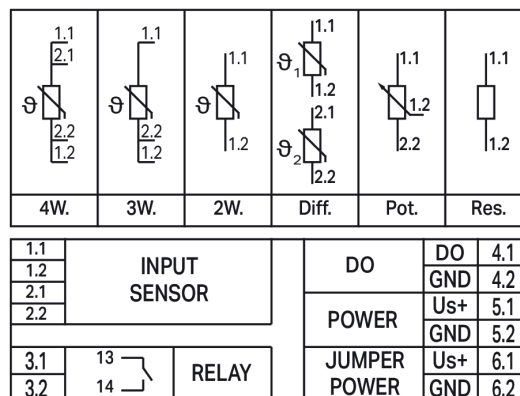
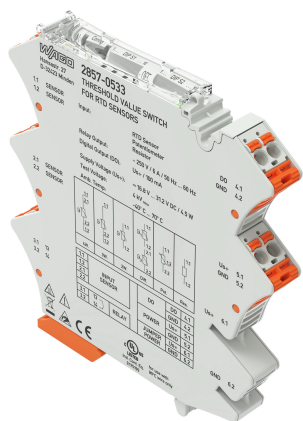
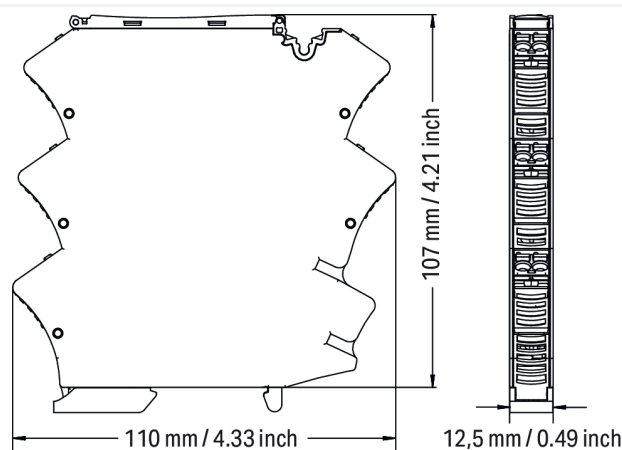


Data Sheet | Item Number: 2857-533

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 powered by 24 VDC, which can be bridged using lateral push-in type jumper bars: (6.1) $U_5 + (BR)$ 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.	Applied supply voltage – 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	Test voltage	
Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V	Test voltage (input/relay output/supply)	4 kVAC; 60 Hz; 1 min
Measurement category per EN/UL 61010-2-030	CAT II (input)	Test voltage (input/service interface)	3 kVAC; 60 Hz; 1 min
Note on insulation parameters	Temperature sensors must not be used in hazardous circuits unless the external temperature sensors used provide basic insulation in accordance with EN 61010-1 (300 VAC; Overvoltage Category II; Pollution Degree 2). The digital output (DO) operates at the supply potential.	Test voltage (relay output/service interface)	4 kVAC; 60 Hz; 1 min
Protection type	IP20	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)
Continuous current (max.)	6 A

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



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

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 the 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)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821676973
Customs tariff number	90303370000



Product Classification	
UNSPSC	39122334
eCl@ss 10.0	27-37-18-10
eCl@ss 9.0	27-37-18-10
ETIM 9.0	EC001446
ETIM 8.0	EC001446
ECCN	NO US CLASSIFICATION

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)	53cffe9-5596-4742-9f5a-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-abb-451ebe189c33

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 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



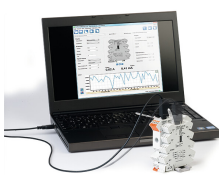
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

Conductor termination

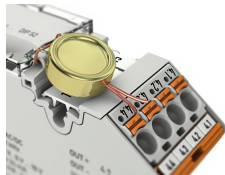


Pluggable connection technology



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

Security



Lock-out seal option