 Marking

1.1.4.1 Marker



Item No.: 2009-141
Micro-USB-Inline; 2000 pieces on roll; plain; snap-on type; white



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



Item No.: 793-502
WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-566
WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-503
WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-504
WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-505
WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-506
WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.4.2 Marking strip



Item No.: 2009-110
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.5 Power supply

1.1.5.1 Power supply unit



Item No.: 787-2852
Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.6 Relay module

1.1.6.1 Relay module



Item No.: 857-304
Relay module; Nominal input voltage: 24 VDC; 1 changeover contact; Limiting continuous current: 6 A; Yellow status indicator; Module width: 6 mm; 2,50 mm²; gray

1.1.7 Terminal blocks

1.1.7.1 Supply module



Item No.: 857-979
Supply and through module

1.1.7.2 Through terminal block



Item No.: 857-979
Supply and through module

1.1.8 Test and measurement

1.1.8.1 Testing accessories



Item No.: 735-500
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.1.9 Tool

1.1.9.1 Operating tool



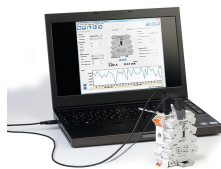
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch



Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App



Configuration via WAGO Configuration Display

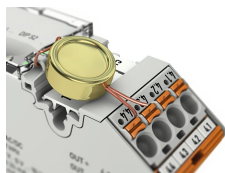
Conductor termination



Pluggable connection technology

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

Security



Lock-out seal option