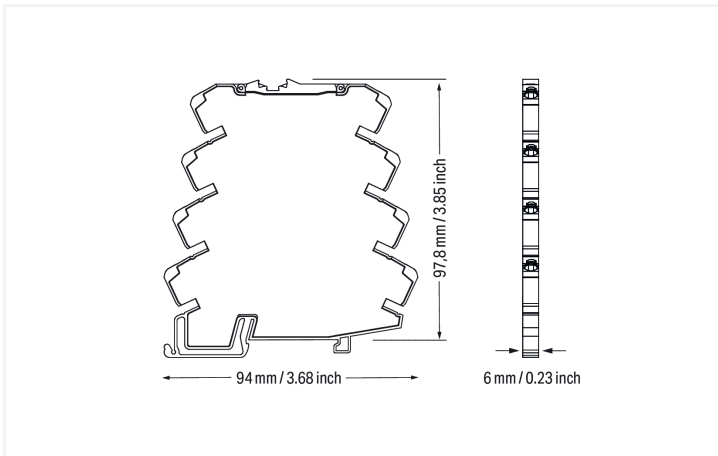
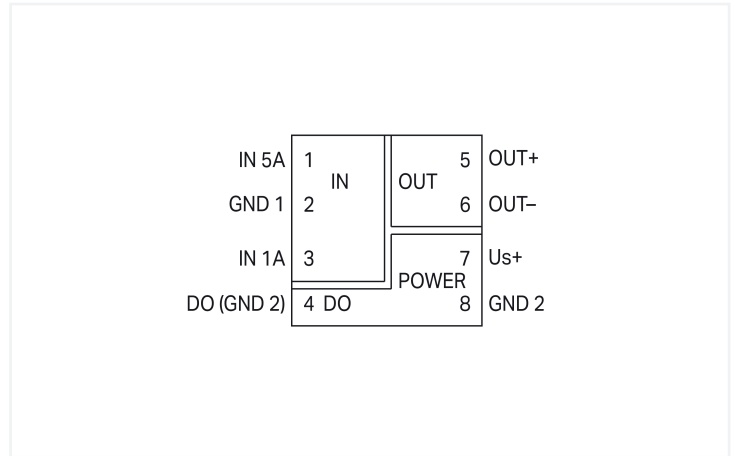


Data Sheet | Item Number: 857-551

Current signal conditioner; Current input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width



<https://www.wago.com/857-551>



857-551
DIP Switch Adjustability

= ON Default

1	2	3	4	5	6	7	8	9	10
DIP Switch S1		5A	Effective value (RMS)	off					
		• 2.5 A	• Arithmetic mean value (bipolar output)	• active					
		• 1 A							
		• 0.5 A							
DIP Switch S1		Output Signal Range (Bipolar for Arithmetic Mean Value)							
		(+/-) 0...20 mA							
		• 4...20 mA							
		• (+/-) 0...10 V							
		• 2...10 V							
		• (+/-) 0...10 mA							
		• 2...10 mA							
		• (+/-) 0...5 V							
		• 1...5 V							
DIP Switch S1		Measurement Range Underflow	Measurement Range Overflow	Digital Output DO Signaling					
		Lower limit of measurement range ±2.5%	Upper limit of measurement range -5%	DO U _i switching					
		• Lower limit of measurement range +2.5%	Upper limit of measurement range -5%	• DO GND switching					
		• Lower limit of measurement range	Upper limit of measurement range -5%	acc. to NAMUR NE 43					

Filter
The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

Digital Output DO/Signaling
The digital output (DO) signals error messages and can be configured as follows: 24 V – 0 VDC – 24 V.

Short description:

WAGO's current signal conditioner measures AC/DC currents up to 5 A, converting the input signal to a standard analog signal at the output.

Features:

- Two isolated measurement inputs for 1 and 5 A AC/DC (when mounted individually: 6 A AC/DC)
- RMS measurement or arithmetic mean value
- A digital signal output reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Switchable filter function
- 3-way electrical isolation with 2.5 kV test voltage

Notes

Note	Only the WAGO Interface Configuration Software can be used to set the measurement range of 0 to 6 A. Additional setting options via the WAGO Interface Configuration Software
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Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software
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Input

Input signal type	Current
Input signal (current)	0 ... 5 A AC/DC (IN 1; block arrangement) 0 ... 6 A AC/DC (IN 1; individual arrangement)
Frequency range	16 ... 200 Hz
Input resistance (current input)	47 mΩ (IN 1) 10 mΩ (IN 2)
Input current (max.)	15 A (IN 1; 5 s); 10 A (IN 3; 5 s)
Response threshold	10 mA (IN 1); 2 mA (IN 3)
Resolution (current)	1 mA (IN 1); 0.5 mA (IN 3)

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V (invertible, also bipolar)
Output signal (current)	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA (invertible, also bipolar)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Output (digital)

Switching voltage (DO) max.	Supply voltage applied
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)

Signal Processing

Measurement method	True RMS measurement; Arithmetic mean value
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (with software filter 3)
Step response (max.)	250 ms

Measurement Error

Transmission error (max.)	≤ 0.5 % (of the full scale value)
Temperature coefficient	1 A input: ≤ 0.01 %/K (typ.); ≤ 0.02 %/K (max.); 5 A input: ≤ 0.02 %/K (typ.); ≤ 0.04 %/K (max.)

Power Supply

Nominal supply voltage U_s	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ I_{D0})

Safety and protection

Rated Voltage	300 V
Measurement category per EN 61010-2-030	CAT II (input 300 VAC)
Note on insulation parameters	Danger: Configuration via the service interface must only be performed with a voltage-free measurement input! The digital output (DO) operates at the supply potential.
Protection type	IP20

Test voltage

Test voltage (input/analog output/supply/service interface)	3 kVAC; 50 Hz; 1 min
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Insulation coordination

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Double insulation (impedance and basic insulation); Requirement: The GND 1 input must not become hazardous when active and the measurement is performed as a low-side measurement!

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.013 MJ
Weight	38.2 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C (at nominal current)
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	≥ (T _{ambient} + 34 K)
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1
EMC emission of interference	EN 61000-6-3; EN 61326-1
Standards/specifications	EN 61010-1

Commercial data	
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4055143967129
Customs tariff number	85437090300

Product Classification	
UNSPSC	41113630
ETIM 9.0	EC002475
ETIM 10.0	EC002475
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
			Approval	Standard	Certificate Name
			EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
Approval	Standard	Certificate Name			
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03078			
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081			

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 857-551	↓

Documentation

Manual	Additional Information			
WAGO Current and Voltage Signal Conditioners and Power Measurement Modules ↓	857-551	15.07.2019	xml 7.81 KB	↓
	857-551	15.07.2019	docx 19.79 KB	↓
	857-551	15.07.2019	pdf 79.17 KB	↓

Instruction Leaflet			
Strommessumformer	V 1.0.0 03.04.2020	pdf 1712.19 KB	

CAD/CAE-Data	
CAD data 2D/3D Models 857-551	CAE data ZUKEN Portal 857-551

1 Compatible Products

1.1 Optional Accessories

1.1.1 Cables and connectors

1.1.1.1 Communication cable



[Item No.: 750-923/000-001](#)
 Configuration cable; USB connector;
 Length: 5 m

1.1.3 Current transformer

1.1.3.1 Plug-in current transformer



[Item No.: 855-305/300-501](#)
 Plug-in current transformer; Primary rated current: 300 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-405/750-501](#)
 Plug-in current transformer; Primary rated current: 750 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-301/100-201](#)
 Plug-in current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 2.5 VA; Accuracy class: 1



[Item No.: 855-305/100-201](#)
 Plug-in current transformer; Primary rated current: 100 A; Secondary rated current: 5 A; Rated power: 2.5 VA; Accuracy class: 1



[Item No.: 855-501/1000-1001](#)
 Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1



[Item No.: 855-801/1000-1001](#)
 Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1



[Item No.: 855-505/1000-1001](#)
 Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1



[Item No.: 855-301/150-501](#)
 Plug-in current transformer; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-305/150-501](#)
 Plug-in current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-601/1500-501](#)
 Plug-in current transformer; Primary rated current: 1500 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-605/1500-501](#)
 Plug-in current transformer; Primary rated current: 1500 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-301/200-501](#)
 Plug-in current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-305/200-501](#)
 Plug-in current transformer; Primary rated current: 200 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-801/2000-1001](#)
 Plug-in current transformer; Primary rated current: 2000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1



[Item No.: 855-805/2000-1001](#)
 Plug-in current transformer; Primary rated current: 2000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1



[Item No.: 855-301/250-501](#)
 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-401/250-501](#)
 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-305/250-501](#)
 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-405/250-501](#)
 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1



[Item No.: 855-1001/2500-1001](#)
 Plug-in current transformer; Primary rated current: 2500 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1

1.1.3.2 Split-core current transformer



Item No.: 855-4101/250-001
 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-5001/250-001
 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 1; Cable length: 5 m

Item No.: 855-4105/250-101
 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m

Item No.: 855-4101/400-001
 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-5001/400-000
 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m

Item No.: 855-5005/400-001
 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-4105/400-101
 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m

Item No.: 855-3001/060-003
 Split-core current transformer; Primary rated current: 60 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m



Item No.: 855-5001/600-000
 Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m

Item No.: 855-5005/600-000
 Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m

1.1.4 Interface module

1.1.4.1 Interface adapters



Item No.: 857-980
 Interface adapter; 16-pole; analog

1.1.5 Jumper

1.1.5.1 Jumper



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



Item No.: 859-410/000-006
 Jumper; for jumper slot; 10-way; insulated; blue



Item No.: 859-410
 Jumper; for jumper slot; 10-way; insulated; light gray



Item No.: 859-410/000-005
 Jumper; for jumper slot; 10-way; insulated; red



Item No.: 859-410/000-029
 Jumper; for jumper slot; 10-way; insulated; yellow



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



Item No.: 859-403/000-006
 Jumper; for jumper slot; 3-way; insulated; blue



Item No.: 859-403
 Jumper; for jumper slot; 3-way; insulated; light gray



Item No.: 859-403/000-005
 Jumper; for jumper slot; 3-way; insulated; red



Item No.: 859-403/000-029
 Jumper; for jumper slot; 3-way; insulated; yellow



Item No.: 859-404/000-006
 Jumper; for jumper slot; 4-way; insulated; blue



Item No.: 859-404
 Jumper; for jumper slot; 4-way; insulated; light gray



Item No.: 859-404/000-005
 Jumper; for jumper slot; 4-way; insulated; red



Item No.: 859-404/000-029
 Jumper; for jumper slot; 4-way; insulated; yellow



Item No.: 859-405/000-006
 Jumper; for jumper slot; 5-way; insulated; blue



Item No.: 859-405
 Jumper; for jumper slot; 5-way; insulated; light gray



Item No.: 859-405/000-005
 Jumper; for jumper slot; 5-way; insulated; red



Item No.: 859-405/000-029
 Jumper; for jumper slot; 5-way; insulated; yellow



Item No.: 859-406/000-006
 Jumper; for jumper slot; 6-way; insulated; blue



Item No.: 859-406
 Jumper; for jumper slot; 6-way; insulated; light gray



Item No.: 859-406/000-005
 Jumper; for jumper slot; 6-way; insulated; red

1.1.5.1 Jumper



Item No.: 859-406/000-029
 Jumper; for jumper slot; 6-way; insulated; yellow

Item No.: 859-407/000-006
 Jumper; for jumper slot; 7-way; insulated; blue

Item No.: 859-407
 Jumper; for jumper slot; 7-way; insulated; light gray

Item No.: 859-407/000-005
 Jumper; for jumper slot; 7-way; insulated; red



Item No.: 859-407/000-029
 Jumper; for jumper slot; 7-way; insulated; yellow

Item No.: 859-408/000-006
 Jumper; for jumper slot; 8-way; insulated; blue

Item No.: 859-408
 Jumper; for jumper slot; 8-way; insulated; light gray

Item No.: 859-408/000-005
 Jumper; for jumper slot; 8-way; insulated; red



Item No.: 859-408/000-029
 Jumper; for jumper slot; 8-way; insulated; yellow

Item No.: 859-409/000-006
 Jumper; for jumper slot; 9-way; insulated; blue

Item No.: 859-409
 Jumper; for jumper slot; 9-way; insulated; light gray

Item No.: 859-409/000-005
 Jumper; for jumper slot; 9-way; insulated; red



Item No.: 859-409/000-029
 Jumper; for jumper slot; 9-way; insulated; yellow

1.1.6 Marking

1.1.6.1 Marker



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

1.1.6.2 Marking strip



Item No.: 2009-110
 Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.7 Potential distribution

1.1.7.1 Current and voltage tap



Item No.: 855-1851/350-000

Current and voltage tap up to 185 mm²; Primary rated current: 350 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused



Item No.: 855-501/150-000

Current and voltage tap up to 50 mm²; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused



Item No.: 855-951/250-000

Current and voltage tap up to 95 mm²; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused

1.1.8 Power supply

1.1.8.1 Power Supply



Item No.: 787-2852

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

1.1.9 Relay module

1.1.9.1 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

1.1.10 Screwless end stop

1.1.10.1 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

1.1.11 Terminal blocks

1.1.11.1 Supply module



Item No.: 857-979

Supply and through module

1.1.11.2 Through terminal block



Item No.: 857-979

Supply and through module

1.1.12 Tool

1.1.12.1 Operating tool

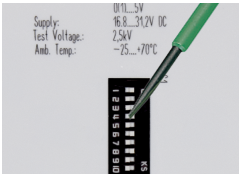


Item No.: 210-720

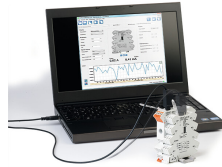
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring

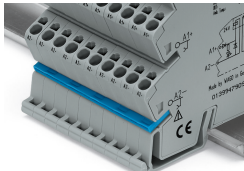


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

Commoning



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