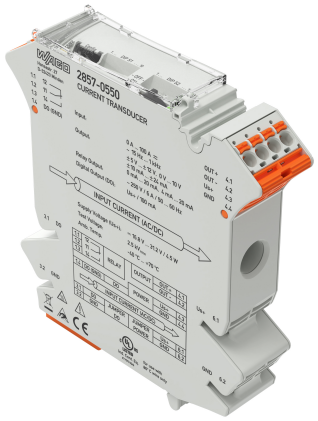
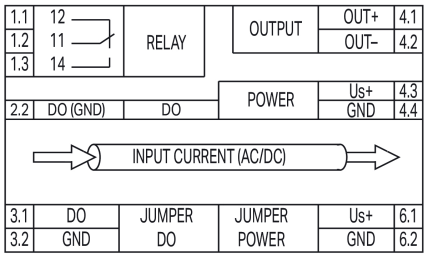
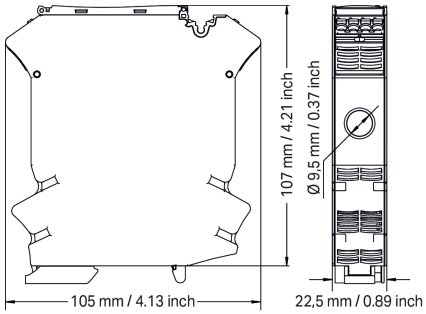
Data Sheet | Item Number: 2857-550

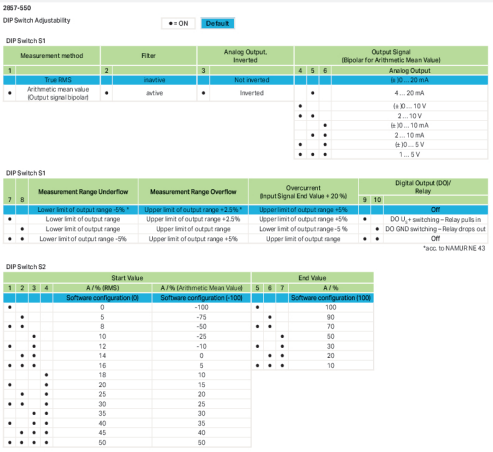
Current signal conditioner; Current input signal; Current and voltage output signal; Digital and relay output; Configuration via software; Supply voltage: 24 VDC; 22.5 mm module width

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









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
- Safe 3-way isolation with 3 kV test voltage per EN 61010-1

Notes

Note	This product is powered by 24 VDC, which can be bridged 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 the WAGO Interface Configuration Software

Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software

Input

Input signal type	Current
Input signal (current)	0.5 … 100 AAC ±100 ADC
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)	±5 V 0 … 5 V 1 … 5 V ±10 V 0 … 10 V 2 … 10 V
Output signal (current)	±10 mA 0 … 10 mA 2 … 10 mA ±20 mA 0 … 20 mA 4 … 20 mA
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω

Output (digital)

Switching voltage (DO) max.	Applied supply voltage - 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.	250 VAC
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.)	≤ 1 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U_S	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ I_{DO})

Safety and protection

Rated Voltage	300 V
Rated voltage of the measurement circuit connections per EN 61010-2-030	300 VAC
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	The conductor carrying the measurement current must have at least basic insulation rated for the applied voltage. The test voltage of the conductor carrying the measurement current must be at least 1390 VAC_{rms} or 1390 VDC. The digital output (DO) operates at the supply potential.
Protection type	IP20

Continued on next page

Test voltage

Test voltage (input/output/supply)	3 kVAC; 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 mm² / 24 … 12 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 12 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inches
Feedthrough for measurement conductor	Ø 9.5 mm

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

Material data

Fire load	1.323 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 the 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

Continued on next page

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821676997
Customs tariff number	85437090300

Product Classification

UNSPSC	41113630
eCl@ss 10.0	27-21-01-23
eCl@ss 9.0	27-21-01-23
ETIM 9.0	EC002475
ETIM 10.0	EC002475
ECCN	NO US CLASSIFICATION

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 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-b0b2-73c8b611cfcd
SCIP notification number (Bulgaria)	722fa4c0-c880-415e-8c2a-dd365342643d
SCIP notification number (Czech Republic)	aa9f0fda-b2e1-4639-b6fb-061687397b29
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SCIP notification number (Finland)	f90327c8-eee8-4ea0-ad4e-55438db00e5f
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SCIP notification number (Germany)	61796aa8-692d-4b07-b95e-a4e98c7cad2f
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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

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Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03084
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity 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

Continued on next page

Runtime Software

Firmware

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

1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 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

1.1.2 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-WSB-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

Continued on next page

1.1.4.1 Marker

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



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; gray

1.1.7 Terminal blocks

1.1.7.1 Supply and through module



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

Continued on next page

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

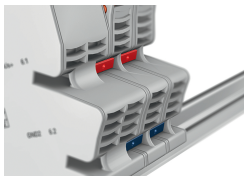


Configuration via WAGO Interface Configuration Software

Conductor termination

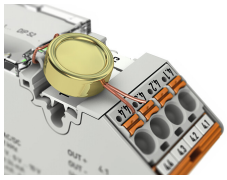


Pluggable connection technology



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

Security



Lock-out seal option