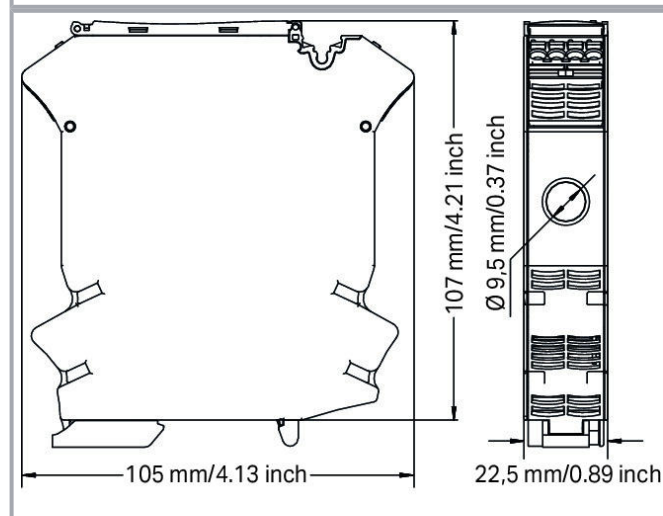
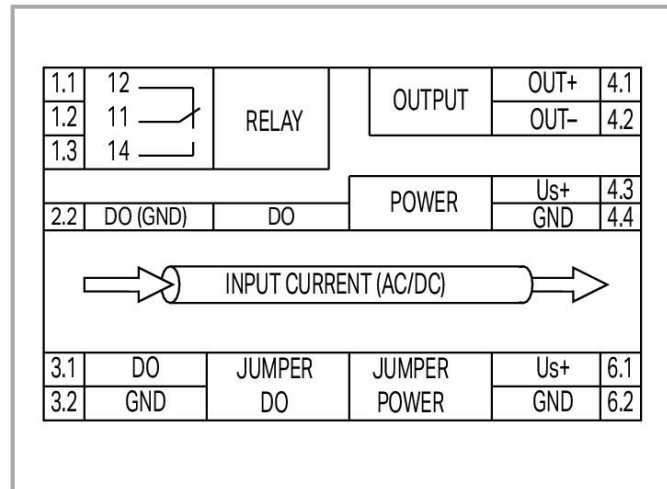
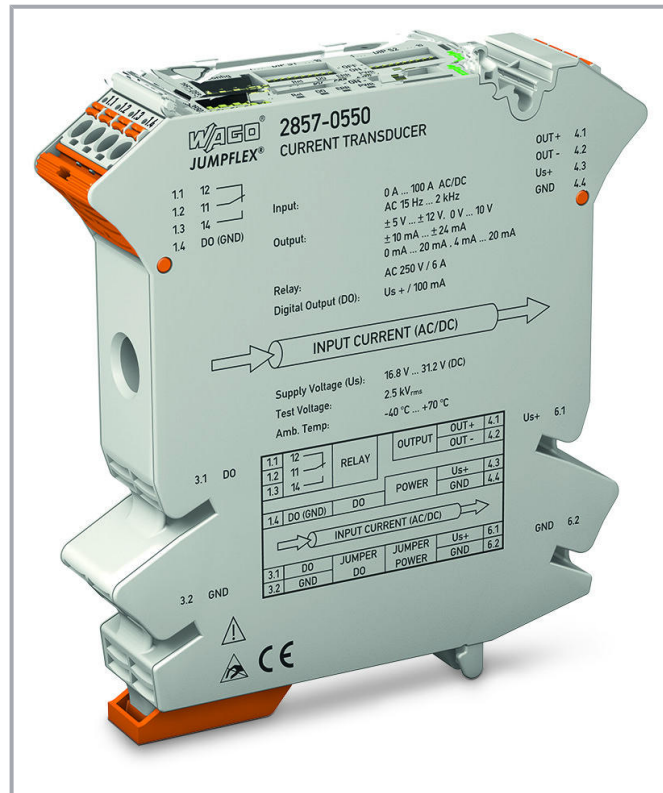


Data sheet | Item number: 2857-550

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



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

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2857-550
DIP Switch Adjustability

• = ON **Default**

DIP Switch S1

Measurement method	Filter	Analogue Output, Inverted	Output Signal (Bipolar for Arithmetic Mean Value)
1 True RMS	2 Inactive	3 Not inverted	4 5 6 Analogue 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 Lower limit of output range -5% *	8 Upper limit of output range +2.5% *	9 Upper limit of output range +5%	10 Off
• Lower limit of output range	• Upper limit of output range +2.5%	• Lower limit of output range +5%	• DO U ₊ switching – Relay pulls in
• Lower limit of output range	• Upper limit of output range	• Lower limit of output range -5 %	• DO GND switching – Relay drops out
• Lower limit of output range -5%	• Upper limit of output range +5%	• Upper limit of output range	• Off

*acc. to NAMUR NE 43

DIP Switch S2

Start Value				End Value	
1	2	3	4	5	6
A / % (RMS)	A / % (Arithmetic Mean Value)	A / % (Arithmetic Mean Value)	A / %	A / %	A / %
• Software configuration (0)	• Software configuration (-100)	• Software configuration (100)			
• 0	• -100	• 100			
• 5	• -75	• 90			
• 8	• -50	• 70			
• 10	• -25	• 50			
• 12	• -10	• 30			
• 14	• 0	• 20			
• 16	• 5	• 10			
• 18	• 10				
• 20	• 15				
• 25	• 20				
• 30	• 25				
• 35	• 30				
• 40	• 35				
• 45	• 40				
• 50	• 50				

Item description

Short description:

This 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

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

Data

Technical data

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

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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 ± 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)	± 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 k Ω
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
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... 70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms

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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)

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	$\pm 30\%$
Power consumption at nominal supply voltage	$\leq 50\text{ mA}$ (+ I_{DO})

Safety and protection

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 nominal insulation 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
Prüfspannung (Messkreis/Relaisausgang/Versorgung/Service-)	3 kVAC; 50 ... 60 Hz; 1 min

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



Schnittstelle)

Test voltage (analog output/service interface)	2 kVAC; 50 ... 60 Hz; 1 min
--	-----------------------------

Insulation parameters per EN/UL 61010-1

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (measurement circuit/relay output, supply, analog output and service interface)	Functional insulation
Insulation type (analog output/service interface)	Functional insulation
Insulation type (relay output/supply/analog output and service interface)	Functional insulation

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 inch
Feedthrough for measurement conductor	Ø 9.5 mm

Physical data

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

Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

Material data

Fire load	1.644 MJ
Weight	102.9 g

Environmental requirements

Surrounding air temperature (operation)	-40 ... 70 °C
Surrounding air temperature (storage)	-40 ... 85 °C

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



Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 10 \text{ K})$
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °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

Commercial data

Product Group	6 (Interface Electronics)
PU (SPU)	1 Each
Packaging type	bag
Country of origin	DE
GTIN	4050821676997
Customs tariff number	85437090300

Approvals / Certificates

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Optional accessories

Cables and pluggable connectors

	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

Power supplies

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**Item no.: 787-2852**

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current; -

www.wago.com/787-2852**Mounting****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**Terminal blocks****Item no.: 857-979**

Supply and through module

www.wago.com/857-979**General accessories****Item no.: 2857-900**

Configuration display

www.wago.com/2857-900**Item no.: 750-921**

Bluetooth® Adapter

www.wago.com/750-921**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

www.wago.com/857-304**Jumpers****Item no.: 281-482**

Jumper; insulated; gray

www.wago.com/281-482**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**Item no.: 859-402/000-006**

Jumper; for jumper slot; 2-way; insulated; blue

www.wago.com/859-402/000-006**Item no.: 859-402/000-029**

Jumper; for jumper slot; 2-way; insulated; yellow

www.wago.com/859-402/000-029**Testing and measuring****Item no.: 735-500**

Test pin; 1 mm Ø; with solder connection for test wire

www.wago.com/735-500**Tool****Item no.: 210-720**

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

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Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

www.wago.com/210-720**Marking accessories**

	Item no.: 2009-110 Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	www.wago.com/2009-110
	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
	Item no.: 2009-141 Micro-WSB-Inline; 2000 pieces on roll; plain; snap-on type; white	www.wago.com/2009-141
	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.: 793-5501 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.: 793-566 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white	www.wago.com/793-566

Downloads**Documentation****Bid Text**

2857-550 X81 - Datei	15 Jul 2019	xml 8.6 kB	Download
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Instruction Leaflet

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

Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf	Download
		265.8 kB	

Engineering-Software

Software for Interface-Products

WAGO Interface Configuration Software G2 FULL	1.0.6.18	exe	Download
The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	8 Apr 2021	113.9 MB	

WAGO Interface Configuration Software G2 SMALL	1.0.6.18	exe	Download
The full setup only includes the WAGO Interface Configuration Software G2.	8 Apr 2021	30.0 MB	

Runtime Software

Firmware

Firmware: 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	03 9 May 2017	zip	Download
		597.0 kB	

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

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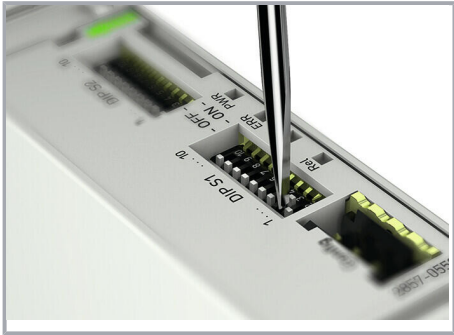
Environmental Product Compliance

Compliance Search

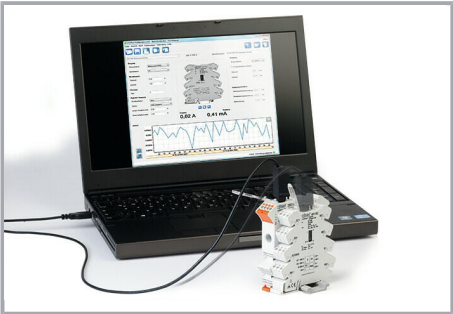
Environmental Product Compliance 2857-550	URL	Download
Current signal conditioner; Current input signal; Current and voltage output signal; Digital and relay output; Configuration via software; Supply voltage: 24 VDC; 22.5 mm module width		

Installation Notes

Configuration



Configuration via DIP switch



Configuration via WAGO Interface
Configuration Software



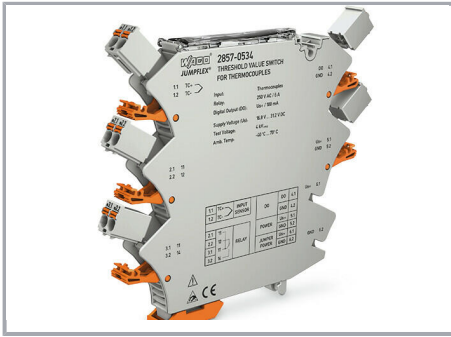
Configuration via WAGO Interface
Configuration App



Configuration via WAGO Configuration
Display

Conductor termination

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

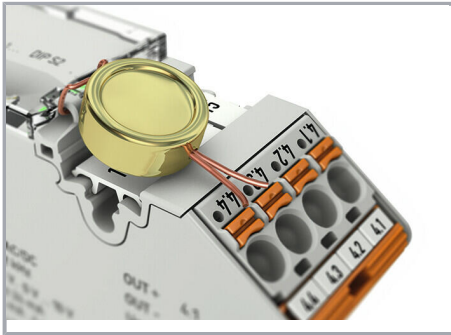


Pluggable connection technology



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

Safety



Lock-out seal option

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