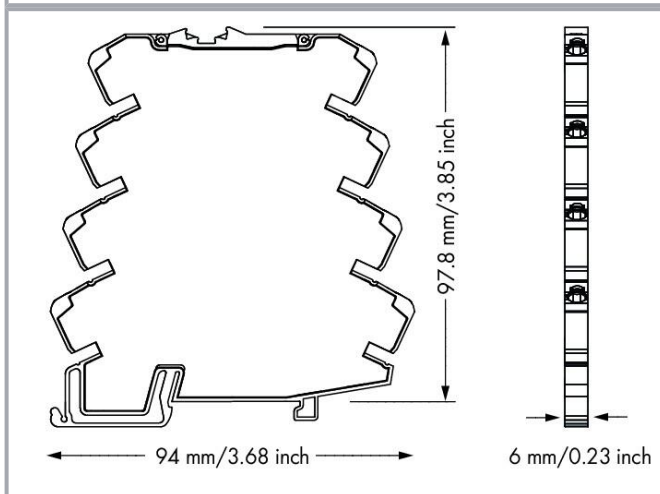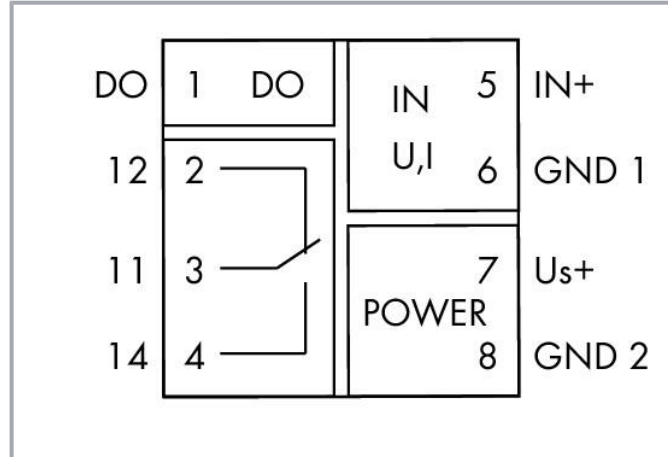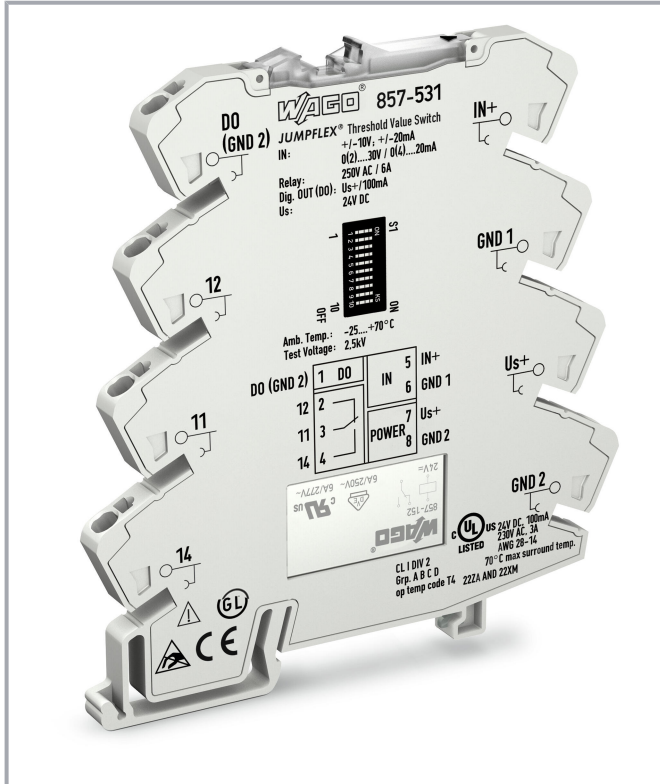# Data sheet | Item number: 857-531

Threshold value switches; Analog values; 1 changeover contact; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²

www.wago.com/857-531

857-531
DIP Switch Adjustability   • = ON   Default

DIP-Switch S1

Input Signal Limits ±0.25 V; ±0.5 mA				Hysteresis	
1	2	3	4	5	
				±10 V	5 mV; 10 µA
	•			0 … 10 V	•	10 mV, 20 µA
		•		2 … 10 V	
	•	•		0 … 5 V	
			•	1 … 5 V	
	•		•	±5 V	
		•	•	0 … 15 V	
	•	•	•	0 … 30 V	
•				±20 mA	
•		•		0 … 20 mA	
•			•	4 … 20 mA	
•		•	•	0 … 10 mA	
•	•		•	2 … 10 mA	
•	•		•	±10 mA	

DIP Switch S1

Configurable Rise/Fall Delay Time in sec.			Digital Output DO Signaling	
6	7	8	9	10
			0	DO not active
•			1	•	GND → Us (switching)
	•		2	•	•	Us → GND (switching)
•	•		3	
		•	4	
•		•	5	
	•	•	8	
•	•	•	10	

Do you have any questions about our products?
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Item description

Short description:

WAGO's threshold value switch for analog signals monitors standard analog signals and reports signals exceeding a preset threshold.

Features:

- PC configuration interface
- Digital switching output
- Changeover contact relay output
- Calibrated measurement range switching
- Threshold value configuration via DIP switches and teach-in function via push/slide switch
- 3-way electrical isolation with 2.5 kV test voltage

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	Voltage
	Current
Input signal (voltage)	±10 V; 0 … 30 V
Input signal (current)	±20 mA

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

Input resistance (current input)	≤ 200 Ω
Input resistance (voltage input)	≥ 100 kΩ
Input current (max.)	22 mA
Input voltage (max.)	31 V

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)
Configurable rise/fall delay time (DO)	10 s

Output (relay)

Number of changeover/switchover contacts	1
Switching voltage (max.)	AC 250 V
Switching power (resistive) max.	AC 1250 VA
Drop-out time (typ.)	4 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 … 30 s (via software)

Signal Processing

Hysteresis	Adjustable via DIP switch or software
Step response (typ.)	16 ms

Measurement Error

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

Supply

Power supply type	24 VDC
Nominal supply voltage U_S	DC 24 V
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 25 mA (+ I_{DO})

Safety and protection

Protection type	IP20

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

Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min

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

Fire load	0.013 MJ
Weight	38.6 g

Environmental requirements

Ambient temperature (operation)	-25 … +70 °C
Ambient temperature (storage)	-40 … +85 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61131-2; EN 61326-1
EMC emission of interference	EN 61000-6-4; EN 61131-2; EN 61326-1
Standards/specifications	EN 50121-3-2 DNV EN 61373

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

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
ETIM 7.0	EC002653
PU (SPU)	1 pcs
Packaging type	bag
Country of origin	DE
GTIN	4045454885229
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)	70c9867b-9228-49b1-8871-0ff4880135a1
SCIP notification number (Czech Republic)	475d917f-e72d-4462-a17f-b1550a3b1393

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
EAC	**EAC** Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
EAC	**EAC** Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name

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

	EU-Declaration of Conformity	-	-
CE	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
	DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00001D1
	PRS Polski Rejestr Statków	-	TE/2186 /880590/18

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Optional accessories

Screwless end stop

Mounting accessories		
	Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-116
	Item no.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-117
	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

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

Terminal blocks

Supply module

Item no.: 857-979

Supply and through module

www.wago.com/857-979

Power supplies

Power supply unit

Item no.: 787-2852

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

www.wago.com/787-2852

Relay module

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; 2,50 mm²; gray

www.wago.com/857-304

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

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

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

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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

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

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

Interface module

Interface adapters

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

www.wago.com/857-980

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](www.wago.com/750-923/000-001)

Jumpers

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](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](www.wago.com/859-404/000-006)

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

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
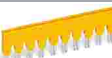
www.wago.com/859-406
/000-005

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
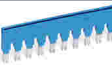
www.wago.com/859-410
/000-005

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

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

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	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
	Item no.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue	www.wago.com/859-409 /000-006
	Item no.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue	www.wago.com/859-402 /000-006
	Item no.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray	www.wago.com/859-402
	Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red	www.wago.com/859-402 /000-005

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

	Item no.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue	www.wago.com/859-406 /000-006
	Item no.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow	www.wago.com/859-406 /000-029
	Item no.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue	www.wago.com/859-407 /000-006
	Item no.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red	www.wago.com/859-407 /000-005
	Item no.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow	www.wago.com/859-407 /000-029
	Item no.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray	www.wago.com/859-407

Downloads

Documentation

Bid Text

857-531 docx - Datei	2019 Feb 20	docx 17.9 kB	Download
857-531 X81 - Datei	2019 Feb 19	xml 6.4 kB	Download

Instruction Leaflet

Messumformer und Trennverstärker Grenzwertschalter DIP-Schalter, "Teach-In" -Schalter / FDT/DTM Software	V 2.2.2 2023 Mar 28	pdf 3.4 MB	Download

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

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

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

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

CAD/CAE-Data

CAD data

2D/3D Models 857-531	URL	Download

CAE data

EPLAN Data Portal 857-531	URL	Download

WSCAD Universe 857-531	URL	Download

ZUKEN Portal 857-531	URL	Download

Environmental Product Compliance
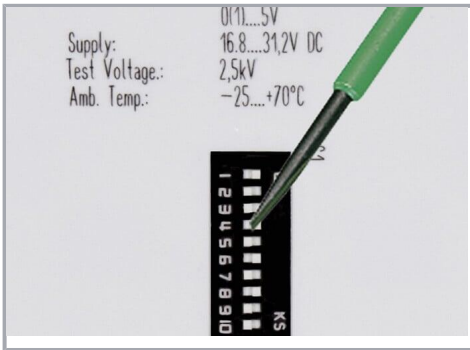
Compliance Search

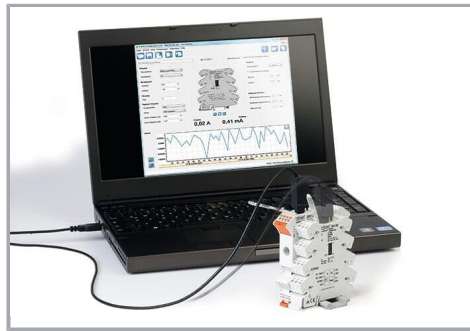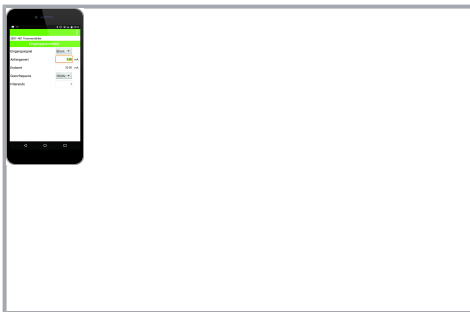| Environmental Product Compliance 857-531	URL	Download
Threshold value switches; Analog values; 1 changeover contact; Digital output; Configuration via software; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²		

Installation Notes

Configuring

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

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Configuration via DIP switch

Configuration via WAGO Interface
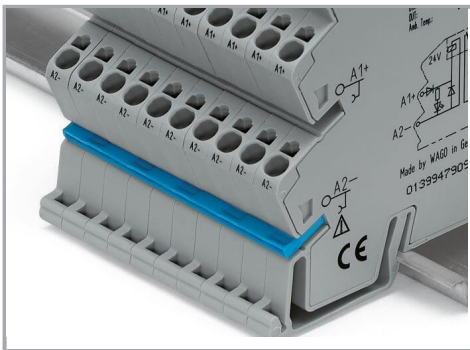Configuration Software

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!