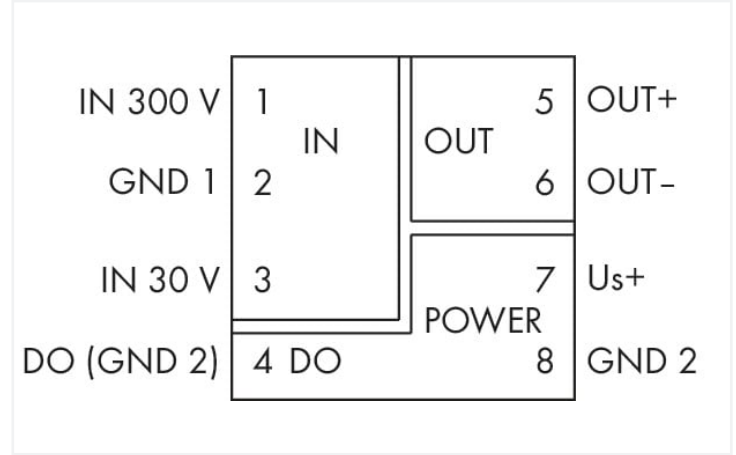


Data Sheet | Item Number: 857-560

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



<https://www.wago.com/857-560>



857-560
DIP Switch Adjustability

ON Default

DIP Switch S1		Input	Measurement Method	Filter
1	2	300 V	Effective value (RMS)	off
		<ul style="list-style-type: none"> 150 V 30 V 15 V 	<ul style="list-style-type: none"> Arithmetic mean value (bipolar output) 	<ul style="list-style-type: none"> active

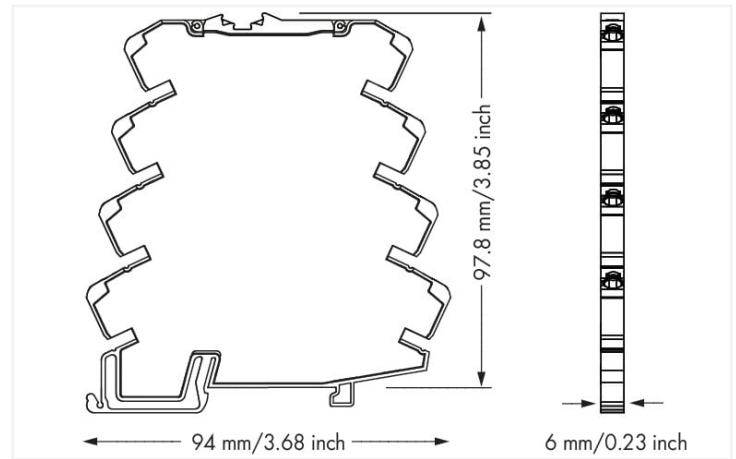
DIP Switch S1		Output Signal Range (Bipolar for Arithmetic Mean Value)
5	6	(+/-) 0 ... 20 mA
		<ul style="list-style-type: none"> 4 ... 20 mA (+/-) 0 ... 10 V 2 ... 10 V
		<ul style="list-style-type: none"> (+/-) 0 ... 10 mA 2 ... 10 mA (+/-) 0 ... 5 V 1 ... 5 V

DIP Switch S1		Measurement Range Underflow	Measurement Range Overflow	Digital Output DO/ Signaling
8	9	Lower limit of measurement range -5 %	Upper limit of measurement range +2.5 %	DO, V _s switching
		<ul style="list-style-type: none"> Lower limit of measurement range Lower limit of measurement range Lower limit of measurement range -5 % 	<ul style="list-style-type: none"> Upper limit of measurement range Upper limit of measurement range Upper limit of measurement range +5 % 	<ul style="list-style-type: none"> DO GND switching

*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 flow).

Digital Output DO/Signaling
The digital output (DO) signals error messages and can be configured as follows: 24 V - 0/10 V - 24 V.



Dimensions in mm

Short description:

WAGO's voltage signal conditioner measures AC/DC voltages up to 300 V, converting the input signal into a standard analog signal at the output.

Features:

- Two isolated measurement inputs for 30 and 300 V 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

Technical data

Configuration	
Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App

Input	
Input signal type	Voltage
Input signal (voltage)	AC/DC 300 V (IN 1); AC/DC 30 V (IN 2)
Measurement frequency	10 ... 100 Hz (AC)
Frequency range	10 ... 100 Hz (AC)
Input resistance (voltage input)	≥ 300 kΩ
Response threshold	300 mV (IN 1); 30 mV (IN 2)
Resolution (voltage)	30 mV (IN 1) 3 mV (IN 2)

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)
Load impedance (voltage output)	$\geq 1 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$

Signal processing

Measurement method	RMS measurement; Arithmetic mean value
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	30 ms

Power 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	$\leq 46 \text{ mA}$ (+ I_{DO})

Safety and protection

Rated Voltage	300 V; 150 V (UL)
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	The digital output (DO) is at the potential of the supply.
Protection type	IP20

Insulation coordination (UL)

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Reinforced insulation (safe isolation)

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)

Measurement error

Transmission error (max.)	$\leq 0.5 \%$ (of the full scale value)
Temperature coefficient	$\leq 0.01 \%/K$

Test voltage

Test voltage (input/analog output/supply/service interface)	2.5 kVAC; 50 ... 60 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 is dangerous when active and the measurement is conducted 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
---------------	-------------

Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.013 MJ
Weight	40 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C (at nominal current)
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
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 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1 EN 61373 EN 50121-3-2

Commercial data

eCl@ss 10.0	27-21-01-25
eCl@ss 9.0	27-21-01-25
ETIM 9.0	EC002477
ETIM 8.0	EC002477
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4055143481571
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1 75980-60-8
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption

Environmental Product Compliance

RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	e39ffb15-f554-4816-a577-82f294898011
SCIP notification number (Belgium)	4e3c29de-9839-4487-8450-21e290cce428
SCIP notification number (Bulgaria)	a62309da-6e93-49d0-9ca6-31ee2cbbbee05
SCIP notification number (Czech Republic)	4e179792-6d82-43e7-a0bc-61c1bbf5190b
SCIP notification number (Denmark)	d9e51cec-dd28-4094-8511-04bde8b72d54
SCIP notification number (Finland)	bfe296bd-7c71-4597-9172-90001c8c8f8c
SCIP notification number (France)	396a94fe-cc62-47b3-ae66-2fa168881435
SCIP notification number (Germany)	fbcf3bd8-1c98-48b5-a7db-5e8e81acb7f1
SCIP notification number (Hungary)	2b23d5cf-8881-40dc-b708-8ad82f781d25
SCIP notification number (Italy)	a6a805df-791f-45bb-b670-7af08d995145
SCIP notification number (Netherlands)	9cd592c7-c51d-4742-a863-2d13dd0e889c
SCIP notification number (Poland)	2b299cf8-7127-49b5-ba48-13995ec4bfb6
SCIP notification number (Romania)	d8ac266d-97e5-40de-a3e4-c13eda02beeb5
SCIP notification number (Sweden)	02e70fdd-434e-4d94-91a6-1e9375b034c3

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
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-560

Documentation

Manual
WAGO Current and Voltage Signal Conditioners and Power Measurement Modules

Bid Text
857-560 17.07.2019 xml 7.35 KB
857-560 17.07.2019 docx 19.16 KB
857-560 17.07.2019 pdf 77.36 KB

Instruction Leaflet			
Signal conditioner; voltage; configurable; with digital output	V 2.0.0 29.09.2020	pdf 2397.31 KB	

CAD/CAE-Data

CAD data
2D/3D Models 857-560

CAE data
EPLAN Data Portal 857-560
WSCAD Universe 857-560
ZUKEN Portal 857-560

Engineering-Software

Configuration and Commissioning Software			
WAGO Interface Configuration Software G2 FULL	1.00.10.01 20.01.2022	exe 112213.07 KB	
WAGO Interface Configuration Software G2 SMALL	1.00.10.01 20.01.2022	exe 30238.22 KB	

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 Interface module

1.1.3.1 Interface adapters



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

1.1.4 Jumper

1.1.4.1 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



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

1.1.4.1 Jumper



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

1.1.5 Marking

1.1.5.1 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

1.1.5.2 Marking strip



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

1.1.6 Power supply

1.1.6.1 Power supply



Item No.: 787-2852
 Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.7 Power tap

1.1.7.1 Power tap



Item No.: 855-8015
 Power tap; for busbar; with fuse; Clamping connection



Item No.: 855-8006
 Power tap; for busbar; with fuse; Mounting screw M6



Item No.: 855-8008
 Power tap; for busbar; with fuse; Mounting screw M8



Item No.: 855-8003
 Power tap; with fuse; 10 mm² (8 AWG) - 16 mm² (6 AWG); Phase



Item No.: 855-8001
 Power tap; with fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); Phase



Item No.: 855-8004
 Power tap; without fuse; 10 mm² (8 AWG) - 16 mm² (6 AWG); N-conductor



Item No.: 855-8002
 Power tap; without fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); N-conductor

1.1.8 Relay module

1.1.8.1 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

1.1.9 Screwless end stop

1.1.9.1 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

1.1.10 Terminal blocks

1.1.10.1 Supply module



Item No.: 857-979

Supply and through module

1.1.10.2 Through terminal block



Item No.: 857-979

Supply and through module

1.1.11 Tool

1.1.11.1 Operating tool

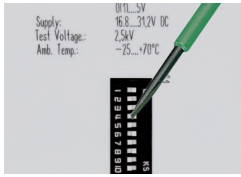


Item No.: 210-720

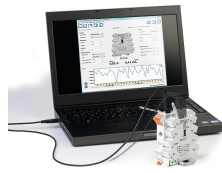
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch

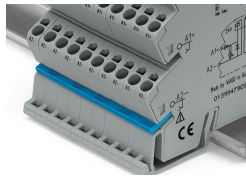


Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App

Commoning



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