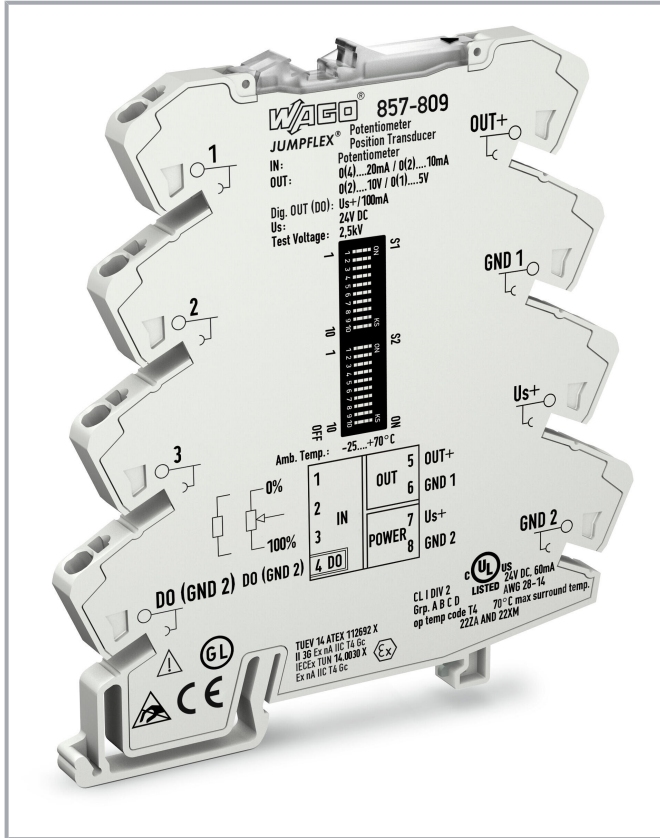


Data sheet | Item number: 857-809

Potentiometer signal conditioner; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²

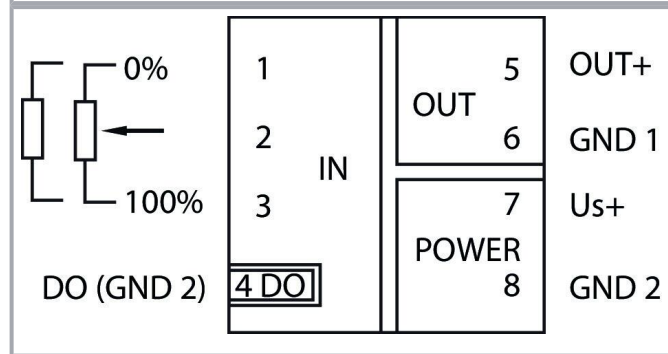
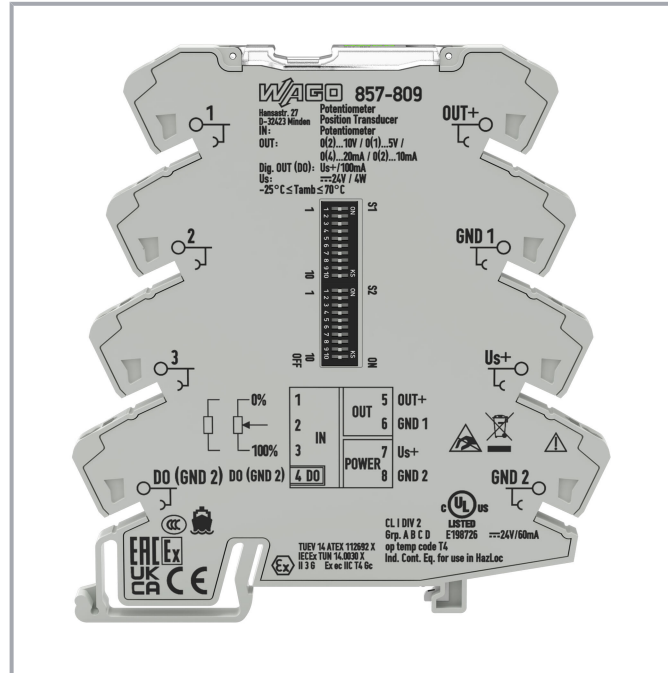
www.wago.com/857-809



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

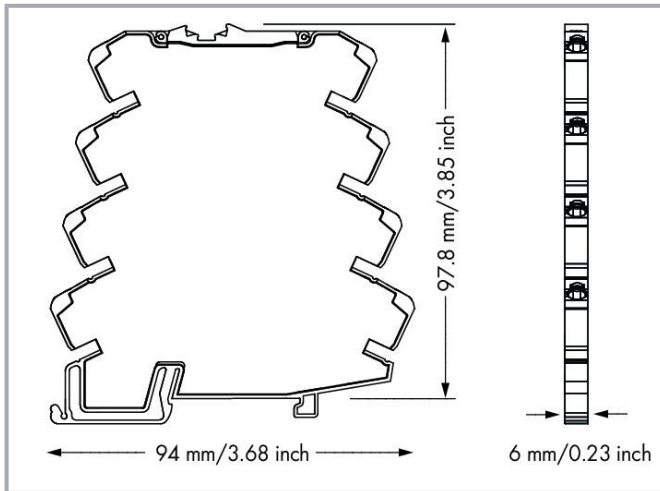
Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
 Hansastr. 27
 32423 Minden
 Phone: +49571 887-0 | Fax: +49571 887-169
 Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
 We are always happy to take your call at +49 (571) 887-44222.



857-809
DIP Switch Adjustability

• ON Default

DIP Switch S1 und S2

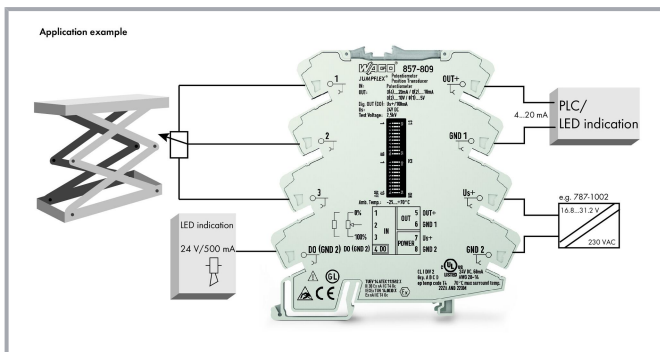
DIP S1	Input	Start Value					End Value					
		DIP S1	Resistor Ω	DIP S1	Resistor Ω	DIP S2	Resistor Ω					
1	Potentiometer	2	3	4	5	6	7	8	9	10	1	100000
•	Resistor	•	•	•	•	•	•	•	•	•	•	•
						0						0
						10						10
						11						11
						12						12
						13						13
						15						15
						16						16
						18						18
						20						20
						22						22
						24						24
						27						27
						30						30
						33						33
						36						36
						39						39
						43						43
						47						47
						51						51
						56						56
						62						62
						68						68
						75						75
						82						82
						91						91
						40						40
						50						50
						60						60
						70						70
						80						80
						90						90

DIP Switch S2

Factor of Initial Value		Factor of End Value		Output		Output Signal Range	
2	3	4	5	6	7	8	
•	x10	•	•	x1	•	•	0 ... 10 V _{DC} ... 20 mA
•	x100	•	•	x10	•	•	2 ... 10 V _{AC} ... 20 mA
•	x1000	•	•	x100	•	•	0 ... 5 V _{DC} ... 10 mA
•	•	•	•	x1000	•	•	1 ... 5 V _{AC} ... 10 mA

9	10	Measurement Range Underflow	Measurement Range Overflow	Wire Break
•	•	Upper limit of output range* +2.5%	Lower limit of output range* -5%	Upper limit of output range* +4%
•	•	Upper limit of output range +2.5%	Lower limit of output range	Upper limit of output range +5%
•	•	Upper limit of output range	Lower limit of output range	Upper limit of output range +5%
•	•	Upper limit of output range	Lower limit of output range	Lower limit of output range

*acc. to NAMUR NE 45



Item description

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

Subject to changes. Please also observe the further product documentation!



Data Notes

Note

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.

Additional setting options via WAGO Interface Configuration Software or WAGO Interface Configuration App

Technical data

Configuration

Configuration options

DIP switch
WAGO Interface Configuration Software
WAGO Interface Configuration App
Push/slide switch

Input

Input signal type

Potentiometer
Resistance
Potentiometers
Resistor

Input (resistors)

Input range (resistor)	10 Ω ... 100 k Ω
Input range (potentiometer)	100 Ω ... 100 k Ω
Potentiometer supply voltage (max.)	2.5 V
Measurement range (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

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.

Output (digital)

Switching voltage (DO) max.	Supply voltage applied
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)

Signal Processing

Step response (typ.)	32 ms
----------------------	-------

Measurement Error

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

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	$\leq 50\text{ mA} (+ I_{DO})$
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
------------------------------------	-----------------------

Insulation parameters

Insulation type (input/analog output/supply)	Functional insulation
--	-----------------------

Connection data

Connection technology

Subject to changes. Please also observe the further product documentation!



	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

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	≥ (T _{ambient} + 9 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

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 8.0	EC002653

Subject to changes. Please also observe the further product documentation!




ETIM 7.0	EC002653
PU (SPU)	1 pcs
Packaging type	bag
Country of origin	DE
GTIN	4050821480761
Customs tariff number	85437090300


Environmental Product Compliance

CAS-No.	7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead
RoHS Compliance Status	Compliant,With Exemption
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**

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0

Subject to changes. Please also observe the further product documentation!

BUREAU
VERITAS

DNV

DNV-CG-0339, Aug. 2021

TAA00001D1

DNV Germany GmbH



PRS

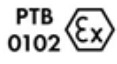





-

TE/2186

Polski Rejestr Statków

/880590/18

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00144/19 (2 Ex nA IIC T4 Gc X)
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
	UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Optional accessories














Jumpers

Subject to changes. Please also observe the further product documentation!



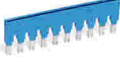











WAGO GmbH & Co. KG
 Hansastr. 27
 32423 Minden
 Phone: +49571 887-0 | Fax: +49571 887-169
 Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
 We are always happy to take your call at +49 (571) 887-44222.













Jumper

	Item no.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray	www.wago.com/859-408
	Item no.: 281-482 Jumper; 2-way; insulated; gray	www.wago.com/281-482
	Item no.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red	www.wago.com/859-404/000-005
	Item no.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue	www.wago.com/859-404/000-006
	Item no.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red	www.wago.com/859-405/000-005
	Item no.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow	www.wago.com/859-405/000-029
	Item no.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray	www.wago.com/859-405
	Item no.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow	www.wago.com/859-404/000-029
	Item no.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray	www.wago.com/859-406
	Item no.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue	www.wago.com/859-405/000-006
	Item no.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red	www.wago.com/859-406/000-005
	Item no.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow	www.wago.com/859-409/000-029
	Item no.: 859-410/000-005 Jumper; for jumper slot; 10-way; insulated; red	www.wago.com/859-410/000-005

Subject to changes. Please also observe the further product documentation!

	Item no.: 859-410/000-029 Jumper; for jumper slot; 10-way; insulated; yellow	www.wago.com/859-410/000-029
	Item no.: 859-410 Jumper; for jumper slot; 10-way; insulated; light gray	www.wago.com/859-410
	Item no.: 859-410/000-006 Jumper; for jumper slot; 10-way; insulated; blue	www.wago.com/859-410/000-006
	Item no.: 859-403/000-005 Jumper; for jumper slot; 3-way; insulated; red	www.wago.com/859-403/000-005
	Item no.: 859-402/000-029 Jumper; for jumper slot; 2-way; insulated; yellow	www.wago.com/859-402/000-029
	Item no.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow	www.wago.com/859-403/000-029
	Item no.: 859-403/000-006 Jumper; for jumper slot; 3-way; insulated; blue	www.wago.com/859-403/000-006
	Item no.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red	www.wago.com/859-408/000-005
	Item no.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow	www.wago.com/859-408/000-029
	Item no.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray	www.wago.com/859-409
	Item no.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue	www.wago.com/859-408/000-006
	Item no.: 859-403 Jumper; for jumper slot; 3-way; insulated; light gray	www.wago.com/859-403
	Item no.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red	www.wago.com/859-409/000-005
	Item no.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray	www.wago.com/859-404

Subject to changes. Please also observe the further product documentation!

	<p>Item no.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue</p>	<p>www.wago.com/859-409/000-006</p>
	<p>Item no.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue</p>	<p>www.wago.com/859-402/000-006</p>
	<p>Item no.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray</p>	<p>www.wago.com/859-402</p>
	<p>Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red</p>	<p>www.wago.com/859-402/000-005</p>
	<p>Item no.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue</p>	<p>www.wago.com/859-406/000-006</p>
	<p>Item no.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow</p>	<p>www.wago.com/859-406/000-029</p>
	<p>Item no.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue</p>	<p>www.wago.com/859-407/000-006</p>
	<p>Item no.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red</p>	<p>www.wago.com/859-407/000-005</p>
	<p>Item no.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow</p>	<p>www.wago.com/859-407/000-029</p>
	<p>Item no.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray</p>	<p>www.wago.com/859-407</p>
Relay module		
Relay module		
	<p>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; 2,50 mm²; gray</p>	<p>www.wago.com/857-304</p>
Screwless end stop		
Mounting accessories		
	<p>Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray</p>	<p>www.wago.com/249-116</p>
	<p>Item no.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray</p>	<p>www.wago.com/249-117</p>

Subject to changes. Please also observe the further product documentation!



Item no.: 249-197

Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

www.wago.com/249-197

Tool

Operating tool



Item no.: 210-720

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

www.wago.com/210-720

Marking accessories

Marking strip



Item no.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

www.wago.com/2009-110

Marker



Item no.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/2009-115



Item no.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/793-501



Item no.: 793-502

WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-502



Item no.: 793-503

WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-503



Item no.: 793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-504



Item no.: 793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-505



Item no.: 793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-506



Item no.: 793-566

WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/793-566



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

www.wago.com/793-5501

Power supplies

Power supply unit

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

Hansastr. 27







32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.

	Item no.: 787-2852 Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current	www.wago.com/787-2852
Terminal blocks		
Supply module		
	Item no.: 857-979 Supply and through module	www.wago.com/857-979
Interface module		
Interface adapters		
	Item no.: 857-980 Interface adapter; 16-pole; analog	www.wago.com/857-980
Communication		
Bluetooth		
	Item no.: 750-921 Bluetooth® Adapter	www.wago.com/750-921
Communication cable		
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m	www.wago.com/750-923
Cables and pluggable connectors		
Communication cable		
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m	www.wago.com/750-923/000-001

Downloads

Documentation

Bid Text

857-809 docx - Datei	2019 Feb 20	docx 18.1 kB	Download
857-809 X81 - Datei	2019 Feb 19	xml 6.1 kB	Download

Instruction Leaflet

CCC Ex (Additional information) 857-***	2023 Apr 26	pdf 144.4 kB	Download
Potipositionsmessumformer	2022 Aug 15	pdf 2.2 MB	Download

Subject to changes. Please also observe the further product documentation!



Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download
---	------------------------	---------------	----------

Engineering-Software

Configuration and Commissioning Software

WAGO Interface Configuration Software G2 FULL The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	1.00.10.01 2022 Jan 20	exe 114.9 MB	Download
---	---------------------------	-----------------	----------

WAGO Interface Configuration Software G2 SMALL The full setup only includes the WAGO Interface Configuration Software G2.	1.00.10.01 2022 Jan 20	exe 31.0 MB	Download
--	---------------------------	----------------	----------

CAD/CAE-Data

CAE data

EPLAN Data Portal 857-809	URL	Download
---------------------------	-----	----------

WSCAD Universe 857-809	URL	Download
------------------------	-----	----------

ZUKEN Portal 857-809	URL	Download
----------------------	-----	----------

CAD data

2D/3D Models 857-809	URL	Download
----------------------	-----	----------

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-809 Potentiometer signal conditioner; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm ²	URL	Download
--	-----	----------

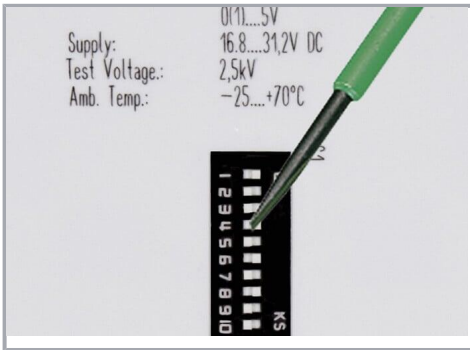
Installation Notes

Configuring

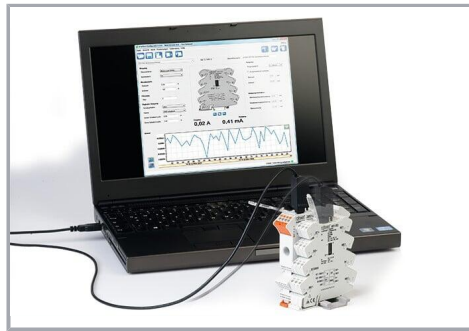
Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

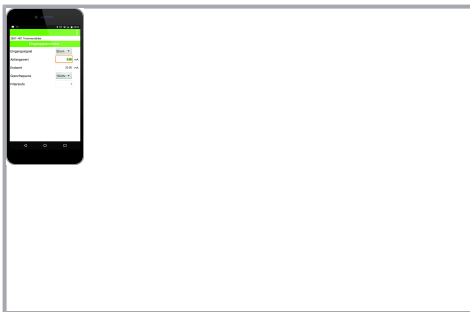
Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Configuration via DIP switch



Configuration via WAGO Interface
Configuration Software

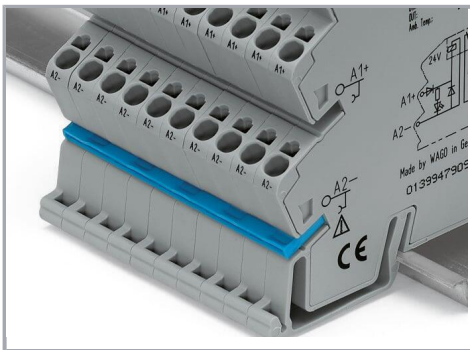


Configuration via WAGO Interface
Configuration App



Configuration via push/slide switch

Commoning



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

Subject to changes. Please also observe the further product documentation!