



Short description:

WAGO's potentiometer signal conditioner records resistance signals (e.g., from potentiometers) and converts them into a standard analog signal. The device is supplied with 24 VDC (nominal voltage). It is set via DIP switch or push/slide switch.**Features:**

- PC configuration interface
- Calibrated measurement range switching
- Automatic maximum value identification for the connected potentiometer

Notes

Safety Information	Input and output must be safely isolated from any hazardous live parts!
Note	<p>Use shielded signal lines! Only use shielded signal lines for analog input and output signals. Only then can you ensure that the accuracy and interference immunity specified for the device can be achieved, even in the presence of interference acting on the signal cable.</p> <p>Additional setting options via WAGO Interface Configuration Software or WAGO Interface Configuration App</p>

Technical data

Configuration

Configuration options	DIP switch WAGO Interface Configuration Software Push/slide switch
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Input

Input signal type	Potentiometer Resistance
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Input (resistors)

Input range (resistor)	0 ... 100 k Ω
Input range (potentiometer)	100 Ω ... 100 k Ω
Potentiometer supply voltage (max.)	2.5 V
Measurement span (min.)	100 Ω

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 k Ω
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)	2 (adjustable switching points)

Signal processing

Step response (typ.)	32 ms
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Measurement error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Power supply

Power supply type	24 VDC (SELV)
Nominal supply voltage U_S	DC 24 V
Supply voltage range	± 30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ I_{DO})
Power consumption (max.)	4 W
Power loss (max.) $P_{I(max)}$	0.9 W

Safety and protection

Rated Voltage	300 V
Overvoltage category	II
Pollution degree	2
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 2 kV; 50 Hz; 1 min
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Insulation coordination

Insulation type (input/analog output/supply)	Functional insulation
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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	0.418 MJ
Weight	36.6 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 9 \text{ K})$
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
EMC emission of interference	EN 61000-6-4
Standards/specifications	DNV EN 61010-1

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 9.0	EC002653
ETIM 8.0	EC002653
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821480761
Customs tariff number	85437090300

Environmental Product Compliance


CAS-No.	1303-86-2 1317-36-8 7439-92-1 79-94-7 80-05-7
REACH Candidate List Substance	Lead monoxide 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 4,4'-isopropylidenediphenol Diboron trioxide Lead
RoHS Compliance Status	Compliant, With Exemption

Environmental Product Compliance

RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	852b910c-257c-472c-a61b-3693d1584e48
SCIP notification number (Czech Republic)	ca15a22b-2053-43e4-b99b-5ae3cefb73bd

Approvals / Certificates


General approvals **Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

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

Approvals for marine applications



Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1
PRS Polski Rejestr Statków	-	TE/1098/880590/23


Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX112692X (II 3G Ex ec IIC T4 Gc)
CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	-	IECEX TUN14.0030X
UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-809 

Documentation

Manual			
WAGO Signal Conditioners with Special Functions			↓

Bid Text			
857-809	19.02.2019	xml 5.97 KB	↓
857-809	20.02.2019	docx 17.66 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	↓
Potipositionsmessumformer		pdf 2579.65 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 857-809	↓

CAE data	
EPLAN Data Portal 857-809	↓
WSCAD Universe 857-809	↓
ZUKEN Portal 857-809	↓

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 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

1.1.4.1 Jumper



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

1.1.5 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 Relay module

1.1.7.1 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

1.1.8 Screwless end stop

1.1.8.1 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

1.1.9 Terminal blocks

1.1.9.1 Supply module



Item No.: 857-979

Supply and through module

1.1.9.2 Through terminal block



Item No.: 857-979

Supply and through module

1.1.10 Tool

1.1.10.1 Operating tool

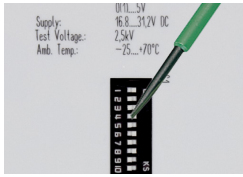


Item No.: 210-720

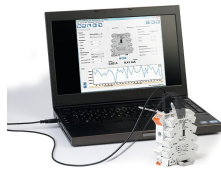
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch

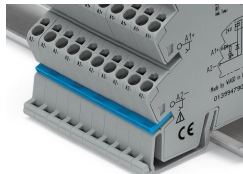


Configuration via WAGO Interface Configuration Software



Configuration via push/slide switch

Commoning



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