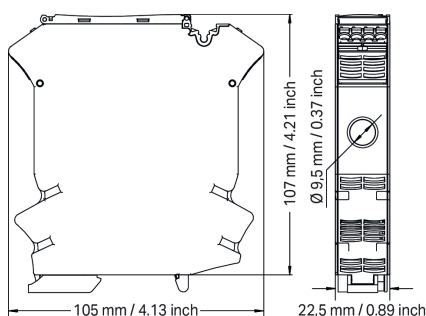
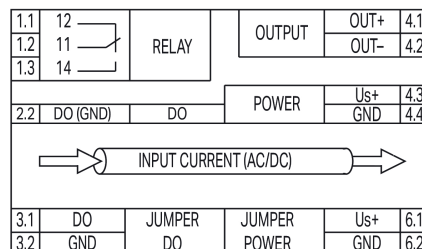
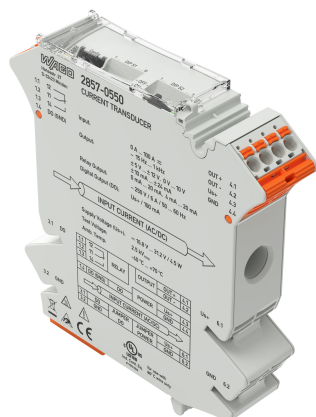


Data Sheet | Item Number: 2857-550

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>

[illegible]

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) U₅+ (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



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
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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

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-b0b2-73c8b611cfd
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
SCIP notification number (France)	89eb3d4b-04a5-4aee-ba79-125fca3d022f
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SCIP notification number (Romania)	681d533f-f33c-4c20-9062-7107db671054
SCIP notification number (Sweden)	e2864b11-4440-44bc-835b-1dc8cf6550e0

Manual	Additional Information		
WAGO Current and Voltage Signal Conditioners and Power Measurement Modules	Messumformer, Strommessumformer AC/DC 100 A	pdf 1486.50 KB	
	2857-550, Additional Information	pdf 71.51 KB	

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	↓

Current Signal Conditioner AC/DC 100 A	V 2.0.0 30.09.2020	pdf 2838.74 KB	
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CAD data	CAE data
2D/3D Models 2857-550	EPLAN Data Portal 2857-550
	WSCAD Universe 2857-550
	ZUKEN Portal 2857-550

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

Current addresses can be found at: www.wago.com