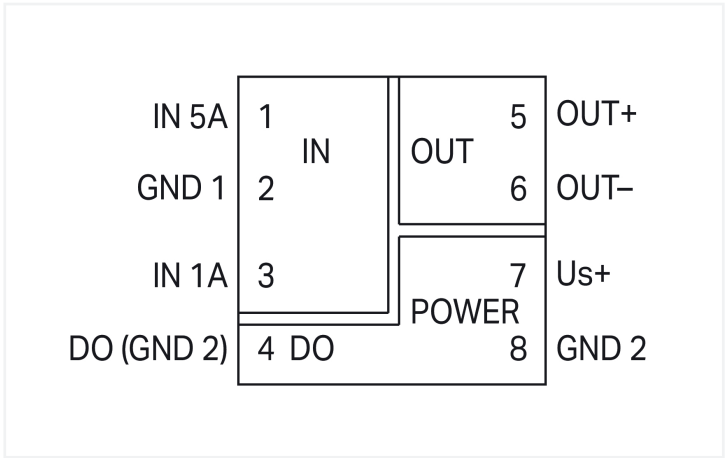


Data Sheet | Item Number: 857-551

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

DIP Switch S1		3	4
1	2	Input	Measurement Method
•	•	5 A	Effective value RMS
•	•	1 A	Arithmetic mean value (bipolar output)
•	•	0.5 A	active

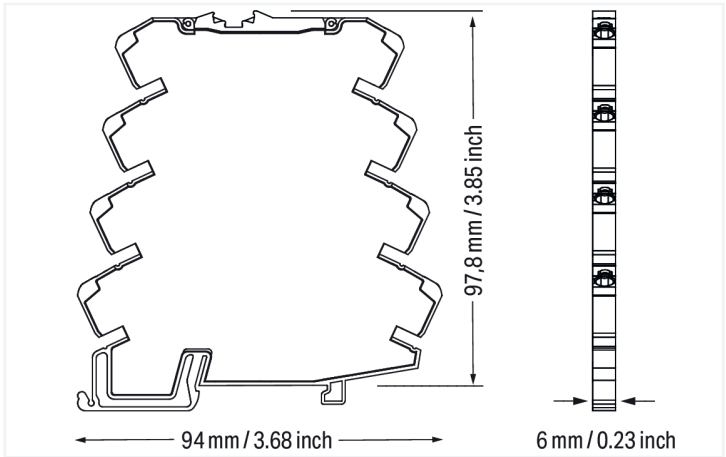
DIP Switch S1		5	6	7
		Output Signal Range (Bipolar for Arithmetic Mean Value)		
•	•	(H/L) 0...20 mA		
•	•	4...20 mA		
•	•	(H/L) 0...10 V		
•	•	2...10 V		
•	•	(H/L) 0...10 mA		
•	•	2...10 mA		
•	•	(H/L) 0...5 V		
•	•	1...5 V		

DIP Switch S1		8	9	10
		Measurement Range Underflow	Measurement Range Overflow	Digital Output DO Signaling
•	•	Lower limit of measurement range $\pm 2.5\%$	Upper limit of measurement range $\pm 5\%$	DO U _s switching
•	•	Lower limit of measurement range $\pm 2.5\%$	Upper limit of measurement range	DO GND switching
•	•	Lower limit of measurement range	Upper limit of measurement range $\pm 5\%$	

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 V – 24 V.

*acc. to NAMUR NE 43



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



Technical data

Configuration	
Configuration options	DIP switch WAGO Interface Configuration Software

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 _{DO})

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



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 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm² / 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

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 8.0		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
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		
	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	
<div>CAD data</div> <div>2D/3D Models 857-551</div>	<div>CAE data</div> <div>ZUKEN Portal 857-551</div>

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

1.1.2 Communication

1.1.2.1 Bluetooth



[Item No.: 750-921](#)
Bluetooth® Adapter

1.1.2.2 Communication cable



[Item No.: 750-923](#)
Configuration cable; USB connector;
Length: 2.5 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



1.1.3.2 Split-core current transformer



Item No.: 855-4001/100-001
Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-3001/100-003
Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m



Item No.: 855-5001/1000-000
Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m



Item No.: 855-5101/1000-000
Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m



Item No.: 855-5005/1000-000
Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m



Item No.: 855-5105/1000-000
Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m



Item No.: 855-4001/150-001
Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-4005/150-101
Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m



Item No.: 855-4001/200-001
Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; Cable length: 3 m



Item No.: 855-3001/200-001
Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-4101/200-001
Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-3001/250-001
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.: 855-4101/250-001
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












1.1.5.1 Jumper

 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
 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; Pri-
mary rated current: 250 A; Secondary ra-
ted current: 1 A; Rated power: 0.2 VA; Ac-
curacy 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 con-
tinuous current: 6 A; Yellow status indica-
tor; 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

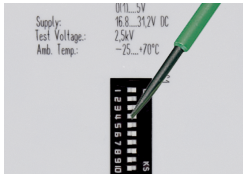
1.1.12.1 Operating tool



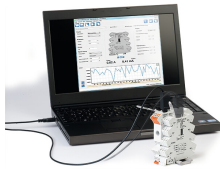
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring

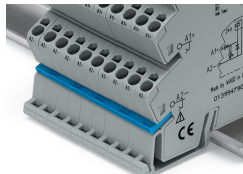


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

Commoning



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