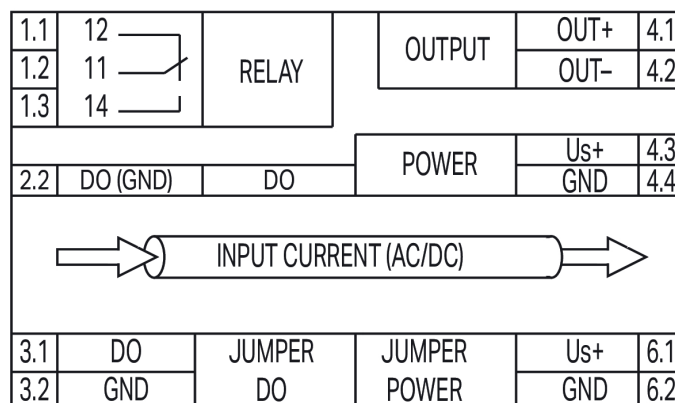
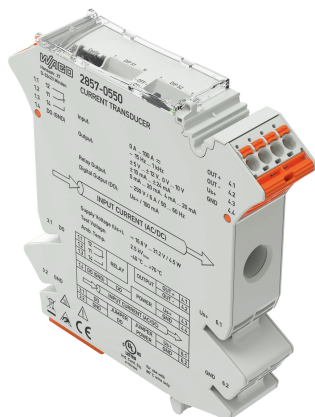


Data Sheet | Item Number: 2857-550

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>

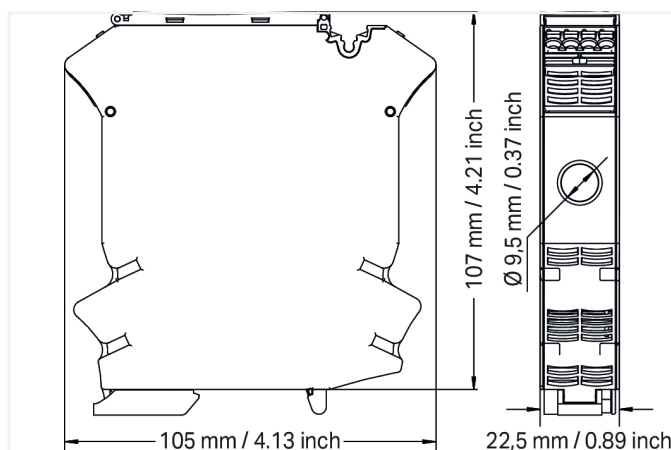


DIP Switch S1						
Measurement method		Filter	Analog Output, Inverted	Output Signal (Bipolar for Arithmetic Mean Value)		
1	2			A	B	C
•	True RMS	•	Not switched	•	•	0 V... 20 mA
•	Arithmetic Mean value	•	Inverted	•	•	4 ... 20 mA
•	Output signal bipolar	•		•	•	0 V... 10 V
				•	•	2 ... 10 V
				•	•	0 V... 10 mA
				•	•	2 ... 10 mA
				•	•	0 V... 5 V
				•	•	1 ... 5 V

DIP Switch S1					
Measurement Range Underflow		Measurement Range Overflow		Occurrent Input Signal Error Value > 20 %	Digital Output DGM / Relay
1	2	3	4	5	6
•	Lower limit of output range -5%	•	Upper limit of output range +2.5%	•	Lower limit of output range -5%
•	Lower limit of output range -10%	•	Upper limit of output range +2.5%	•	Lower limit of output range -5%
•	Lower limit of output range -15%	•	Upper limit of output range +2.5%	•	Lower limit of output range -5%
•	Lower limit of output range -20%	•	Upper limit of output range +5%	•	Lower limit of output range -5%

(acc. to NAMUR NE 43)

DIP Switch S2							
Start Value				End Value			
1	2	3	4	5	6	7	8
•	Software configuration 10			•	Software configuration 100		
•	•	•	-100	•	•	•	100
•	•	•	5	•	•	•	90
•	•	•	-50	•	•	•	70
•	•	•	-25	•	•	•	50
•	•	•	-12	•	•	•	30
•	•	•	14	•	•	•	20
•	•	•	18	•	•	•	10
•	•	•	20	•	•	•	10
•	•	•	25	•	•	•	20
•	•	•	30	•	•	•	30
•	•	•	35	•	•	•	40
•	•	•	40	•	•	•	50
•	•	•	45	•	•	•	60
•	•	•	50	•	•	•	70



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		Input	
Configuration options	DIP switch WAGO Interface Configuration Software	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 (digital)	
Output signal type	Current Voltage	Switching voltage (DO) max.	Applied supply voltage – 0.3 V
Output signal (voltage)	±5 V 0 ... 5 V 1 ... 5 V ±10 V 0 ... 10 V 2 ... 10 V	Continuous current (DO) max.	100 mA (no internal restriction)
Output signal (current)	±10 mA 0 ... 10 mA 2 ... 10 mA ±20 mA 0 ... 20 mA 4 ... 20 mA	Number of switching thresholds (DO)	1 or 2 (adjustable)
Load impedance (voltage output)	≥ 1 kΩ	Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Load impedance (current output)	≤ 600 Ω		
Output (relay)		Signal processing	
Number of changeover/switchover contacts	1	Measurement method	True RMS measurement; Arithmetic mean value
Contact material (relay)	AgNi + Au	Limit frequency	3.3 kHz
Switching Voltage, Max.	250 VAC	Software filter (adjustable)	Moving average value (filter level: 30)
Dielectric strength (open contact) (AC, 1 min)	1 kVrms	Step response (typ.)	60 ms (DC; for software filter 3/default setting) 250 ms (AC) 1 ms (DC/AC for signals < 0.5 A)
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)		
Measurement error		Power supply	
Transmission error (max.)	≤ 1 % (of the full scale value)	Power supply type	24 VDC
Temperature coefficient	≤ 0.01 %/K	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	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.
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)	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
--	-----------------------------

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	1.787 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 8.0	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 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-b0b2-73c8b611cfcf
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
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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



Approvals / Certificates			Declarations of conformity and manufacturer's declarations		
EAC EAC 					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03084			
UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	UL 61010-2-201	E175199			
Downloads					
Environmental Product Compliance					
Compliance Search					
Environmental Product Compliance 2857-550					
Documentation					
Manual			Additional Information		
WAGO Current and Vol- tage Signal Conditio- ners and Power Measu- rement Modules			Messumformer, Strom- messumformer AC/DC 100 A		pdf 1486.50 KB 
			2857-550, Additional Information		pdf 71.51 KB 
Bid Text			Instruction Leaflet		
2857-550	15.07.2019	xml 8.44 KB 	Current Signal Condi- tioner AC/DC 100 A	V 2.0.0 30.09.2020	pdf 2838.74 KB 
2857-550	15.07.2019	docx 21.59 KB 			
2857-550	15.07.2019	pdf 81.83 KB 			
CAD/CAE-Data					
CAD data			CAE data		
2D/3D Models 2857-550			EPLAN Data Portal 2857-550		
			WSCAD Universe 2857-550		
			ZUKEN Portal 2857-550		



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 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

1.1.2 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



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 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



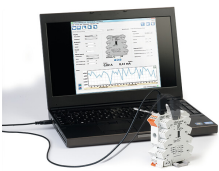
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring

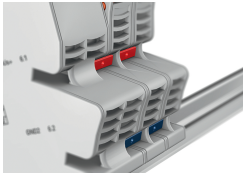


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

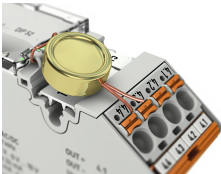
Conductor termination



Pluggable connection technology

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

Security



Lock-out seal option