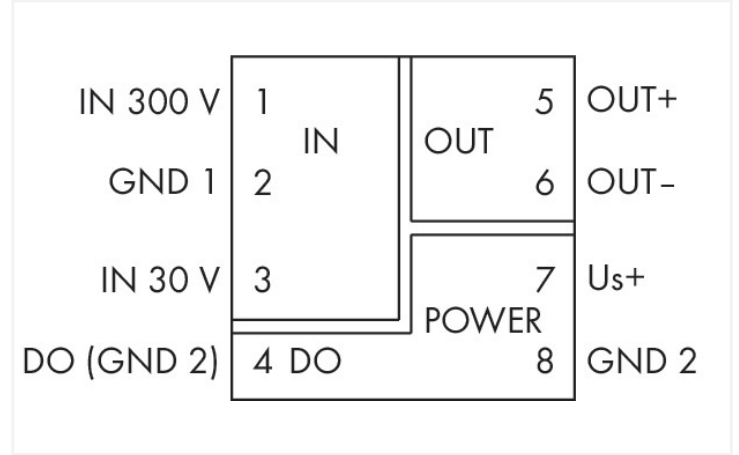


Data Sheet | Item Number: 857-560

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

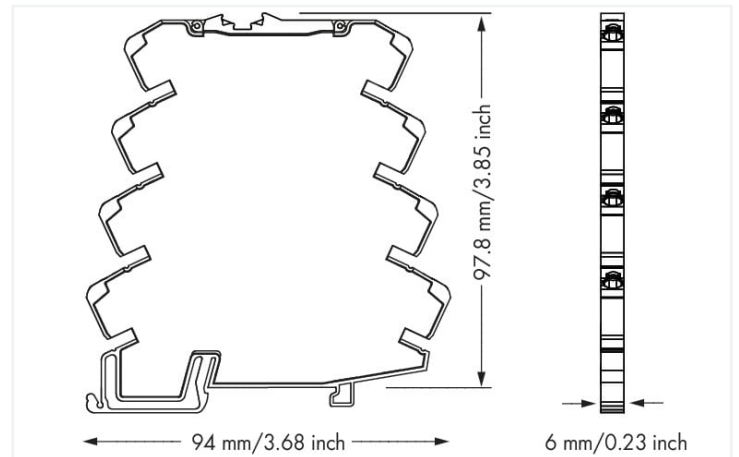
DIP Switch S1		Output Signal Range (Bipolar for Arithmetic Mean Value)
5	6	7
		<ul style="list-style-type: none"> (+/-) 0 ... 20 mA 4 ... 20 mA (+/-) 0 ... 10 V 2 ... 10 V (+/-) 0 ... 10 mA 2 ... 10 mA (+/-) 0 ... 5 V 1 ... 5 V

DIP Switch S1		Measurement Range Underflow	Measurement Range Overflow	Digital Output DO/ Signaling
8	9	10		
		<ul style="list-style-type: none"> Lower limit of measurement range $\leq 5\%$ Lower limit of measurement range Lower limit of measurement range Lower limit of measurement range $\leq 5\%$ 	<ul style="list-style-type: none"> Upper limit of measurement range $\geq 2.5\%$ Upper limit of measurement range $+2.5\%$ Upper limit of measurement range Upper limit of measurement range $\geq 15\%$ 	<ul style="list-style-type: none"> DO, V_r switching 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
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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)	$\geq 300 \text{ k}\Omega$
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
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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

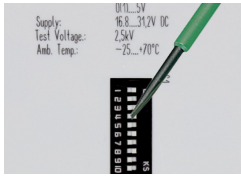


Item No.: 210-720

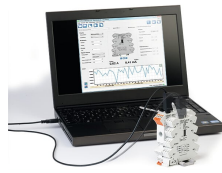
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch

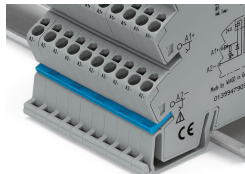


Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App

Commoning



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