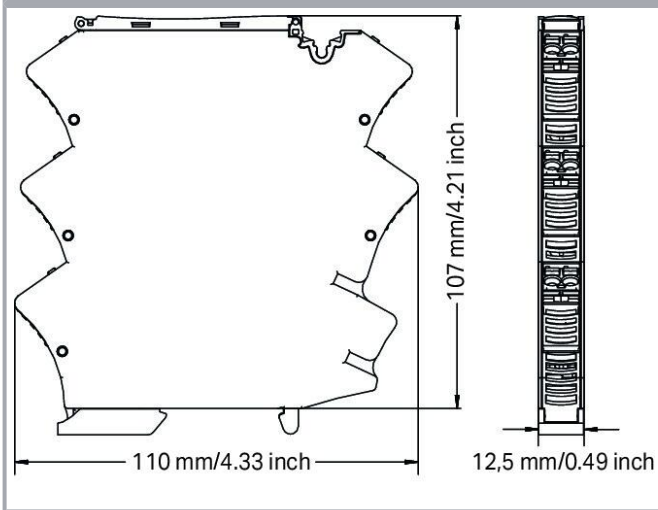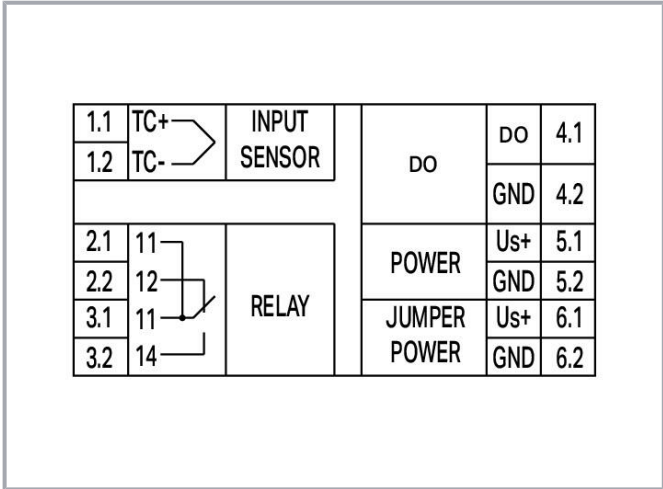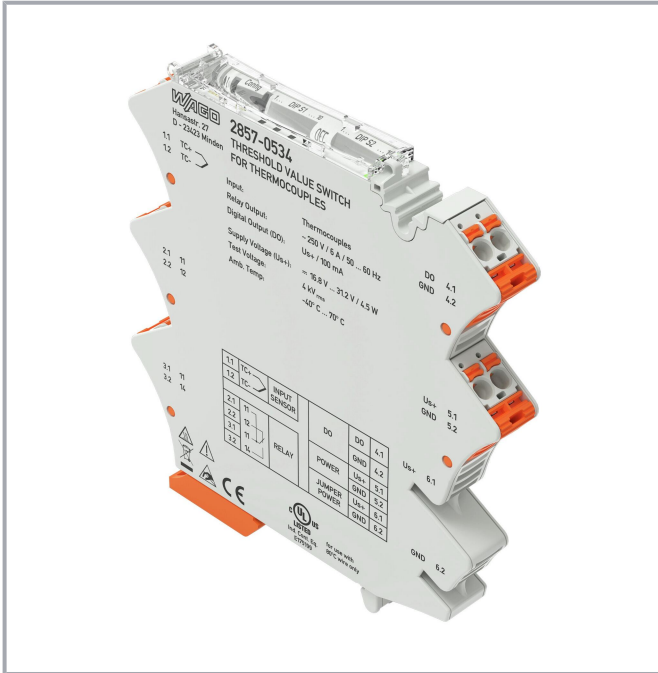# Data sheet | Item number: 2857-534

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

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

107 mm/4.21 inch

110 mm/4.33 inch

12,5 mm/0.49 inch

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

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WAGO

2857-534

DIP Switch Adjustability   ● = ON   **Default**

DIP Switch S1

1	2	3	4	Typ	5	Cold Junction Compensation	6	Hysteresis T / K	7	8	9	t / s	10	Reserve
				J		**ON**		**3**				**0**		
●				K	●	OFF	●	5	●			1		
	●			E						●		2		
●	●			R					●	●		3		
		●		N							●	4		
●		●		S					●		●	5		
	●	●		T						●	●	8		
●	●	●		B					●	●	●	10		
			●	C										

DIP Switch S2

1	2	3	4	5	Start Value Temperature / °C	6	7	8	9	10	End Value Temperature / °C
					0						**100**
●					OFF	●					OFF
	●				-200		●				-200
●	●				-150	●	●				-150
		●			-100			●			-100
●		●			-50	●		●			-50
	●	●			50		●	●			50
●	●	●			100	●	●	●			100
			●		150				●		150
●			●		200	●			●		200
	●		●		250		●		●		250
●	●		●		300	●	●		●		300
		●	●		350			●	●		350
●		●	●		400	●		●	●		400
	●	●	●		450		●	●	●		450
●	●	●	●		500	●	●	●	●		500
				●	550					●	550
●				●	600	●				●	600
	●			●	650		●			●	650
●	●			●	700	●	●			●	700
		●		●	750			●		●	750
●		●		●	800	●		●		●	800
	●	●		●	850		●	●		●	850
●	●	●		●	900	●	●	●		●	900
			●	●	950				●	●	950
●			●	●	1000	●			●	●	1000
	●		●	●	1050		●		●	●	1050
●	●		●	●	1100	●	●		●	●	1100
		●	●	●	1150			●	●	●	1150
●		●	●	●	1200	●		●	●	●	1200
	●	●	●	●	1300		●	●	●	●	1300
●	●	●	●	●	1400	●	●	●	●	●	1400

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

Data
Notes

Note

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

- 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
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)

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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

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
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

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

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 parameters(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	63.8 g

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

Environmental requirements

Ambient temperature (operation)	-40 … +70 °C
Ambient temperature (storage)	-40 … +85 °C
Temperature range of connection cable	$\geq (T_{ambient} + 10\ K)$
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
PU (SPU)	1 pcs
Packaging type	bag
Country of origin	DE
GTIN	4055143242318
Customs tariff number	90303370000

Environmental Product Compliance

CAS-No.	7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead Perfluorobutane sulfonic acid (PFBS) and its salts
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	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

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

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 WAGO GmbH & Co. KG	-	-

Optional accessories

Tool

Operating tool

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

Item no.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

www.wago.com/210-720

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

Item no.: 2009-141

Micro-WSB-Inline; 2000 pieces on roll; plain; snap-on type; white

www.wago.com/2009-141

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

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

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

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

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

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

	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

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

Bid Text

2857-534 docx - Datei	2019 Feb 20	docx 19.1 kB	Download
2857-534 X81 - Datei	2019 Feb 19	xml 6.5 kB	Download

Instruction Leaflet

Signal Conditioner; TC Threshold Value Switch	V 2.0.0 2020 Sep 30	pdf 2.9 MB	Download

Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download

Engineering-Software

Configuration and Commissioning Software

WAGO Interface Configuration Software G2 FULL The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	1.00.10.01 2022 Jan 20	exe 114.9 MB	Download

WAGO Interface Configuration Software G2 SMALL

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32423 Minden	
Phone: +49571 887-0 | Fax: +49571 887-169	
Email: info.de@wago.com | Web: www.wago.com	

The full setup only includes the WAGO Interface Configuration Software G2.	1.00.10.01 2022 Jan 20	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

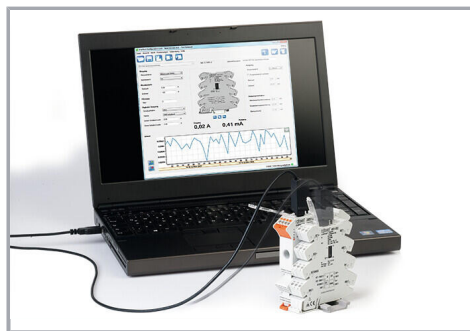|			
Environmental Product Compliance 2857-534		URL	Download

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

Installation Notes
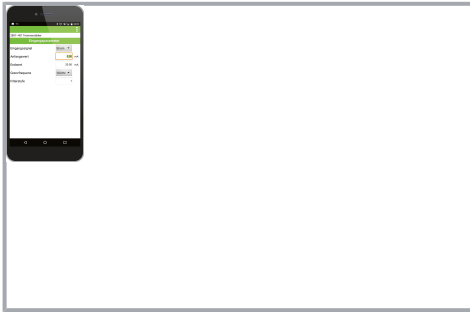
Configuring

Configuration via DIP switch

Configuration via WAGO Interface
Configuration Software

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

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Configuration via WAGO Interface
Configuration App

Configuration via WAGO Configuration Display
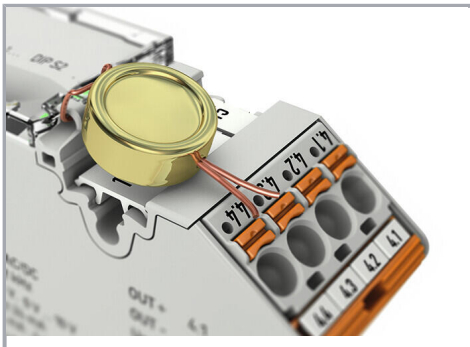
Conductor termination

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!