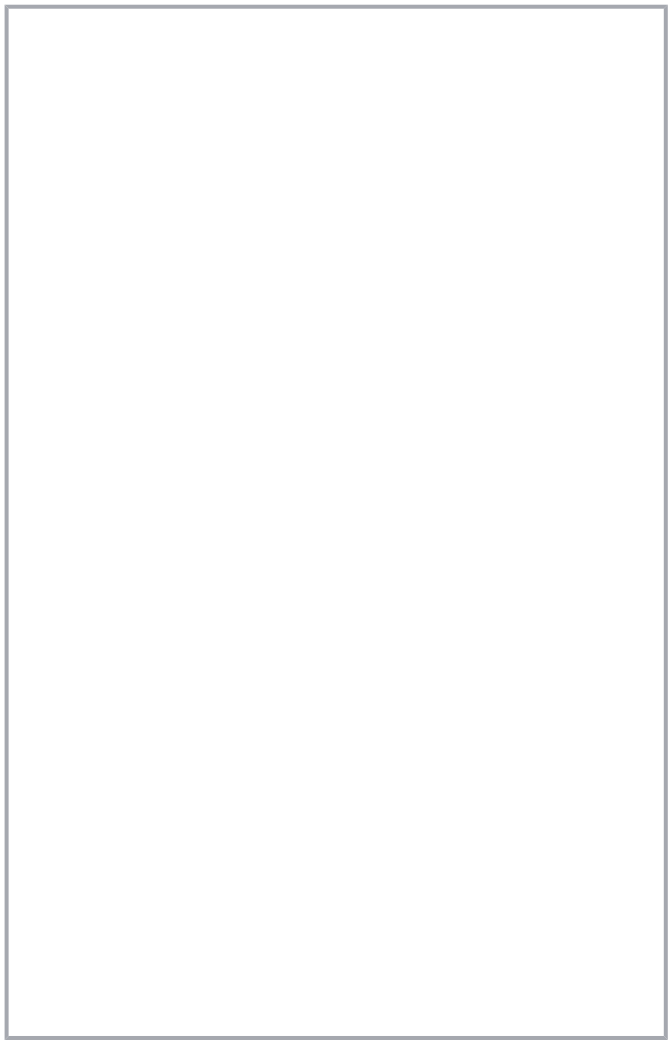
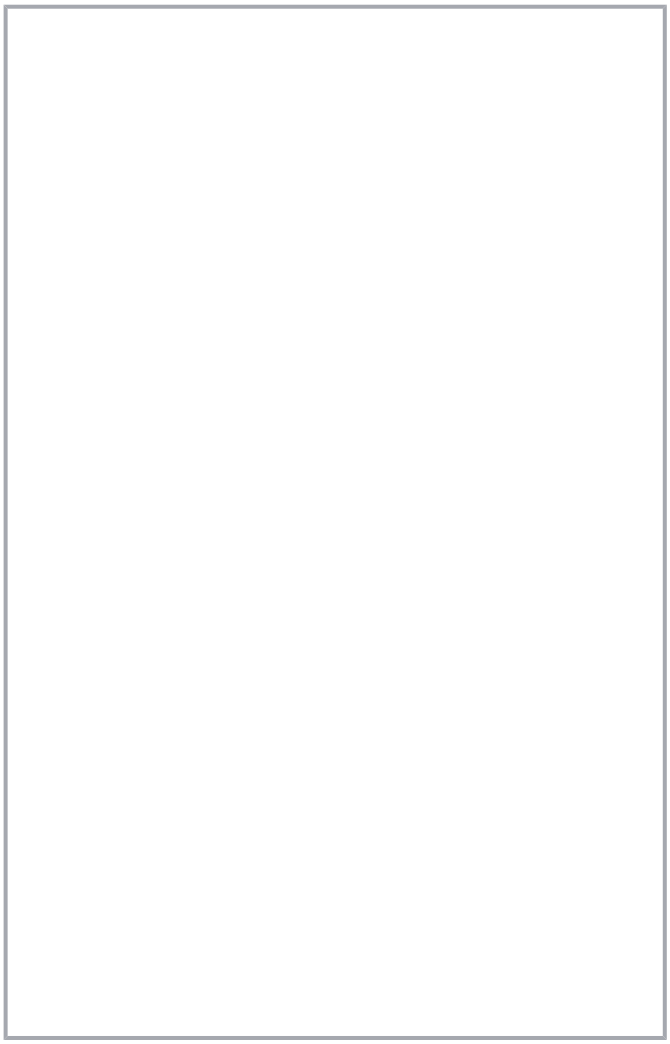
Data sheet | Item number: 2857-534

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

www.wago.com/2857-534





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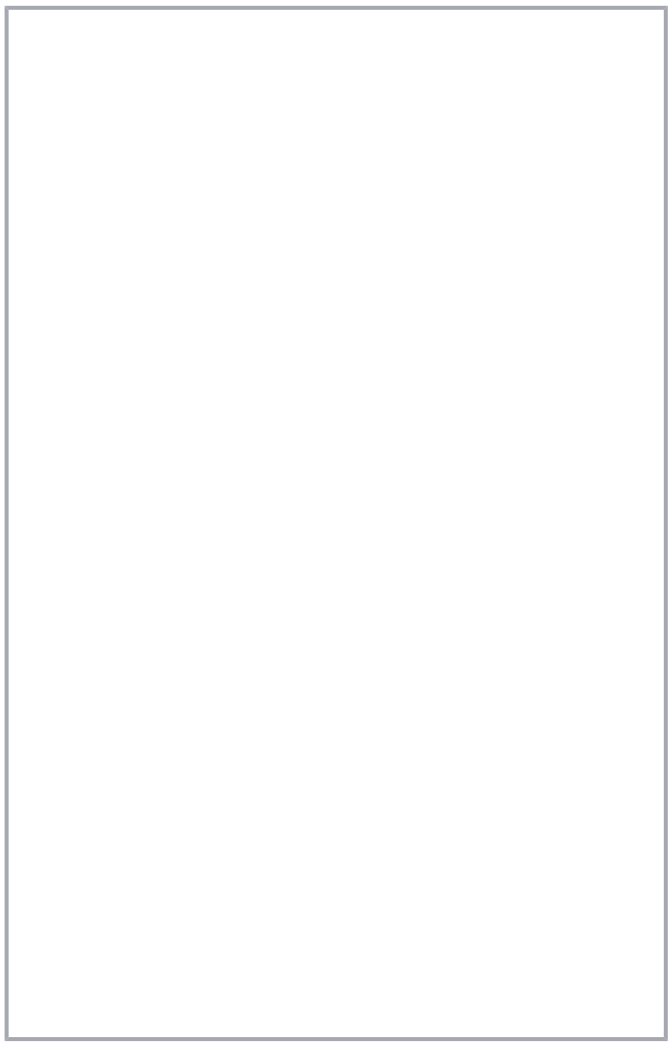

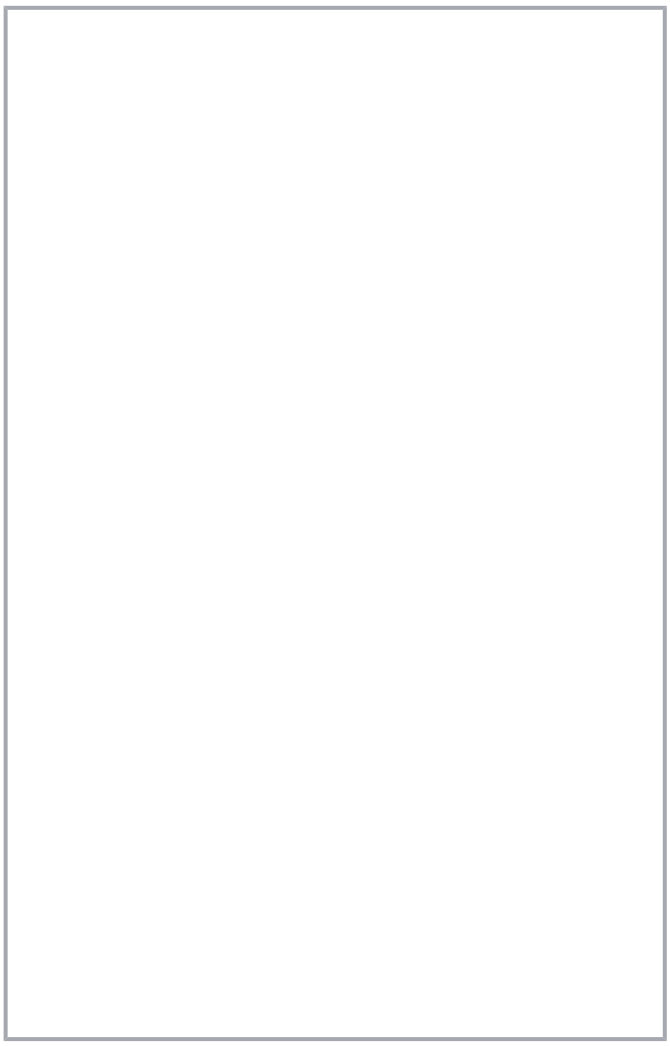

Item description

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
- Input/output response simulation via configuration display
- Safe three-way isolation with 4 kV test voltage per EN 61010-1

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Data

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 2 A is not exceeded. ■ 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 WAGO Configuration Display

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.	Supply voltage (applied): −0.3 V

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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)

Dielectric strength (open contact) (AC, 1 min)	1 kV_{rms}
Number of changeover/switchover contacts	1
Contact material (relay)	AgNi + Au
Switching voltage (max.)	AC 250 V
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)

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	DC 24 V
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

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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

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

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Material Data

Fire load	1.573 MJ
Weight	63.8 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 50121-3-2 EN 61010-1 EN 61373

Commercial data

eCl@ss 10.0	27-37-18-10
eCl@ss 9.0	27-37-18-10
ETIM 8.0	EC001446
ETIM 7.0	EC001446
Recupel Type	
PU (SPU)	1 pcs
Packaging type	bag
Country of origin	DE
GTIN	4055143242318
Customs tariff number	90303370000

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7

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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
SCIP notification number (France)	d428f471-7411-4cc1-9954-e2e708d38bac
SCIP notification number (Germany)	b09e21e7-8662-4ee1-ac5a-dcad6c89462f
SCIP notification number (Hungary)	38a2a8e6-be31-466e-a297-d4ed34448198
SCIP notification number (Italy)	76a372f1-e64e-48fc-aa2a-513cbdd7d1f7
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

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	EAC Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity	-	-

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Optional accessories

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

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 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

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	Item no.: 2009-141 Micro-WSB-Inline; 2000 pieces on roll; plain; snap-on type; white	www.wago.com/2009-141
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
Communication		
Bluetooth		
	Item no.: 750-921 Bluetooth® Adapter	www.wago.com/750-921
Configuration display		
	Item no.: 2857-900 Configuration display	www.wago.com/2857-900
Communication cable		
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m	www.wago.com/750-923
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m	www.wago.com/750-923/000-001
Mounting		
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
Jumpers		
Jumper		
	Item no.: 281-482 Jumper; 2-way; insulated; gray	www.wago.com/281-482
	Item no.: 859-402/000-029 Jumper; for jumper slot; 2-way; insulated; yellow	www.wago.com/859-402/000-029
	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

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Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red	www.wago.com/859-402/000-005

Terminal blocks

Supply module

Item no.: 857-979 Supply and through module	www.wago.com/857-979

Testing and measuring

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	www.wago.com/735-500

Downloads

Documentation

Manual

WAGO Threshold Value Switches HTML		URL	Download

Bid Text

2857-534 docx - Datei	2019 年2月20 日	docx 19.1 kB	Download
2857-534 X81 - Datei	2019 年2月19 日	xml 6.5 kB	Download

Instruction Leaflet

Signal Conditioner; TC Threshold Value Switch	V 2.0.0 2020 年9月30 日	pdf 2.9 MB	Download

Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf 2.2 MB	Download

Engineering-Software

Configuration and Commissioning Software

WAGO Interface Configuration Software G2 FULL	1.00.10.01	exe	Download

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The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	2022 年1月20 日	114.9 MB	
WAGO Interface Configuration Software G2 SMALL The full setup only includes the WAGO Interface Configuration Software G2.	1.00.10.01 2022 年1月20 日	exe 31.0 MB	Download

CAD/CAE-Data

CAD data

2D/3D Models 2857-534	URL	Download

CAE data

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

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2857-534 Threshold value switches; Thermocouples; 1 make contact; Digital output; Configuration via software; Supply voltage: 24 VDC; 12.5 mm module width	URL	Download

Installation Notes

Configuring

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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

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Lock-out seal option

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