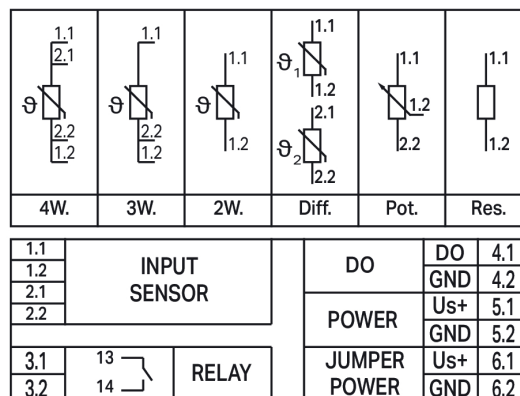
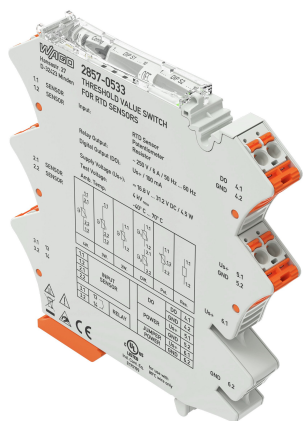
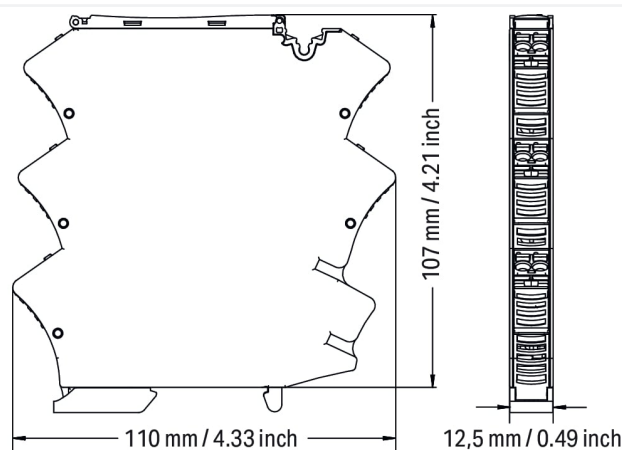


Data Sheet | Item Number: 2857-533

Threshold value switches; RTD sensors; 1 make contact; Digital output; Configuration via software; Supply voltage: 24 VDC; 12.5 mm module width

<https://www.wago.com/2857-533>

[illegible]

Short description:

WAGO's RTD threshold value switch for RTD sensors, potentiometers and resistors monitors and reports signals for up to two switching thresholds.

Features:

- Both digital signal output and relay with make contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Configurable RTD factor
- Adjustable software filter
- Safe three-way isolation with 4 kV test voltage per EN 61010-1

Notes

Note

This product is supplied with 24 VDC, which can be commoned using lateral push-in type jumper bars: (6.1) $U_S +$ (BR) and (6.2) GND 2 (BR). With this variant, it is necessary to ensure that the maximum permissible total current of 6 A is not exceeded.

Additional setting options via the WAGO Interface Configuration Software

Technical data

Configuration

Configuration options DIP switch
WAGO Interface Configuration Software

Input

Input signal type	RTD sensors Potentiometer Resistance
-------------------	--



Input (RTD sensors)	
Sensor types (RTD)	Pt100 Pt200 Pt500 Pt1000 Pt5000 Pt10000 Pt10 ... Pt20000
Sensor connection	2-wire; 3-wire; 4-wire; differential
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C

Output (digital)	
Switching voltage (DO) max.	Supply voltage (applied) - 0.3 V
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)

Signal processing	
Software filter (adjustable)	Moving average value (filter level: 30)
Hysteresis	Adjustable via DIP switch or software
Step response (typ.)	60 ms (2-wire) 360 ms (3-wire) 540 ms (4-wire) 360 ms (potentiometer)

Power supply	
Power supply type	24 VDC
Nominal supply voltage U _S	24 VDC (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA (+ I _{DO})

Safety and protection	
Rated Voltage	300 V
Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	Temperature sensors are not intended for use in dangerous circuits, provided the external temperature sensors used do not have basic insulation in accordance with EN/UL 61010-1 (300 VAC; overvoltage category II; pollution degree 2). The digital output (DO) is at the potential of the supply.
Protection type	IP20

Test voltage	
Test voltage (input/relay output/supply)	4 kVAC; 60 Hz; 1 min
Test voltage (input/service interface)	3 kVAC; 60 Hz; 1 min
Test voltage (relay output/service interface)	4 kVAC; 60 Hz; 1 min
Test voltage (supply/service interface)	2.5 kVAC; 60 Hz; 1 min

Input (resistors)	
Input range (resistor)	0 ... 100 kΩ
Input range (potentiometer)	0 ... 100 kΩ

Output (relay)	
Number of make/switch-on contacts	1
Contact material (relay)	AgNi + Au
Switching Voltage, Max.	250 VAC
Dielectric strength (open contact) (AC, 1 min)	1 kVrms
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	8 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Measurement error	
Transmission error (max.)	± 1 K
Temperature coefficient	≤ 0.01 %/K

Operating data	
Continuous current (max.)	6 A

Insulation coordination (UL)

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

Connection data

Connection technology	Push-in CAGE CLAMP®
WAGO connector	<i>picoMAX</i> ® 5.0
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	12.5 mm / 0.492 inches
Height	110 mm / 4.331 inches
Depth from upper-edge of DIN-rail	107 mm / 4.213 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	1.573 MJ
Weight	86.6 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	≥ (T _{ambient} + 10 K)
Temperature range of connection cable (UL)	80 °C

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 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1 EN 61373 EN 50121-3-2

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-37-18-10
eCl@ss 9.0	27-37-18-10
ETIM 9.0	EC001446
ETIM 8.0	EC001446
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821676973
Customs tariff number	90303370000



Environmental Product Compliance	
CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Perfluorobutane sulfonic acid (PFBS) and its salts Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	5dacf9f1-acec-4030-a576-2066861dd611
SCIP notification number (Belgium)	93a2e53f-f28c-4be6-803b-f05ac560dbc3
SCIP notification number (Bulgaria)	2674e09f-f188-47ca-907f-6da7555f3cbe
SCIP notification number (Czech Republic)	53482b4c-731d-46d7-978a-76349083b4ae
SCIP notification number (Denmark)	bd15bcb7-0805-48fd-804d-7c2b0575624e
SCIP notification number (Finland)	f95a8eb7-dda8-4f0f-a6a7-71055557790a
SCIP notification number (France)	a95114a5-e653-4a5c-9d8d-4217bd36673b
SCIP notification number (Germany)	5058fdd7-a366-4ffa-9b3b-8dc6348e2b84
SCIP notification number (Hungary)	53cffe9a-5596-4742-9f5a-4a850f720b5b
SCIP notification number (Italy)	d49bce73-6715-4d98-b444-679711c15ee3
SCIP notification number (Netherlands)	0175bf0f-8d9e-4f18-afd7-43d4440d1d8d
SCIP notification number (Poland)	07e60571-bb7b-447a-90ca-0a5fc4588e2a
SCIP notification number (Romania)	b18f85a9-7d9d-48f3-824e-f73837ce0f15
SCIP notification number (Sweden)	e18be451-767b-4edb-abbcb-451ebe189c33

Approvals / Certificates		
General approvals		Declarations of conformity and manufacturer's declarations
EAC EAC		
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03084
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199
		Approval Standard Certificate Name EU-Declaration of Confor- mity WAGO GmbH & Co. KG - -



Downloads

Environmental Product Compliance

Compliance Search			
Environmental Product Compliance 2857-533			↓

Documentation

Manual			
WAGO Threshold Value Switches			↓

Bid Text			
2857-533	19.02.2019	xml 6.67 KB	↓
2857-533	20.02.2019	docx 18.85 KB	↓

Instruction Leaflet			
Signal Conditioner RTD Threshold Value Switch	V 2.0.0 30.09.2020	pdf 2792.42 KB	↓

CAD/CAE-Data

CAD data			
2D/3D Models 2857-533			↓

CAE data			
EPLAN Data Portal 2857-533			↓
WSCAD Universe 2857-533			↓
ZUKEN Portal 2857-533			↓

Runtime Software

Firmware			
WA GO_FW2857-0533_V0 2.00.00		txt 868.95 KB	↓



1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 Bluetooth



[Item No.: 750-921](#)
Bluetooth® Adapter

1.1.1.2 Communication cable



[Item No.: 750-923](#)
Configuration cable; USB connector;
Length: 2.5 m



[Item No.: 750-923/000-001](#)
Configuration cable; USB connector;
Length: 5 m

1.1.2 Installation

1.1.2.1 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

1.1.3 Jumper

1.1.3.1 Jumper



[Item No.: 281-482](#)
Jumper; 2-way; insulated; gray



[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

1.1.4 Marking

1.1.4.1 Marker



[Item No.: 2009-141](#)
Micro-USB-Inline; 2000 pieces on roll;
plain; snap-on type; white



[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 mar-
king; snap-on type; white



[Item No.: 793-566](#)
WMB marking card; as card; MARKED; 1 ...
50 (2x); not stretchable; Horizontal mar-
king; 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



1.1.4.1 Marker



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

1.1.4.2 Marking strip



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

1.1.5 Power supply

1.1.5.1 Power supply



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

1.1.6 Relay module

1.1.6.1 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

1.1.7 Terminal blocks

1.1.7.1 Supply module



Item No.: 857-979
Supply and through module

1.1.7.2 Through terminal block



Item No.: 857-979
Supply and through module

1.1.8 Test and measurement

1.1.8.1 Testing accessories



Item No.: 735-500
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.1.9 Tool

1.1.9.1 Operating tool



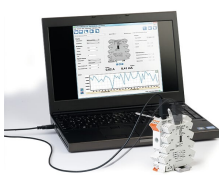
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch



Configuration via WAGO Interface Configuration Software



Configuration via WAGO Interface Configuration App



Configuration via WAGO Configuration Display

Conductor termination

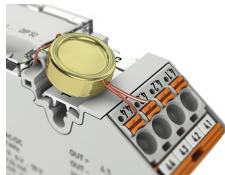


Pluggable connection technology



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

Security



Lock-out seal option

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

Current addresses can be found at: www.wago.com