

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

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 97 / 23 / EC.

Mechanical temperature control device / rod thermostat THERMASREG® 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 |
| Enclosure: | plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016) |
| Enclosure dimensions: | 108 x 70 x 73.5 mm (Thor2) |
| Cable gland: | M20 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 enclosure |
| 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: | 150 mm, 200 mm |
| Process connection: | screwed socket |
| Electrical connection: | 0.14 - 2.5 mm ² 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 97 / 23 / EC , certificate No.: IS-TAF-MUC 08 02 100248356 001, 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. |





Configuration variants:

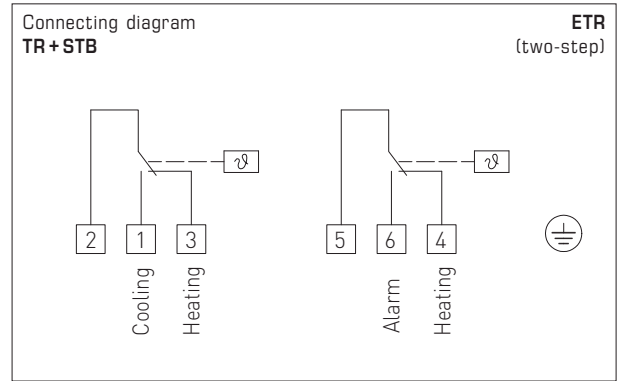
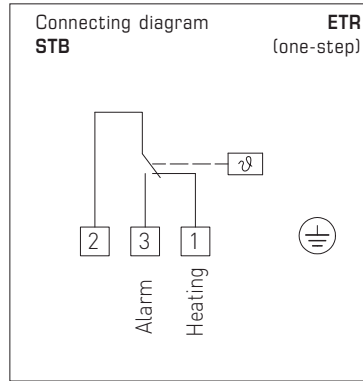
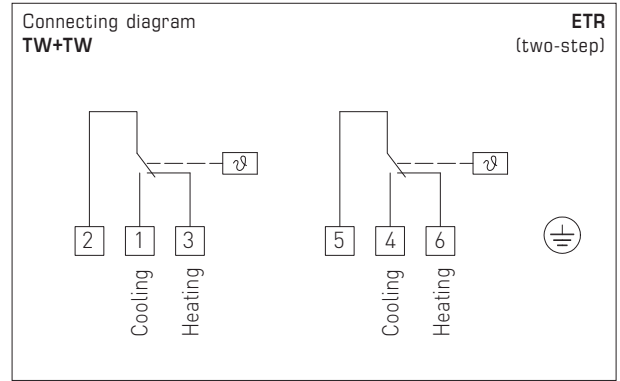
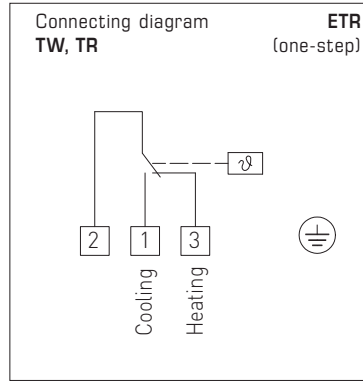
TW
Temperature monitor
(internal setting)

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)



ZERTIFIKAT Certificate

EG-Baumusterprüfung (Modul B) nach Richtlinie 97/23/EG
EO Type-examination (Module B) according to Directive 97/23/EC

Zertifikat-Nr.: IS-TAF-MUC 06 02 100248356 001
Certificate No.:

Name und Anschrift des Herstellers: S+S Regeltechnik GmbH
Klingenhofstraße 11
90411 Nürnberg
Name and Postal Address of Manufacturer:

Hiermit wird bescheinigt, daß das unten genannte EG-Baumuster die Anforderungen der Richtlinie 97/23/EG erfüllt.
We hereby certify that the type mentioned below meets the requirements of the Directive 97/23/EC.

Produktart product category: **Safety temperature limiter as safety accessory**

Typ, Ausführung type, model: **ETR and KTR**
(The listing of the single types, see page 2)

Prüfgrundlage basis of examination: **Essential safety requirements of Directive 97/23/EC of the European Parliament and of the Council of 25. May 1997, annex I for safety accessories according Article 3 paragraph 1.4.**
DIN EN 14597:2005-12.

Prüfbericht Nr. test report no.: **C-T 1382-00/08 of 2008-02-22**
TÜV SÜD Industrie Service GmbH

Fertigungsstätte manufacturing plant: **S+S Regeltechnik GmbH**
Klingenhofstraße 11
90411 Nürnberg, Germany

TÜV SÜD Industrie Service GmbH
TÜV-CERT-Certification body
for pressure devices

Munich, 2008-02-22

Bitte beachten Sie die untenigen Hinweise.
Please note the remarks on the second page.

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80339 München

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CONFEDERATION EUROPEENNE
DES ORGANISMES DE CERTIFICATION
CEOC
ORGANISATION OF CERTIFIERS

Seite 2 zum Zertifikat Nr.
page 2 of certificate no.
IS-TAF-MUC 06 02 100248356 001

Industrie Service

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 following difference: The tube is not closed to the medium. |
| KTR-R90110 | STB | Same function as ETR R90110, with the following difference: The tube is not closed to the medium. |

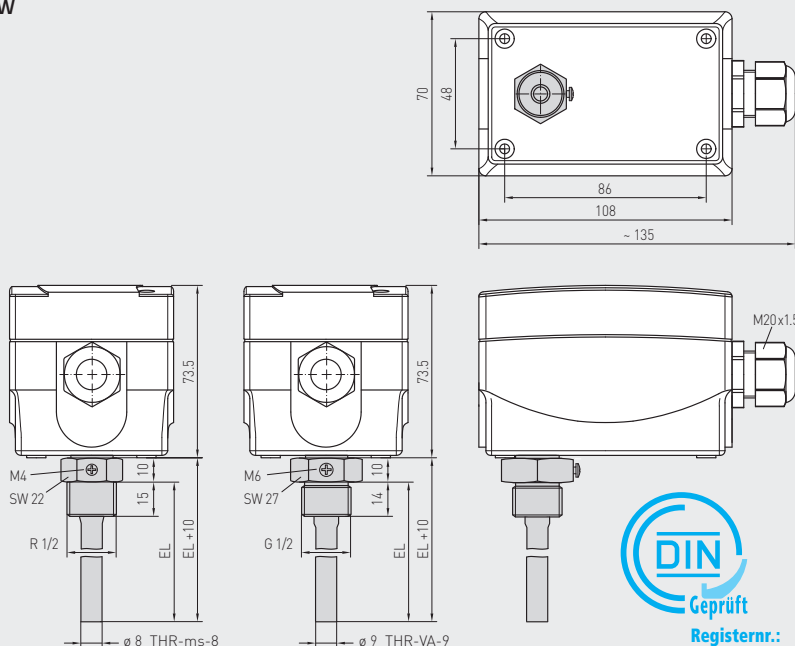
| Type | Code | Technical data |
|-------------|--------|--|
| ETR-060R85 | TR/STB | Combination of two single types: TR and STB with the range: TR: from 0 °C to +90 °C STB: from +65 °C to +85 °C |
| ETR-060R110 | TR/STB | Combination of two single types: TR and STB with the range: TR: from 0 °C to +90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

The conditions listed below have to be considered:

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

Dimensional drawing
Temperature monitor
TW

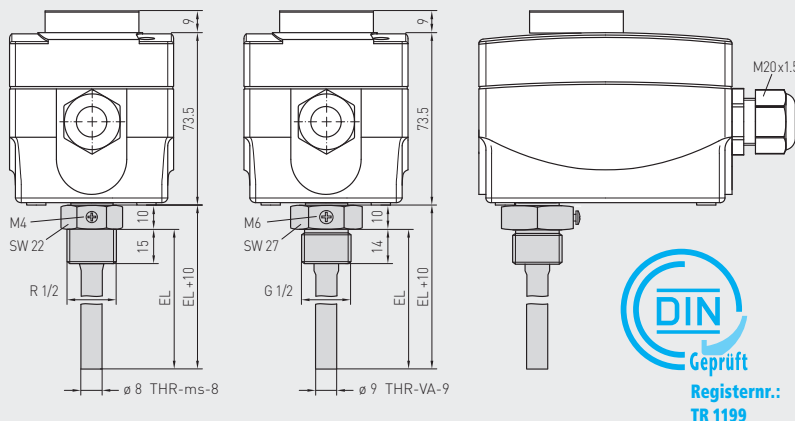
ETR-xxU
(one-step)



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

Dimensional drawing
Temperature controller
TR

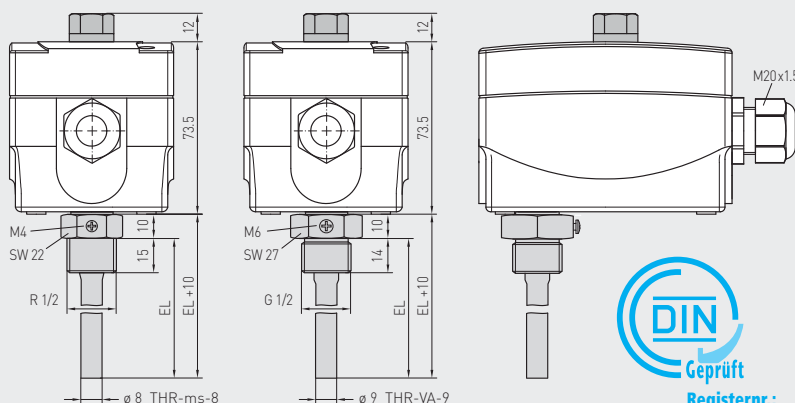
ETR-xx
(one-step)



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

Dimensional drawing
Safety temperature limiter
STB

ETR-Rxx
(one-step)



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



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

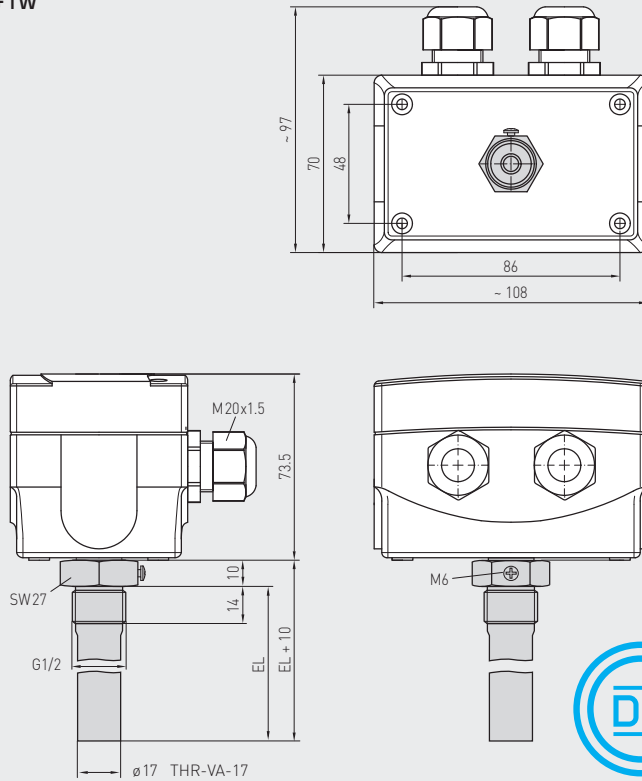
| Type / WG02 | Ø mm | Temperature Ranges (adjustable) | Thermal Operating Difference (fixed) approx. | Maximum Capillary Temp. | Item No. | Price |
|-------------------|---------|---------------------------------------|--|-------------------------------|--------------------|------------|
| ETR-060 U | | | | | | TW |
| ETR-060 U MS/100 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-380 | 59,75 € |
| ETR-060 U MS/150 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-310 | 61,75 € |
| ETR-060 U MS/200 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-320 | 65,28 € |
| ETR-060 U VA/100 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-390 | 83,04 € |
| ETR-060 U VA/150 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-330 | 85,04 € |
| ETR-060 U VA/200 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-2100-340 | 88,59 € |
| ETR-090 U | | | | | | TW |
| ETR-090 U MS/100 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-480 | 59,75 € |
| ETR-090 U MS/150 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-410 | 61,75 € |
| ETR-090 U MS/200 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-420 | 65,28 € |
| ETR-090 U VA/100 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-490 | 83,04 € |
| ETR-090 U VA/150 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-430 | 85,04 € |
| ETR-090 U VA/200 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-2100-440 | 88,59 € |
| ETR-1 | | | | | | TR |
| ETR-1 MS/100 | 8 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-180 | 59,75 € |
| ETR-1 MS/150 | 8 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-110 | 61,75 € |
| ETR-1 MS/200 | 8 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-120 | 65,28 € |
| ETR-1 VA/100 | 9 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-190 | 83,04 € |
| ETR-1 VA/150 | 9 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-130 | 85,04 € |
| ETR-1 VA/200 | 9 | -35...+35 °C | 3K | +75 °C | 1102-2010-1100-140 | 88,59 € |
| ETR-060 | | | | | | TR |
| ETR-060 MS/100 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-380 | 59,75 € |
| ETR-060 MS/150 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-310 | 61,75 € |
| ETR-060 MS/200 | 8 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-320 | 65,28 € |
| ETR-060 VA/100 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-390 | 83,04 € |
| ETR-060 VA/150 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-330 | 85,04 € |
| ETR-060 VA/200 | 9 | 0...+60 °C | 3K | +75 °C | 1102-2010-1100-340 | 88,59 € |
| ETR-090 | | | | | | TR |
| ETR-090 MS/100 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-480 | 59,75 € |
| ETR-090 MS/150 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-410 | 61,75 € |
| ETR-090 MS/200 | 8 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-420 | 65,28 € |
| ETR-090 VA/100 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-490 | 83,04 € |
| ETR-090 VA/150 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-430 | 85,04 € |
| ETR-090 VA/200 | 9 | 0...+90 °C | 3K | +120 °C | 1102-2010-1100-440 | 88,59 € |
| ETR-0120 | | | | | | TR |
| ETR-0120 MS/100 | 8 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-580 | 59,75 € |
| ETR-0120 MS/150 | 8 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-510 | 61,75 € |
| ETR-0120 MS/200 | 8 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-520 | 65,28 € |
| ETR-0120 VA/100 | 9 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-590 | 83,04 € |
| ETR-0120 VA/150 | 9 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-530 | 85,04 € |
| ETR-0120 VA/200 | 9 | 0...+120 °C | 5K | +135 °C | 1102-2010-1100-540 | 88,59 € |
| ETR-50140 | | | | | | TR |
| ETR-50140 MS/100 | 8 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-680 | 59,75 € |
| ETR-50140 MS/150 | 8 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-610 | 61,75 € |
| ETR-50140 MS/200 | 8 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-620 | 65,28 € |
| ETR-50140 VA/100 | 9 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-690 | 83,04 € |
| ETR-50140 VA/150 | 9 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-630 | 85,04 € |
| ETR-50140 VA/200 | 9 | +50...+140 °C | 5K | +150 °C | 1102-2010-1100-640 | 88,59 € |
| ETR-R6585 | | | | | | STB |
| ETR-R6585 MS/100 | 8 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-780 | 71,99 € |
| ETR-R6585 MS/150 | 8 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-710 | 73,99 € |
| ETR-R6585 MS/200 | 8 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-720 | 80,75 € |
| ETR-R6585 VA/100 | 9 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-790 | 87,22 € |
| ETR-R6585 VA/150 | 9 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-730 | 89,22 € |
| ETR-R6585 VA/200 | 9 | +65...+85 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-740 | 92,89 € |
| ETR-R90110 | | | | | | STB |
| ETR-R90110 MS/100 | 8 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-880 | 71,99 € |
| ETR-R90110 MS/150 | 8 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-810 | 73,99 € |
| ETR-R90110 MS/200 | 8 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-820 | 80,75 € |
| ETR-R90110 VA/100 | 9 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-890 | 87,22 € |
| ETR-R90110 VA/150 | 9 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-830 | 89,22 € |
| ETR-R90110 VA/200 | 9 | +90...+110 °C | +0 / -15...20K | +120 °C | 1102-2010-6100-840 | 92,89 € |

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...

Dimensional drawing
Double temperature monitor
TW + TW

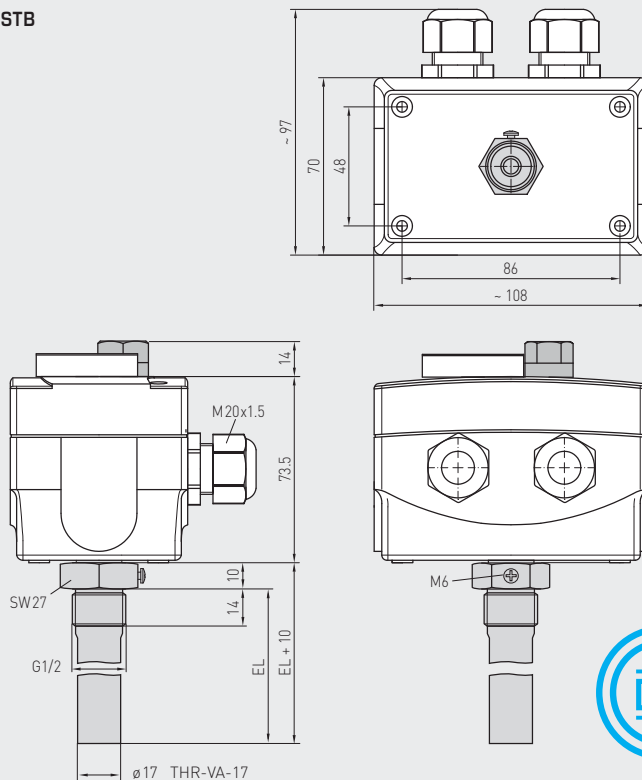
ETR-xx U
(two-step)



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

Dimensional drawing
Temperature controller +
safety temperature limiter
TR + STB

ETR-xx Rxx
(two-step)



ETR-060 R 85
ETR-090 R 110
(two-step)
TR + STB
selectable



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

| Type / WG02 | Ø mm | Temperature Ranges (adjustable) | | Thermal Operating Difference (fixed) approx. | | Maximum Capillary Temp. | Item No. | Price |
|---------------------|---------|------------------------------------|---------------|---|----------------|-------------------------------|--------------------|-----------------|
| | | 1. | 2. | 1. | 2. | | | |
| ETR-090090 U | | | | | | | TW + TW | |
| ETR-090090 U VA/150 | 17 | 0...+90 °C | 0...+90 °C | 3K | 3K | +120 °C | 1102-2010-2205-130 | 123,49 € |
| ETR-090090 U VA/200 | 17 | 0...+90 °C | 0...+90 °C | 3K | 3K | +120 °C | 1102-2010-2205-140 | 134,22 € |
| ETR-060R85 | | | | | | | TR + STB | |
| ETR-060R85 VA/150 | 17 | 0...+60 °C | +65...+85 °C | 3K | +0 / -15...20K | +120 °C | 1102-2010-7205-230 | 123,49 € |
| ETR-060R85 VA/200 | 17 | 0...+60 °C | +65...+85 °C | 3K | +0 / -15...20K | +120 °C | 1102-2010-7205-240 | 134,22 € |
| ETR-090R110 | | | | | | | TR + STB | |
| ETR-090R110 VA/150 | 17 | 0...+90 °C | +90...+110 °C | 3K | +0 / -15...20K | +135 °C | 1102-2010-7205-330 | 123,49 € |
| ETR-090R110 VA/200 | 17 | 0...+90 °C | +90...+110 °C | 3K | +0 / -15...20K | +135 °C | 1102-2010-7205-340 | 134,22 € |

| | | | | | | | | |
|-------------------|--|--|--|--|--|--|------------|---------------|
| 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 | | | | | | 8,40 € |
| | /2 | = 2 steps, unless included in a certain type | | | | | on request | |
| Features: | FT | = Manual reset when temperature drops | | | | | | |
| | ST | = Manual reset when temperature rises | | | | | | |
| | TR | = Temperature controller (external setting) | | | | | | |
| | TB | = Temperature limiter (internal 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...20K below switching temperature (+0K / - 15...20K); with EC type test (module B) according to directive 97 / 23 / EC | | | | | | |
| 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 | | Item No. | Price |
|---|--|--------------------|----------------|
| WLP-1 | Heat-conductive paste set | 7100-0060-1000-000 | 2,85 € |
| THR-VA-17/150 | Immersion sleeve, stainless steel V4A (1.4571), Ø 17 mm, EL = 150 mm | 7100-0012-3033-000 | 34,58 € |
| THR-VA-17/200 | Immersion sleeve, stainless steel V4A (1.4571), Ø 17 mm, EL = 200 mm | 7100-0012-3404-000 | 37,04 € |
| For further information see last chapter! | | | |