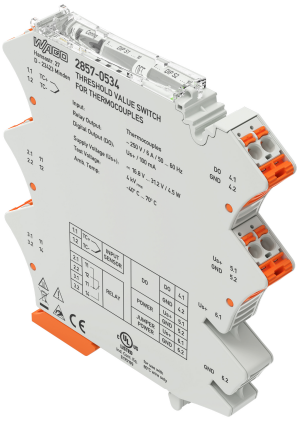
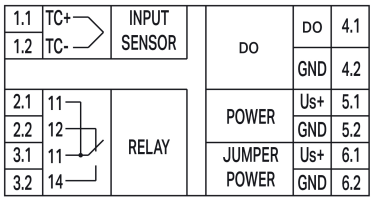
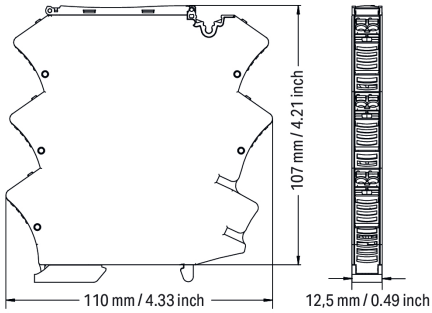
Data Sheet | Item Number: 2857-534

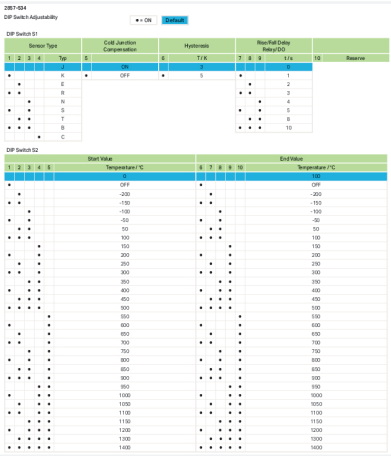
Threshold value switches; Thermocouples; 1 make contact; Digital output; Configuration via software; Supply voltage: 24 VDC; 12.5 mm module width

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









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

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 (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)

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

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)

Measurement Error

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

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	300 VAC
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

Continued on next page

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	1.111 MJ
Weight	63.7 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

Continued on next page

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 10.0	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 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
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SCIP notification number (Netherlands)	c7fe09a0-961d-444e-bccb-b777383080e3
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

Continued on next page

Approvals / Certificates

General approvals

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

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2857-534

Documentation

Manual

WAGO Threshold Value Switches

Bid Text

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

Instruction Leaflet

Signal Conditioner; TC Threshold Value Switch	V 2.0.0 30.09.2020	pdf 2788.18 KB

CAD/CAE-Data

CAD data

2D/3D Models 2857-534

CAE data

EPLAN Data Portal 2857-534

WSCAD Universe 2857-534

ZUKEN Portal 2857-534

Continued on next page

1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 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

Continued on next page

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 and through module



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

Continued on next page

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

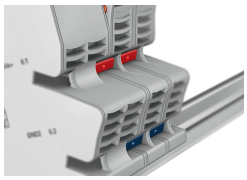


Configuration via WAGO Interface Configuration Software

Conductor termination

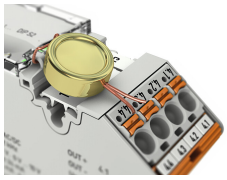


Pluggable connection technology



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

Security



Lock-out seal option