THERMASREG® ETR

**Equipment sensor / controller, including immersion sleeve,
EC type-tested, TÜV tested,
with switching output**

S+S REGELTECHNIK

DIN-tested German quality product. Temperature control and limiting device for heat generation plants in accordance with DIN EN 14597. Safety temperature limiter (STB) with EC type test (module B) according to directive 2014 / 68 / EU.

Mechanical temperature control device / rod thermostat **THERM**ASREG® **ETR** with switching output, used for monitoring, controlling or limiting the temperatures of liquid or gaseous media as a boiler controller or in heating, air conditioning technology as well as in mechanical and apparatus engineering and in heat generation plants. It is available as one-step or two-step device, as adjustable temperature controller **TR**, temperature monitor **TW**, or as safety temperature limiter **STB**.





TECHNICAL DATA

Switching capacity: (Contact load)	24 ... 250 V AC + 10 %, 10 A, cos φ = 1.0 24 ... 250 V AC + 10 %, 1.5 A, cos φ = 0.6 at 24 V AC min. 150 mA
Contact:	dust-proof switch block unit as potential-free single-pole or two-pole changeover contact
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Housing dimensions:	108 x 70 x 73.5 mm (Thor 2)
Cable gland:	M 20 x 1.5; including strain relief
Measuring element:	torsion meter with liquid filling, liquid expansion temperature feeler
Mounting position:	arbitrary
Ambient temperature:	–10...+65 °C at the switch block housing
Tolerance:	T_{min} ± 5 K; T_{max} ± 3 K
Immersion sleeves:	**THR-ms-08 / xx**, Single sleeve brass, nickel-plated, Ø = 8 mm, R ½" straight pipe thread, wrench size 22, p_{max} = 10 bar, T_{max} = +150 °C **THR-VA-09 / xx**, Single sleeve stainless steel **V4A** (1.4571), Ø = 9 mm, G ½" straight pipe thread, wrench size 22, p_{max} = 25 bar, T_{max} = +150 °C **THR-VA-17 / xx**, Double sleeve stainless steel **V4A** (1.4571), Ø = 17 mm, G ½" straight pipe thread, wrench size 22, p_{max} = 25 bar, T_{max} = +150 °C (Depending on the type, the relevant immersion sleeve is included in the scope of delivery, see table)
Operating medium:	Water, oil, air and exhaust gas
Inserted length:	100 mm / 150 mm / 200 mm (see table)
Process connection:	screwed socket
Electrical connection:	0.14 - 2.5 mm² via terminal screws
Protection class:	I (according to EN 60 730)
Protection type:	**IP 65** (according to EN 60 529)
Standards:	CE conformity, EMC directive 2014 / 30 / EU, low-voltage directive 2014 / 35 / EU
Tests:	**EC type test (module B) according to directive 2014 / 68 / EU,** certificate No.: IS-TAF-MUC 18 03 2652130 002, DIN EN 14597, register Nos.: **STB 1201, TR / STB 1202**
FUNCTION	**TW, TR:** Contact 2-3 breaks when temperature rises to the preset value. **STB:** Contact 2-1 or 5-4 (two-step) breaks when temperature rises to the preset value. Restart is possible only after cooling off by approx. 15 K - 20 K by pressing the reset button.

Equipment sensor / controller, including immersion sleeve, EC type-tested, TÜV tested, with switching output

Configuration variants:

TW
Temperature monitor
(internal setting)

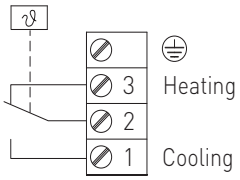
TR
Temperature controller
(external setting)

STB
Safety temperature limiter
(internal setting)

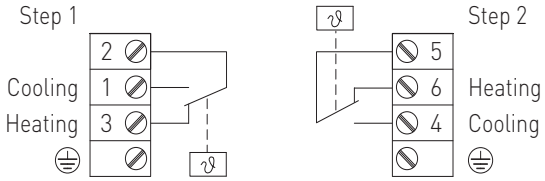
TW+TW
Double temperature monitor
(internal setting)

TR + STB
Temperature controller
(external setting) +
Safety temperature limiter
(internal setting)

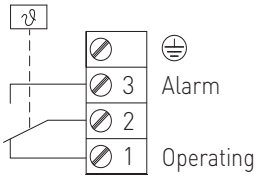
Connecting diagram **TW, TR** **ETR** (one-step)



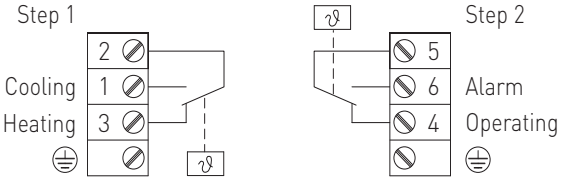
Connecting diagram **TW+TW** **ETR** (two-step)



Connecting diagram **STB** **ETR** (one-step)



Connecting diagram **TR + STB** **ETR** (two-step)





ZERTIFIKAT ◆ CERTIFICATE ◆ 合格证书 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

CERTIFICATE

valid until: 25.02.2028

ZERTIFIKAT

gültig bis: 25.02.2028

EU Type examination (module B) - production type - according to Directive 2014/68/EU

EU-Baumusterprüfung (Modul B) - Baumuster - nach Richtlinie 2014/68/EU

Certificate No.: Z-IS-TAF-MUC-18-03-2652130-002
Zertifikat-Nr.:

Name and address of manufacturer: S+S Regeltechnik GmbH
Name und Anschrift des Herstellers: Pirnaer Str. 20
90411 Nürnberg

We herewith certify that the type mentioned below meets the requirements of the Directive 2014/68/EU.

Hiermit wird bescheinigt, dass das unten genannte Baumuster die Anforderungen der Richtlinie 2014/68/EU erfüllt.

Evaluation report No.: C-T 1382-01/18 dated 2018-02-26
Prüfbericht Nr.:

Scope of examination: Safety temperature limiter as safety accessory type: ETR and KTR (see page 3) basis of examination and details see page 3
Geltungsbereich:

Manufacturing plant: S+S Regeltechnik GmbH
Fertigungsstätte: Pirnaer Str. 20
90411 Nürnberg

München, 26.02.2018
(Place, date)
(Ort, Datum)

TÜV SÜD Industrie Service GmbH
Certification Body for pressure equipment
Johannes Steiglechner

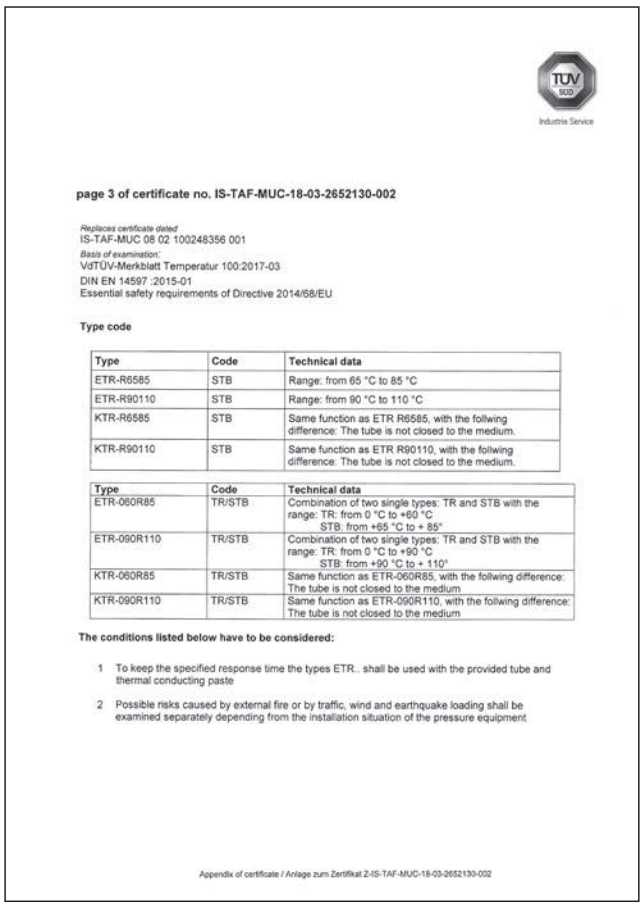
Verification of Certificate by TÜV SÜD App Verify
Echtheitsprüfung durch App TÜV SÜD Verify

089 5190-1027
feuerung@tuev-sued.de

Notified Body, No. 0036
Notifizierte Stelle, Kennnummer 0036
TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München
GERMANY

Page 1 of the certificate No. / Seite 1 zum Zertifikat Nr. Z-IS-TAF-MUC-18-03-2652130-002

TÜV®



TÜV SÜD Industrie Service

page 3 of certificate no. IS-TAF-MUC-18-03-2652130-002

Replaces certificate dated
IS-TAF-MUC 06 02 100248356 001

Basis of examination:
VdTÜV-Merkblatt Temperatur 100:2017-03
DIN EN 14597 :2015-01
Essential safety requirements of Directive 2014/68/EU

Type code

Type	Code	Technical data
ETR-R6585	STB	Range: from 65 °C to 85 °C
ETR-R90110	STB	Range: from 90 °C to 110 °C
KTR-R6585	STB	Same function as ETR R6585, with the follwing difference: The tube is not closed to the medium.
KTR-R90110	STB	Same function as ETR R90110, with the follwing difference: The tube is not closed to the medium.

Type	Code	Technical data
ETR-060R85	TR/STB	Combination of two single types: TR and STB with the range: TR: from 0 °C to +60 °C STB: from +65 °C to + 85°
ETR-090R110	TR/STB	Combination of two single types: TR and STB with the range: TR: from 0 °C to +90 °C STB: from +90 °C to + 110°
KTR-060R85	TR/STB	Same function as ETR-060R85, with the follwing difference: The tube is not closed to the medium
KTR-090R110	TR/STB	Same function as ETR-090R110, with the follwing difference: The tube is not closed to the medium

The conditions listed below have to be considered:

1 To keep the specified response time the types ETR.. shall be used with the provided tube and thermal conducting paste

2 Possible risks caused by external fire or by traffic, wind and earthquake loading shall be examined separately depending from the installation situation of the pressure equipment

Appendix of certificate / Anlage zum Zertifikat Z-IS-TAF-MUC-18-03-2652130-002

THERMASREG® ETR

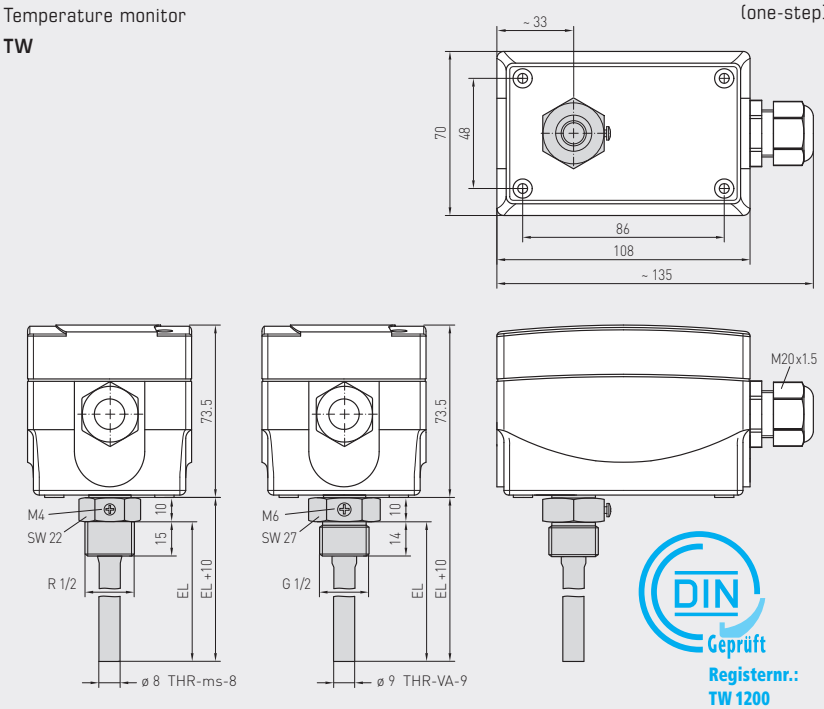
one-step

Equipment sensor / controller, including immersion sleeve,
EC type-tested, TÜV tested,
with switching output

S+S REGELTECHNIK

Dimensional drawing
Temperature monitor
TW

ETR-xxU
(one-step)



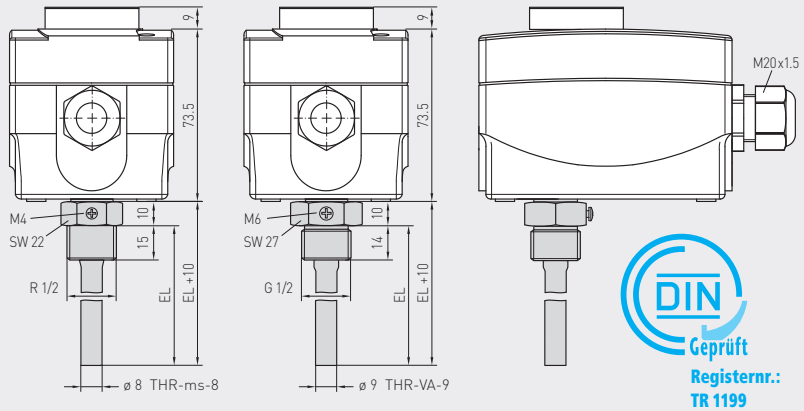
DIN Geprüft
Registernr.:
TW 1200



ETR-060U
ETR-090U
(one-step)
TW

Dimensional drawing
Temperature controller
TR

ETR-xx
(one-step)



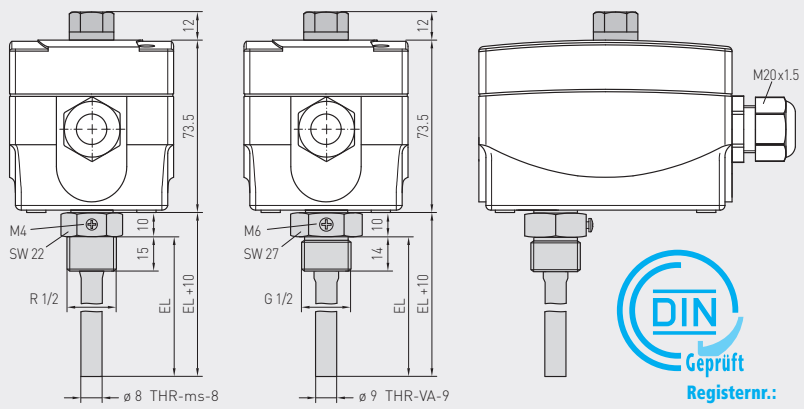
DIN Geprüft
Registernr.:
TR 1199



ETR-1
ETR-060
ETR-090
ETR-0120
ETR-50140
(one-step)
TR

Dimensional drawing
Safety temperature limiter
STB

ETR-Rxx
(one-step)



DIN Geprüft
Registernr.:
STB 1201



ETR-R6585
ETR-R90110
(one-step)
STB
selectable

THERMASREG® ETR — Equipment sensor / controller, one-step, including immersion sleeve

Type / WG02	Inserted Length (EL)	Temperature Ranges (adjustable)	Thermal Operating Difference (fixed) approx.	Maximum Capillary Temp.	Item No.	Price
ETR-060 U					**TW**	
ETR-060 U MS/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-380	**72,95 €**
ETR-060 U MS/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-310	**75,41 €**
ETR-060 U MS/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-320	**79,72 €**
ETR-060 U VA/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-390	**101,41 €**
ETR-060 U VA/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-330	**103,84 €**
ETR-060 U VA/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-340	**108,18 €**
ETR-090 U					**TW**	
ETR-090 U MS/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-480	**72,95 €**
ETR-090 U MS/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-410	**75,41 €**
ETR-090 U MS/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-420	**79,72 €**
ETR-090 U VA/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-490	**101,41 €**
ETR-090 U VA/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-430	**103,84 €**
ETR-090 U VA/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-440	**108,18 €**
ETR-1					**TR**	
ETR-1 MS/100	100 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-180	**72,95 €**
ETR-1 MS/150	150 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-110	**75,41 €**
ETR-1 MS/200	200 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-120	**79,72 €**
ETR-1 VA/100	100 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-190	**101,41 €**
ETR-1 VA/150	150 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-130	**103,84 €**
ETR-1 VA/200	200 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-140	**108,18 €**
ETR-060					**TR**	
ETR-060 MS/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-380	**72,95 €**
ETR-060 MS/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-310	**75,41 €**
ETR-060 MS/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-320	**79,72 €**
ETR-060 VA/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-390	**101,41 €**
ETR-060 VA/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-330	**103,84 €**
ETR-060 VA/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-340	**108,18 €**
ETR-090					**TR**	
ETR-090 MS/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-480	**72,95 €**
ETR-090 MS/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-410	**75,41 €**
ETR-090 MS/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-420	**79,72 €**
ETR-090 VA/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-490	**101,41 €**
ETR-090 VA/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-430	**103,84 €**
ETR-090 VA/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-440	**108,18 €**
ETR-0120					**TR**	
ETR-0120 MS/100	100 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-580	**72,95 €**
ETR-0120 MS/150	150 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-510	**75,41 €**
ETR-0120 MS/200	200 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-520	**79,72 €**
ETR-0120 VA/100	100 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-590	**101,41 €**
ETR-0120 VA/150	150 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-530	**103,84 €**
ETR-0120 VA/200	200 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-540	**108,18 €**
ETR-50140					**TR**	
ETR-50140 MS/100	100 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-680	**72,95 €**
ETR-50140 MS/150	150 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-610	**75,41 €**
ETR-50140 MS/200	200 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-620	**79,72 €**
ETR-50140 VA/100	100 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-690	**101,41 €**
ETR-50140 VA/150	150 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-630	**103,84 €**
ETR-50140 VA/200	200 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-640	**108,18 €**
ETR-R6585					**STB**	
ETR-R6585 MS/100	100 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-780	**87,91 €**
ETR-R6585 MS/150	150 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-710	**90,36 €**
ETR-R6585 MS/200	200 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-720	**98,61 €**
ETR-R6585 VA/100	100 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-790	**106,51 €**
ETR-R6585 VA/150	150 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-730	**108,95 €**
ETR-R6585 VA/200	200 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-740	**113,42 €**
ETR-R90110					**STB**	
ETR-R90110 MS/100	100 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-880	**87,91 €**
ETR-R90110 MS/150	150 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-810	**90,36 €**
ETR-R90110 MS/200	200 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-820	**98,61 €**
ETR-R90110 VA/100	100 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-890	**106,51 €**
ETR-R90110 VA/150	150 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-830	**108,95 €**
ETR-R90110 VA/200	200 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-840	**113,42 €**

Type designation: **ETR-xx_immersion sleeve material / inserted length (mm)**
MS = Brass nickel-plated, **VA** = Stainless steel V4A (1.4571)

For further information and accessories see next page...

THERMASREG® ETR

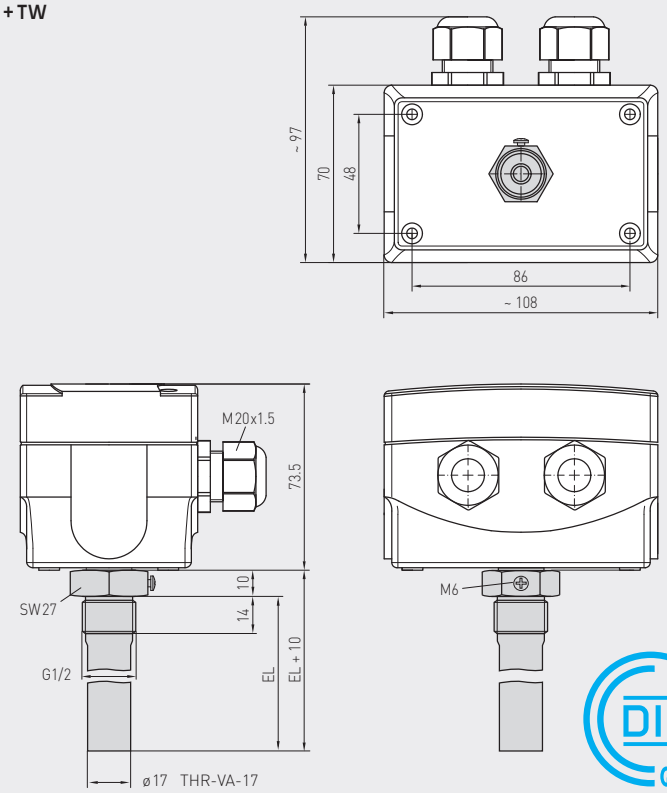
two-step

Equipment sensor / controller, including immersion sleeve,
EC type-tested, TÜV tested,
with switching output

S+S REGELTECHNIK

Dimensional drawing
Double temperature monitor
TW + TW

ETR-xxU
(two-step)



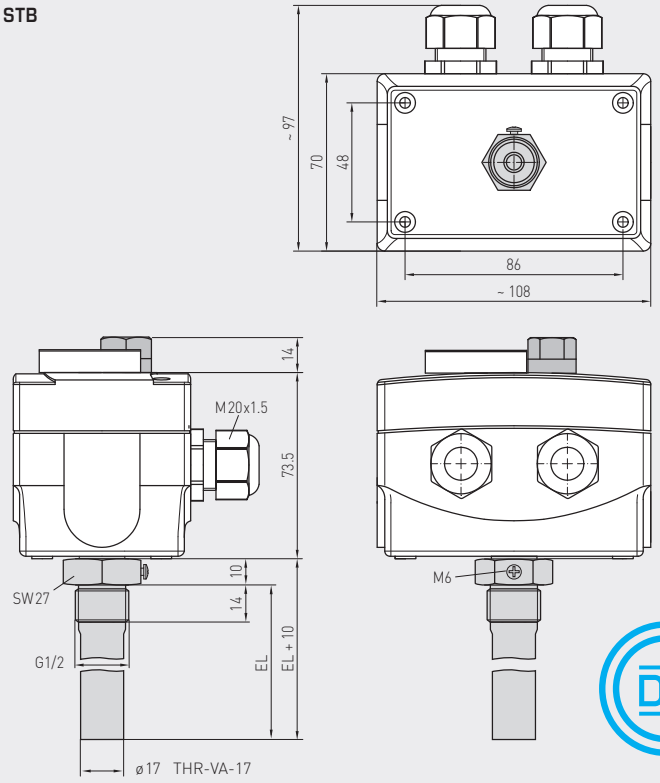
DIN Geprüft
Registernr.: TW / TW 1241



ETR-090090 U
(two-step)
TW + TW

Dimensional drawing
Temperature controller +
safety temperature limiter
TR + STB

ETR-xxRxx
(two-step)



DIN Geprüft
Registernr.: TR / STB 1202



ETR-060R85
ETR-090R110
(two-step)
TR + STB
selectable

THERMASREG® ETR Equipment sensor / controller, two-step, including immersion sleeve

Type / WG02	Inserted Length (EL)	Temperature Ranges (adjustable) 1.	2.	Thermal Operating Difference (fixed) approx. 1.	2.	Maximum Capillary Temp.	Item No.	Price
ETR-090090 U							**TW + TW**	
ETR-090090 U VA/150	**150 mm**	0...+90 °C	0...+90 °C	3 K	3K	+120 °C	1102-2010-2205-130	**150,80 €**
ETR-090090 U VA/200	**200 mm**	0...+90 °C	0...+90 °C	3 K	3K	+120 °C	1102-2010-2205-140	**163,91 €**
ETR-060 R 85							**TR + STB**	
ETR-060R85 VA/150	**150 mm**	0...+60 °C	+65...+85 °C	3 K	+0 / –15...20 K	+120 °C	1102-2010-7205-230	**150,80 €**
ETR-060R85 VA/200	**200 mm**	0...+60 °C	+65...+85 °C	3 K	+0 / –15...20 K	+120 °C	1102-2010-7205-240	**163,91 €**
ETR-090 R110							**TR + STB**	
ETR-090R110 VA/150	**150 mm**	0...+90 °C	+90...+110 °C	3 K	+0 / –15...20 K	+135 °C	1102-2010-7205-330	**150,80 €**
ETR-090R110 VA/200	**200 mm**	0...+90 °C	+90...+110 °C	3 K	+0 / –15...20 K	+135 °C	1102-2010-7205-340	**163,91 €**

Type designation:	**ETR-xx_immersion sleeve material / inserted length (mm)** **MS** = Brass nickel-plated, **VA** = Stainless steel V4A (1.4571)	
Extra charge:	**U** = Internal setting, unless included in a certain type **/2** = 2 steps, unless included in a certain type	**10,25 €** on request
Features:	**TR** = Temperature controller (**external setting**) **TW** = Temperature monitor (**internal setting**) **STB** = Safety temperature limiter (**internal setting**), **selectable,** with external switchpoint confirmation and restart interlock, restart by reset button at approx. 15...20 K below switching temperature (+0 K / - 15...20 K); **with EC type test (module B) according to directive 2014 / 68 / EU**	
Note:	To ensure **accurate responsiveness** series **ETR** devices must only be used in connection with the immersion sleeves included in the scope of delivery while applying heat-conductive paste	

ACCESSORIES

WLP-1	**Heat-conductive paste**, silicone-free	7100-0060-1000-000	**3,48 €**
	For further information see last chapter!		

THERMASGARD® THR Immersion sleeve Ø 8 / 9 / 17 mm

Type / WG01	p_{max} (static)	T_{max}	Time Constant for Medium: Air	Water	Oil	Inserted Length (EL)	Item No. Ø	Price
THR-ms-08 / xx	**Brass nickel-plated**						**Ø 8** x 0.5 mm	
THR-MS-08/100	10 bar	+150 °C	106 s	18 s	53 s	**100 mm**	7100-0011-3022-000	**15,88 €**
THR-MS-08/150	10 bar	+150 °C	106 s	18 s	53 s	**150 mm**	7100-0011-3404-000	**16,02 €**
THR-MS-08/200	10 bar	+150 °C	106 s	18 s	53 s	**200 mm**	7100-0011-3403-000	**19,02 €**
THR-VA-09 / xx	**Stainless steel V4A** (1.4571)						**Ø 9** x 1.0 mm	
THR-VA-09/100	25 bar	+150 °C	92 s	17 s	41 s	**100 mm**	7100-0012-3022-000	**40,91 €**
THR-VA-09/150	25 bar	+150 °C	92 s	17 s	41 s	**150 mm**	7100-0012-3032-000	**42,22 €**
THR-VA-09/200	25 bar	+150 °C	92 s	17 s	41 s	**200 mm**	7100-0012-3042-000	**45,24 €**
THR-VA-17 / xx	**Stainless steel V4A** (1.4571)						**Ø 17** x 1.0 mm	
THR-VA-17/150	25 bar	+150 °C	–	45 s	55 s	**150 mm**	7100-0012-3033-000	**42,22 €**
THR-VA-17/200	25 bar	+150 °C	–	45 s	55 s	**200 mm**	7100-0012-3404-000	**45,24 €**

Ordering example:	THR-ms-08 / **100**	(Brass immersion sleeve, Ø = 8 mm, **EL = 100** mm)
	THR-VA-09 / **150**	(Stainless steel immersion sleeve, Ø = 9 mm, **EL = 150** mm)
	THR-VA-17 / **200**	(Stainless steel immersion sleeve, Ø = 17 mm, **EL = 200** mm)
Note:	inner diameter of socket 15.0 mm	