

**Built-in temperature controllers, 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, material polyamide, 30 % glass-globe-reinforced, colour traffic white (similar to RAL 9016)
Enclosure dimensions:	108 x 70 x 73.5 mm (Thor 2)
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 <sub>min</sub> ± 5 K; T <sub>max</sub> ± 3 K
Immersion sleeves:	<b>THR-ms-08 / xx</b> , Single sleeve brass, nickel-plated, Ø = 8 mm, R ½" straight pipe thread, wrench size 22, p <sub>max</sub> = 10 bar, T <sub>max</sub> = +150 °C <b>THR-VA-09 / xx</b> , Single sleeve stainless steel V4A (1.4571), Ø = 9 mm, G ½" straight pipe thread, wrench size 22, p <sub>max</sub> = 25 bar, T <sub>max</sub> = +150 °C <b>THR-VA-17 / xx</b> , Double sleeve stainless steel V4A (1.4571), Ø = 17 mm, G ½" straight pipe thread, wrench size 22, p <sub>max</sub> = 25 bar, T <sub>max</sub> = +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 <sup>2</sup> 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:	<b>EC type test (module B) according to directive 97 / 23 / EC</b> , certificate No.: IS-TAF-MUC 08 02 100248356 001, DIN EN 14597, register Nos.: <b>STB 1201, TR / STB 1202</b>
<b>FUNCTION</b>	<b>TW, TR:</b> Contact 2-3 breaks when temperature rises to the preset value. <b>STB:</b> 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. 15K- 20K by pressing the reset button.





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**Configuration variants:**

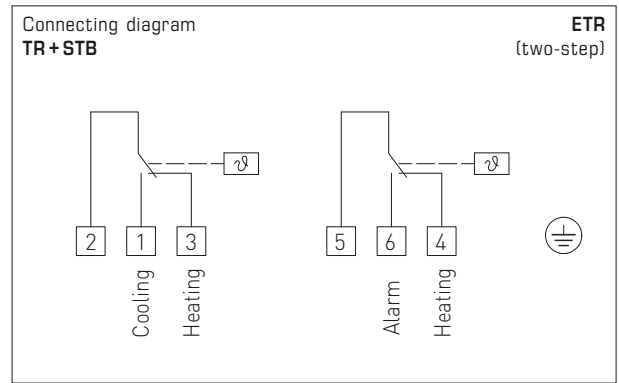
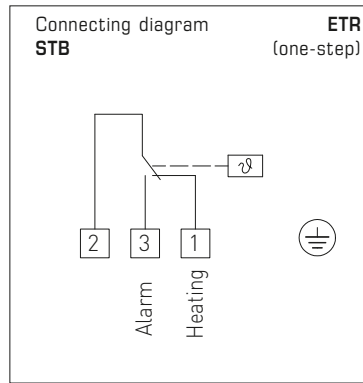
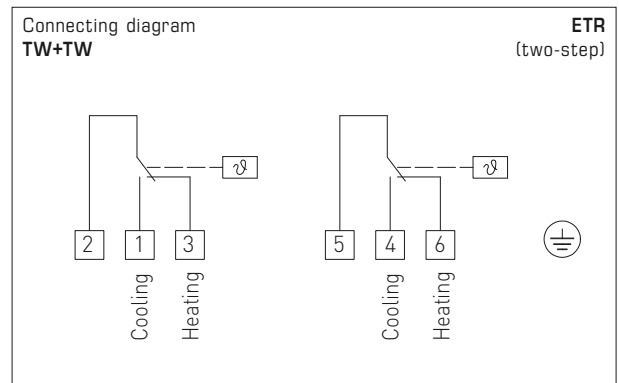
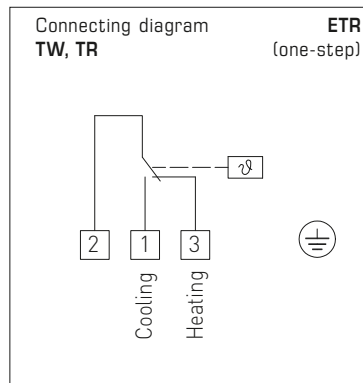
**TW**  
Temperature monitor  
(internal setting)

**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**  
EG Type-examination (Module B) according to Directive 97/23/EC

Zertifikat-Nr.: IS-TAF-MUC 08 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 herewith 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 1382-0008 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

*[Signature]*  
Bertram Stöck, Fachnummer 0030  
Notified Body, No. 0030

Mitglied der CONFEDERATION EUROPEENNE DE CERTIFICATION  
**CEOC**  
ORGANISATION DE COORDINATION

(Location, Date)  
Munich, 2008-02-22

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

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**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.

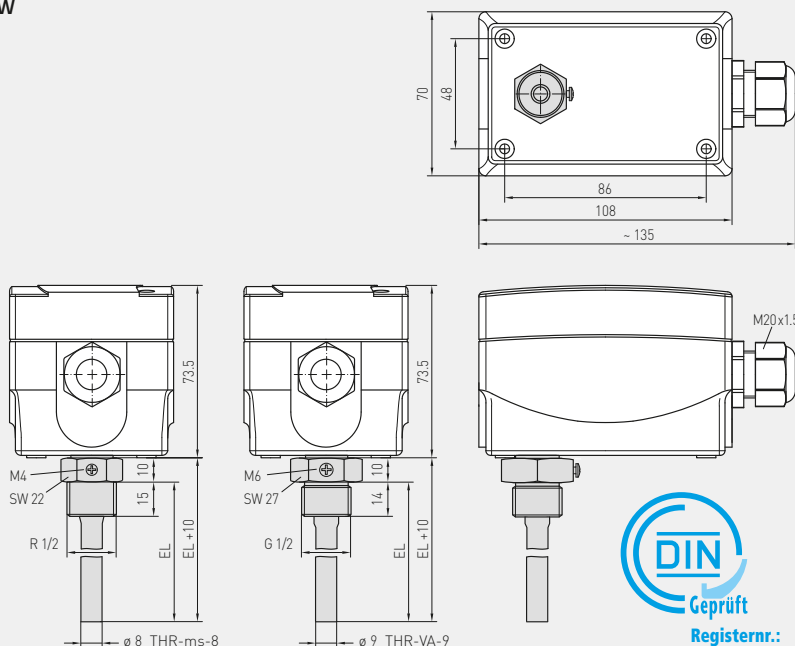
Type	Code	Technical data
ETR-060R85	TR/STB	Combination of two single types: TR and STB with the range: TR: from 0 °C to +60 °C STB: from +65 °C to +85 °C
ETR-060R110	TR/STB	Combination of two single types: TR and STB with the range: TR: from 0 °C to +90 °C STB: from +90 °C to +110 °C
KTR-060R85	TR/STB	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**

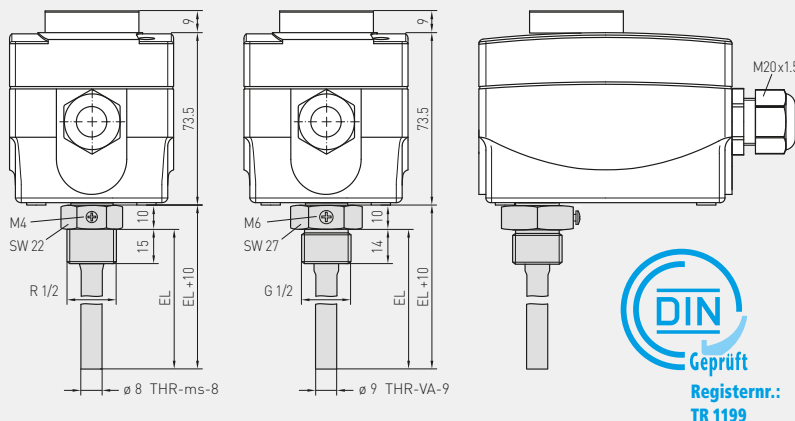
**ETR-xx U**  
(one-step)



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

Dimensional drawing  
Temperature controller  
**TR**

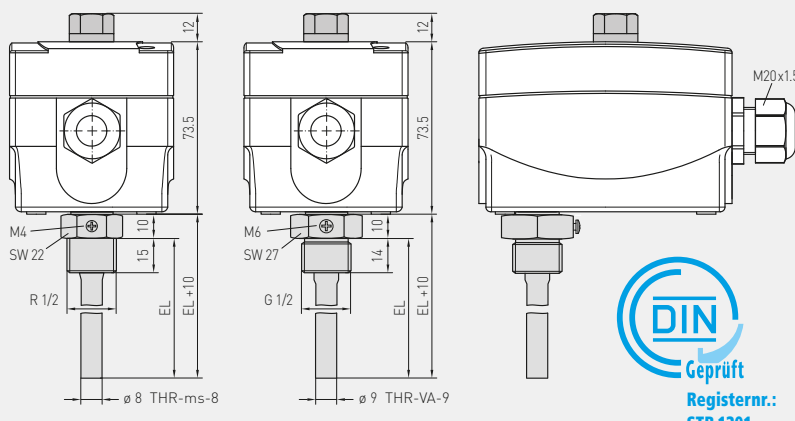
**ETR-xx**  
(one-step)



**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 – Built-in temperature controllers, one-step, including immersion sleeve

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

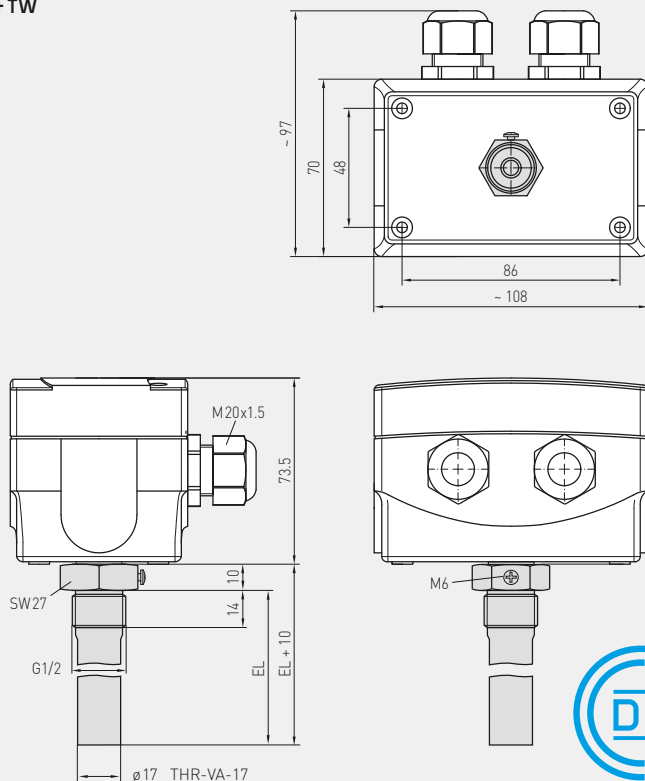
Type designation: **ETR-xx\_immersion sleeve material/inserted length (mm)**  
**MS** = Brass nickel-plated, **VA** = Stainless steel V4A (1.4571)

Features: **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**

For further information and accessories see next page...

Dimensional drawing  
Double temperature monitor  
TW+TW

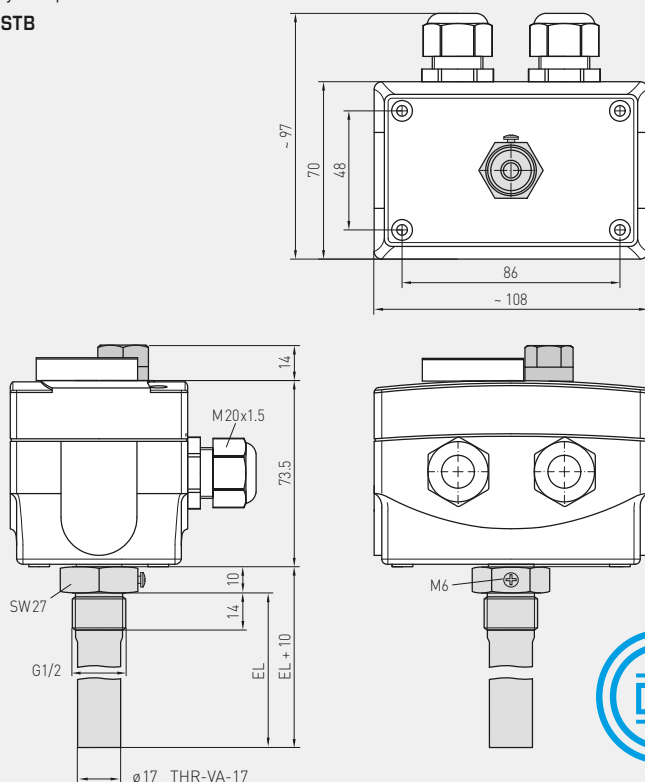
ETR-xxU  
(two-step)



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

Dimensional drawing  
Temperature controller +  
safety temperature limiter  
TR+STB

ETR-xxRxx  
(two-step)



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



## THERMASREG® ETR – Built-in temperature controllers, 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.			
<b>ETR-090090 U</b>							<b>TW + TW</b>	
ETR-090090 U VA/150	17	0...+90 °C	0...+90 °C	3K	3K	+120 °C	1102-2010-2205-130	<b>123,49 €</b>
ETR-090090 U VA/200	17	0...+90 °C	0...+90 °C	3K	3K	+120 °C	1102-2010-2205-140	<b>134,22 €</b>
<b>ETR-060R85</b>							<b>TR + STB</b>	
ETR-060R85 VA/150	17	0...+60 °C	+65...+85 °C	3K	+0/-15...20K	+120 °C	1102-2010-7205-230	<b>123,49 €</b>
ETR-060R85 VA/200	17	0...+60 °C	+65...+85 °C	3K	+0/-15...20K	+120 °C	1102-2010-7205-240	<b>134,22 €</b>
<b>ETR-090R110</b>							<b>TR + STB</b>	
ETR-090R110 VA/150	17	0...+90 °C	+90...+110 °C	3K	+0/-15...20K	+135 °C	1102-2010-7205-330	<b>123,49 €</b>
ETR-090R110 VA/200	17	0...+90 °C	+90...+110 °C	3K	+0/-15...20K	+135 °C	1102-2010-7205-340	<b>134,22 €</b>

Type designation:	<b>ETR-xx_immersion sleeve material / inserted length (mm)</b> MS = Brass nickel-plated, VA = Stainless steel V4A (1.4571)	
Extra charge:	<b>U</b> = Internal setting, unless included in a certain type <b>/2</b> = 2 steps, unless included in a certain type	<b>8,40 €</b> <b>19,01 €</b>
Features:	<b>FT</b> = Manual reset when temperature drops <b>ST</b> = Manual reset when temperature rises <b>TR</b> = Temperature controller ( <b>external setting</b> ) <b>TB</b> = Temperature limiter ( <b>internal setting</b> ) <b>TW</b> = Temperature monitor ( <b>internal setting</b> ) <b>STB</b> = Safety temperature limiter ( <b>internal setting</b> ), <b>selectable</b> , with external switchpoint confirmation and restart interlock, restart by reset button at approx. 15...20K below switching temperature (+0K/- 15...20K); <b>with EC type test (module B) according to directive 97 / 23 / EC</b>	
Note:	To ensure <b>accurate responsiveness</b> series <b>ETR</b> 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
<b>WLP-1</b>	Heat-conductive paste set	7100-0060-1000-000	<b>2,85 €</b>
<b>THR-VA-17/150</b>	Immersion sleeve, stainless steel <b>V4A</b> (1.4571), Ø 17 mm, <b>EL = 150 mm</b>	7100-0012-3033-000	<b>34,58 €</b>
<b>THR-VA-17/200</b>	Immersion sleeve, stainless steel <b>V4A</b> (1.4571), Ø 17 mm, <b>EL = 200 mm</b>	7100-0012-3404-000	<b>37,04 €</b>
For further information see last chapter!			