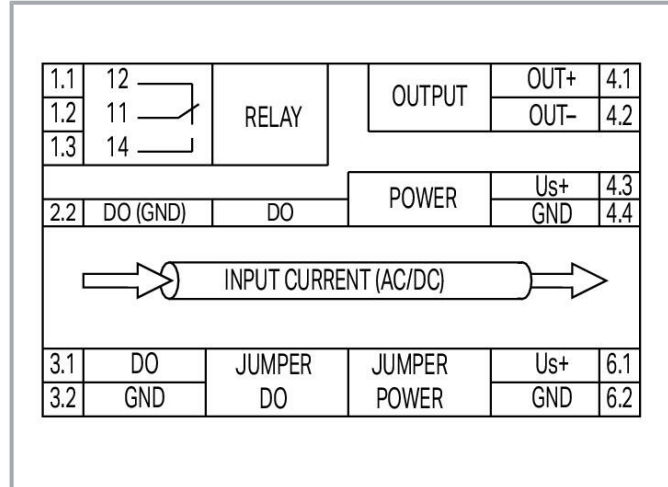
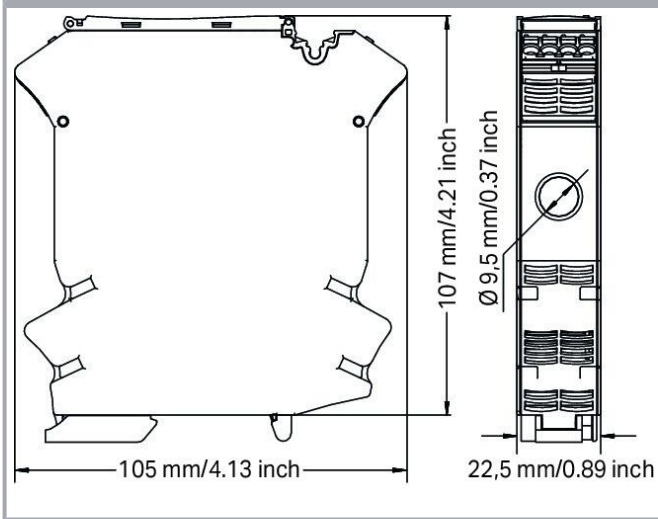
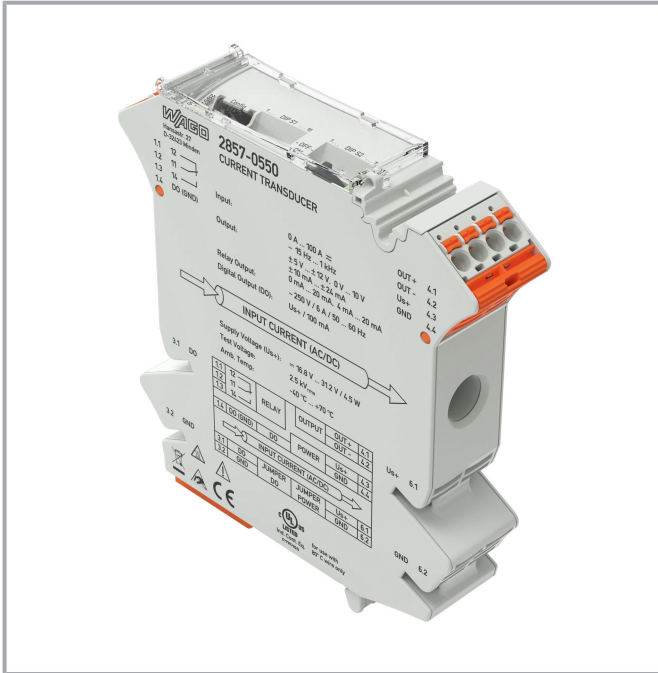


Data sheet | Item number: 2857-550

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



www.wago.com/2857-550



2857-550
DIP Switch Adjustability

• ON Default

DIP Switch S1		Filter	Analog Output, Inverted	Output Signal (Bipolar for Arithmetic Mean Value)	
1	Measurement method	2	3	4	5 6
• True RMS	• Inactive	• Not inverted	• Analog Output (±10 ... 20 mA)		
• Arithmetic mean value (Output signal bipolar)	• active	• Inverted	• 4 ... 20 mA	• ±10 ... 10 V	• 2 ... 10 V
			• ±10 ... 10 mA	• 2 ... 10 mA	• ±10 ... 5 V
			• 1 ... 5 V		

DIP Switch S1		Measurement Range Underflow	Measurement Range Overflow	Overcurrent (Input Signal End Value + 20%)	Digital Output (DO)/ Relay
7	8	• Lower limit of output range -5%*	• Upper limit of output range +2.5%*	• Upper limit of output range +5%	• OFF
• Lower limit of output range	• Upper limit of output range +2.5%	• Lower limit of output range	• Upper limit of output range +5%	• Lower limit of output range -5%	• DO U+ switching - Relay pulls in
• Lower limit of output range -5%	• Upper limit of output range +5%	• Upper limit of output range	• Upper limit of output range		• DO GND switching - Relay drops out

*acc. to NAMUR/NE 43

DIP Switch S2		Start Value	End Value
1	2 3 4	A / % (RMS)	A / % (Arithmetic Mean Value)
		Software configuration (0)	Software configuration (100)
•		0	100
•		5	90
•		8	70
•		10	50
•		12	30
•		14	20
•		16	5
•		18	10
•		20	15
•		25	20
•		30	25
•		35	30
•		40	35
•		45	40
•		50	50

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

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

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Item description

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

Data

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 2 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

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

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

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Response threshold	500 mA (AC); 250 mA (DC)
Resolution (current)	10 mA 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.	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)

Dielectric strength (open contact) (AC, 1 min)	1 kV _{rms}
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 kV _{rms}
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)

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

Measurement Error

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

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	$\leq 50\text{ mA}$ (+ I_{DO})

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 conductor carrying the measurement current must have at least basic insulation for the voltage used. The test voltage of the conductor carrying the measurement current must be at least $1390\text{ V}_{\text{rms}}$ AC or 1390 VDC. 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 parameters(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

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

Insulation type (relay output/supply/analog output and service interface)

Reinforced insulation (safe isolation)

Connection data

Connection technology	Push-in CAGE CLAMP®
WAGO connector	<i>picoMAX</i> ® 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
---------------	-------------

Material Data

Fire load	1.791 MJ
Weight	102.9 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 10 \text{ K})$
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 50121-3-2 EN 61010-1

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EN 61373

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.	7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead Perfluorobutane sulfonic acid (PFBS) and its salts
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	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




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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	EAC Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Declarations of conformity and manufacturer's declarations

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

Optional accessories

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

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



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

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

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	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; white	www.wago.com/793-503
	Item no.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-504
	Item no.: 793-505 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-505
	Item no.: 793-506 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-506
	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
	Item no.: 2009-141 Micro-WSB-Inline; 2000 pieces on roll; plain; snap-on type; white	www.wago.com/2009-141

Communication

Bluetooth		
	Item no.: 750-921 Bluetooth® Adapter	www.wago.com/750-921
Configuration display		
	Item no.: 2857-900 Configuration display	www.wago.com/2857-900
Communication cable		
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m	www.wago.com/750-923
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m	www.wago.com/750-923/000-001

Testing and measuring

Testing accessories		
Item no.: 735-500		

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



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 www.wago.com/735-500

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

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

Terminal blocks

Supply module



Item no.: 857-979
Supply and through module

www.wago.com/857-979

Jumpers

Jumper



Item no.: 281-482
Jumper; 2-way; insulated; gray

www.wago.com/281-482



Item no.: 859-402/000-029
Jumper; for jumper slot; 2-way; insulated; yellow

www.wago.com/859-402/000-029



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

Relay module

Relay module



Item no.: 857-304

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

Relay module; Nominal input voltage: 24 VDC; 1 changeover contact; Limiting continuous current: 6 A; www.wago.com/857-304
 Yellow status indicator; Module width: 6 mm; 2,50 mm²; gray

Downloads

Documentation

Bid Text

2857-550 X81 - Datei	2019 Jul 15	xml 8.6 kB	Download
2857-550 pdf - Datei	2019 Jul 15	pdf 83.8 kB	Download
2857-550 docx - Datei	2019 Jul 15	docx 22.1 kB	Download

Instruction Leaflet

Current Signal Conditioner AC/DC 100 A	V 2.0.0 2020 Sep 30	pdf 2.9 MB	Download
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Additional Information

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

Configuration and Commissioning Software

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
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

Runtime Software

Firmware

2857-0550, Strommessumformer WAGO_FW2857-0550_IX04_H	V 04 2022 Mar 1	zip 596.6 kB	Download
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Subject to changes. Please also observe the further product documentation!

CAD/CAE-Data

CAD data

2D/3D Models 2857-550	URL	Download
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CAE data

EPLAN Data Portal 2857-550	URL	Download
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WSCAD Universe 2857-550	URL	Download
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ZUKEN Portal 2857-550	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2857-550	URL	Download
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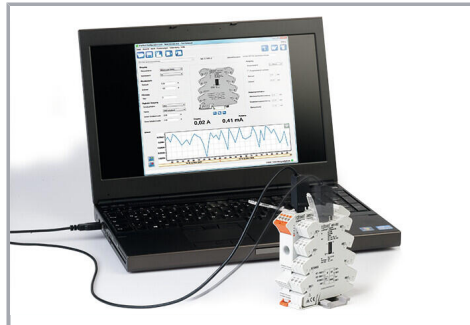
Current signal conditioner; Current input signal; Current and voltage output signal; Digital and relay output; Configuration via software; Supply voltage: 24 VDC; 22.5 mm module width

Installation Notes

Configuring

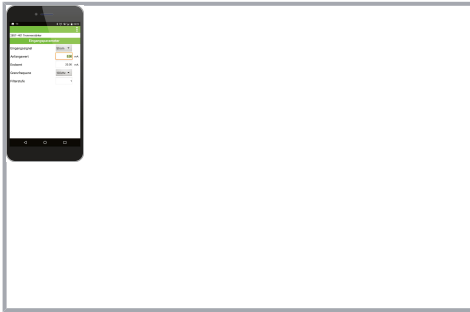


Configuration via DIP switch



Configuration via WAGO Interface
Configuration Software

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



Configuration via WAGO Interface Configuration App



Configuration via WAGO Configuration Display

Conductor termination

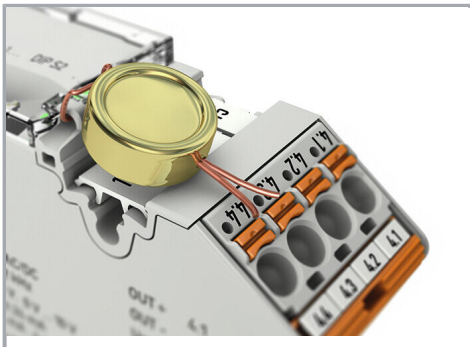


Pluggable connection technology



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

Security



Lock-out seal option

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