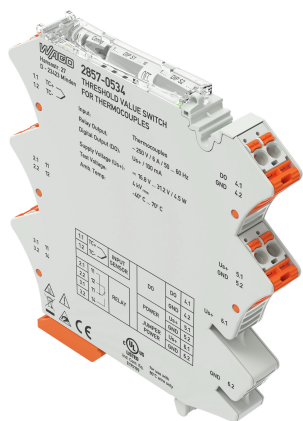


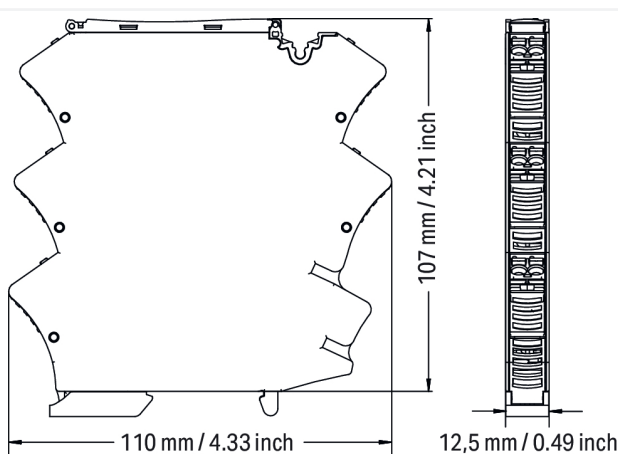
Data Sheet | Item Number: 2857-534

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

<https://www.wago.com/2857-534>



1.1	TC+ 	INPUT SENSOR	DO	DO	4.1
1.2	TC- 			GND	4.2
2.1	11 	RELAY	POWER	Us+	5.1
2.2	12 			GND	5.2
3.1	11 		JUMPER	Us+	6.1
3.2	14 		POWER	GND	6.2

[illegible]

Short description:

WAGO's thermocouple threshold value switch for TC sensors monitors and reports signals of up to two switching thresholds.

Features:

- Both digital signal output and relay with changeover 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).
- 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_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

Additional setting options via the WAGO Interface Configuration Software

Technical data

Configuration

Configuration options

DIP switch
WAGO Interface Configuration Software

Input

Input signal type

TC sensors



Input (TC sensors)	
Sensor types (TC)	Type J Type K Type E Type N Type R Type S Type T Type B Type C
Temperature measurement range (TC)	–210 ... 1200 °C (Type J) –200 ... 1372 °C (Type K)
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (typ. 2 K)

Output (relay)	
Number of changeover/switchover 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

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 (cold junction compensation off) 360 ms (cold junction compensation on)

Power supply	
Power supply type	24 VDC
Nominal supply voltage U _S	24 VDC
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 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.
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

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		picoMAX® 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		63.9 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		
PU (SPU)		1 pcs
Packaging type		Bag
Country of origin		DE
GTIN		4055143242318
Customs tariff number		90303370000

Product Classification		
UNSPSC		39122331
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)	601bb33b-84cc-4805-b720-81f12c38c72c
SCIP notification number (Belgium)	131209b7-ac71-4ce7-9b2f-c117badec519
SCIP notification number (Bulgaria)	7c391072-6a84-41c0-a488-1eed30619da2
SCIP notification number (Czech Republic)	d1772c11-7a5d-49f4-8bb4-425bbedd445f
SCIP notification number (Denmark)	cfa32983-cc33-4189-b84e-a8b7c38e9bcd
SCIP notification number (Finland)	5a251d21-3cd4-4150-8b9a-2dbe4ec1814c
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SCIP notification number (Poland)	ef7bea4e-4cc5-4c67-a93e-8f9ee40db738
SCIP notification number (Romania)	2fa777e0-ce5b-4d0f-9b8d-8e5b77843923
SCIP notification number (Sweden)	6bc78593-b9a6-44e7-b529-4a5eada11443

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 LOCATI- ONS)	UL 61010-2-201	E175199
		Approval EU-Declaration of Confor- mity WAGO GmbH & Co. KG
		Standard -
		Certificate Name -



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2857-534

Download icon

Documentation

Manual

WAGO Threshold Value Switches

Download icon

Bid Text

2857-534	19.02.2019	xml 6.39 KB	Download icon
2857-534	20.02.2019	docx 18.68 KB	Download icon

Instruction Leaflet

Signal Conditioner; TC Threshold Value Switch	V 2.0.0 30.09.2020	pdf 2788.18 KB	Download icon
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CAD/CAE-Data

CAD data

2D/3D Models 2857-534

Download icon

CAE data

EPLAN Data Portal 2857-534	Download icon
WSCAD Universe 2857-534	Download icon
ZUKEN Portal 2857-534	Download icon

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-WSB-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 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

1.1.4.2 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



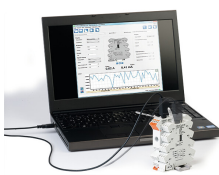
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring



Configuration via DIP switch

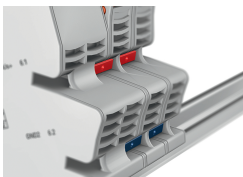


Configuration via WAGO Interface Configuration Software

Conductor termination

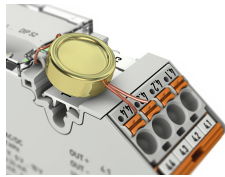


Pluggable connection technology



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

Security



Lock-out seal option