

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 2014/68/EU.

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
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", SW 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", SW 27, p _{max} = 25 bar, T _{max} = +150 °C THR-VA-17/xx , Double sleeve stainless steel V4A (1.4571), Ø = 17 mm, G ½", SW 27, 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 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 according to 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 - 20K by pressing the reset button.





Configuration variants:

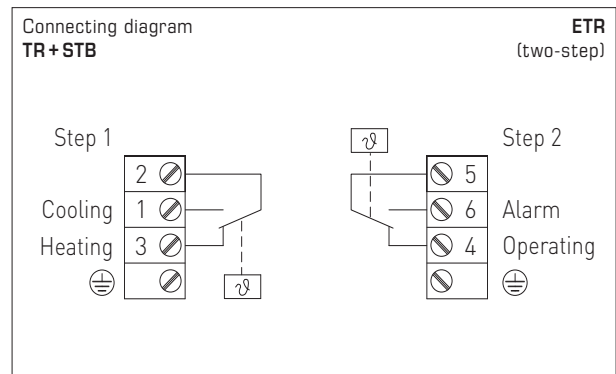
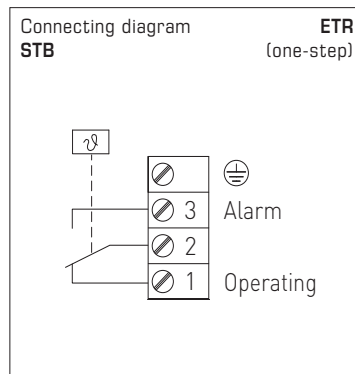
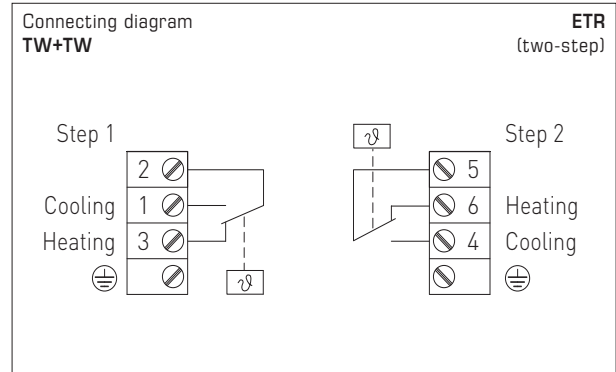
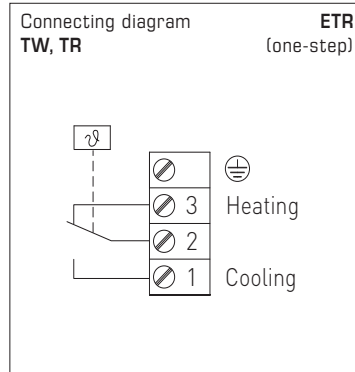
TW
Temperature monitor
(internal setting)

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)

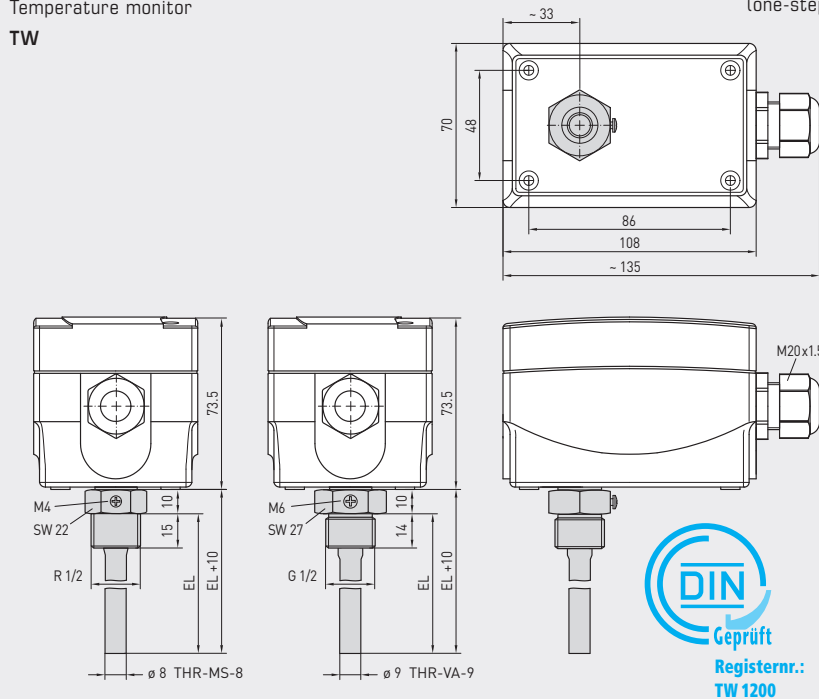


CERTIFICATE ZERTIFIKAT... valid until: 25.02.2028... EU Type examination (module B) - production type - according to Directive 2014/68/EU... Certificate No.: Z-IS-TAF-MUC-18-03-2652130-002... Evaluation report No.: C-T 1382-01/18 dated 2018-02-25... Scope of examination: Safety temperature limiter as safety accessory type: ETR and KTR (see page 3) basis of examination and details see page 3... Manufacturing plant: S+S Regeltechnik GmbH... München, 25.02.2018

page 3 of certificate no. IS-TAF-MUC-18-03-2652130-002... Replaces certificate dated IS-TAF-MUC 08 02 100248356 001... Basis of examination: VdTUV-Merkblatt Temperatur 100:2017-03... DIN EN 14597 :2015-01... Essential safety requirements of Directive 2014/68/EU... Type code... Table with columns: Type, Code, Technical data... 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

Dimensional drawing
 Temperature monitor
TW

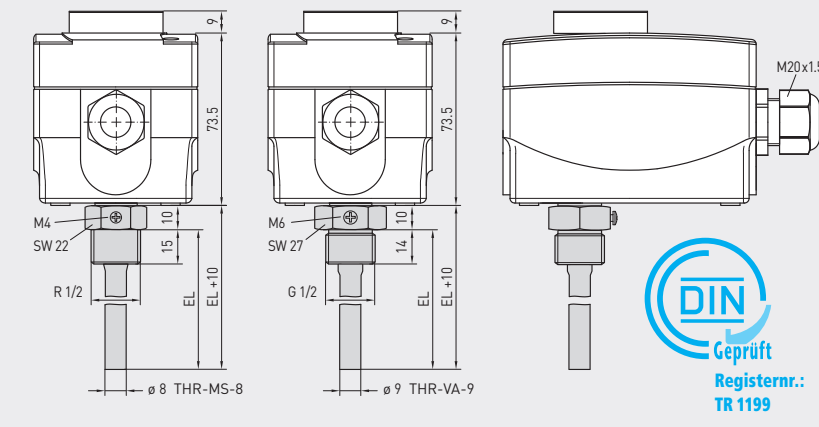
ETR-xx U
 (one-step)



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

Dimensional drawing
 Temperature controller
TR

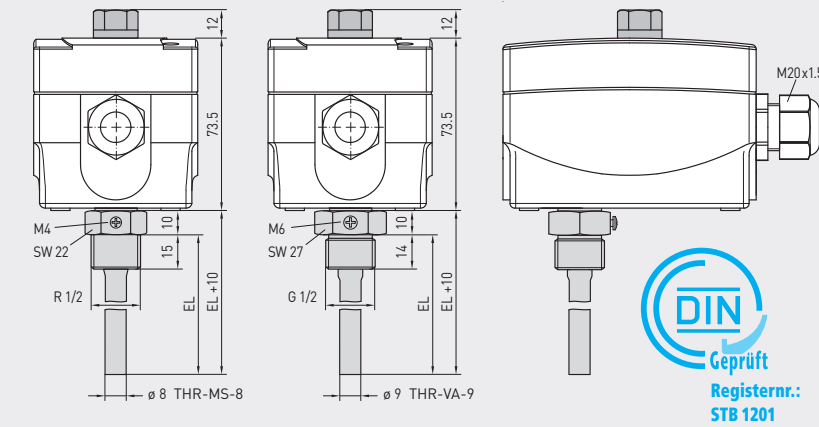
ETR-xx
 (one-step)



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 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	3K	+75 °C	1102-2010-2100-380	78,15 €
ETR-060 U MS/150	150 mm	0...+60 °C	3K	+75 °C	1102-2010-2100-310	80,78 €
ETR-060 U MS/200	200 mm	0...+60 °C	3K	+75 °C	1102-2010-2100-320	85,40 €
ETR-060 U VA/100	100 mm	0...+60 °C	3K	+75 °C	1102-2010-2100-390	108,63 €
ETR-060 U VA/150	150 mm	0...+60 °C	3K	+75 °C	1102-2010-2100-330	111,23 €
ETR-060 U VA/200	200 mm	0...+60 °C	3K	+75 °C	1102-2010-2100-340	115,89 €
ETR-090 U						TW
ETR-090 U MS/100	100 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-480	78,15 €
ETR-090 U MS/150	150 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-410	80,78 €
ETR-090 U MS/200	200 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-420	85,40 €
ETR-090 U VA/100	100 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-490	108,63 €
ETR-090 U VA/150	150 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-430	111,23 €
ETR-090 U VA/200	200 mm	0...+90 °C	3K	+120 °C	1102-2010-2100-440	115,89 €
ETR-1						TR
ETR-1 MS/100	100 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-180	78,15 €
ETR-1 MS/150	150 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-110	80,78 €
ETR-1 MS/200	200 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-120	85,40 €
ETR-1 VA/100	100 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-190	108,63 €
ETR-1 VA/150	150 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-130	111,23 €
ETR-1 VA/200	200 mm	-35...+35 °C	3K	+75 °C	1102-2010-1100-140	115,89 €
ETR-060						TR
ETR-060 MS/100	100 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-380	78,15 €
ETR-060 MS/150	150 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-310	80,78 €
ETR-060 MS/200	200 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-320	85,40 €
ETR-060 VA/100	100 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-390	108,63 €
ETR-060 VA/150	150 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-330	111,23 €
ETR-060 VA/200	200 mm	0...+60 °C	3K	+75 °C	1102-2010-1100-340	115,89 €
ETR-090						TR
ETR-090 MS/100	100 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-480	78,15 €
ETR-090 MS/150	150 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-410	80,78 €
ETR-090 MS/200	200 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-420	85,40 €
ETR-090 VA/100	100 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-490	108,63 €
ETR-090 VA/150	150 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-430	111,23 €
ETR-090 VA/200	200 mm	0...+90 °C	3K	+120 °C	1102-2010-1100-440	115,89 €
ETR-0120						TR
ETR-0120 MS/100	100 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-580	78,15 €
ETR-0120 MS/150	150 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-510	80,78 €
ETR-0120 MS/200	200 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-520	85,40 €
ETR-0120 VA/100	100 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-590	108,63 €
ETR-0120 VA/150	150 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-530	111,23 €
ETR-0120 VA/200	200 mm	0...+120 °C	5K	+135 °C	1102-2010-1100-540	115,89 €
ETR-50140						TR
ETR-50140 MS/100	100 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-680	78,15 €
ETR-50140 MS/150	150 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-610	80,78 €
ETR-50140 MS/200	200 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-620	85,40 €
ETR-50140 VA/100	100 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-690	108,63 €
ETR-50140 VA/150	150 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-630	111,23 €
ETR-50140 VA/200	200 mm	+50...+140 °C	5K	+150 °C	1102-2010-1100-640	115,89 €
ETR-R6585						STB
ETR-R6585 MS/100	100 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-780	94,17 €
ETR-R6585 MS/150	150 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-710	96,79 €
ETR-R6585 MS/200	200 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-720	105,63 €
ETR-R6585 VA/100	100 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-790	114,09 €
ETR-R6585 VA/150	150 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-730	116,71 €
ETR-R6585 VA/200	200 mm	+65...+85 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-740	121,50 €
ETR-R90110						STB
ETR-R90110 MS/100	100 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-880	94,17 €
ETR-R90110 MS/150	150 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-810	96,79 €
ETR-R90110 MS/200	200 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-820	105,63 €
ETR-R90110 VA/100	100 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-890	114,09 €
ETR-R90110 VA/150	150 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-830	116,71 €
ETR-R90110 VA/200	200 mm	+90...+110 °C	+0 / -15...20 K	+120 °C	1102-2010-6100-840	121,50 €

Type designation:

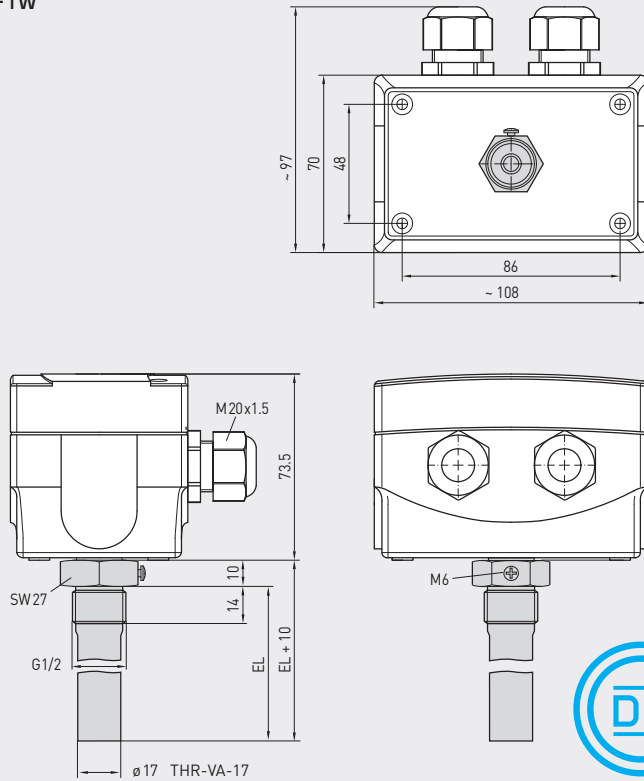
ETR-xx_immersion sleeve material / inserted length (mm)

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

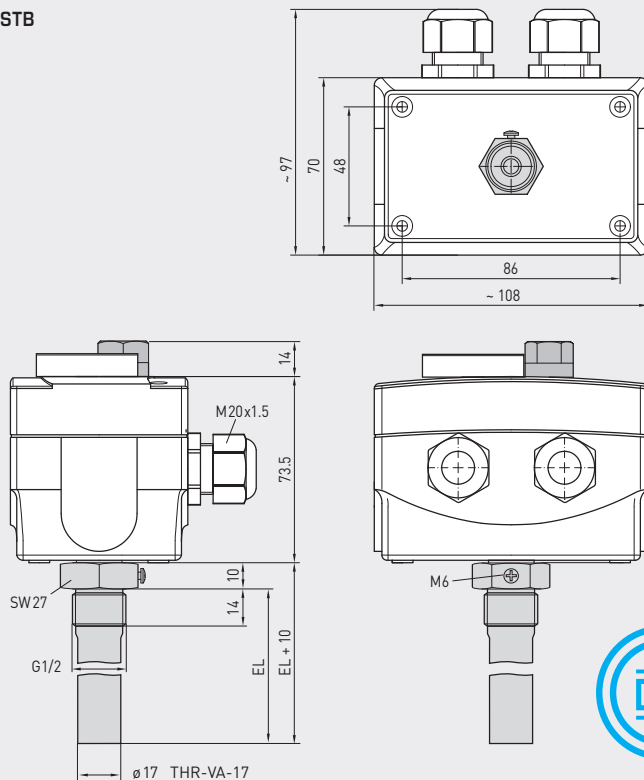
ETR-xx U
(two-step)



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	Inserted Length (EL)	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	150 mm	0...+90 °C	0...+90 °C	3K	3K	+120 °C	1102-2010-2205-130	161,53 €
ETR-090090 U VA/200	200 mm	0...+90 °C	0...+90 °C	3K	3K	+120 °C	1102-2010-2205-140	175,58 €
ETR-060R85							TR + STB	
ETR-060R85 VA/150	150 mm	0...+60 °C	+65...+85 °C	3K	+0 / -15...20K	+120 °C	1102-2010-7205-230	161,53 €
ETR-060R85 VA/200	200 mm	0...+60 °C	+65...+85 °C	3K	+0 / -15...20K	+120 °C	1102-2010-7205-240	175,58 €
ETR-090R110							TR + STB	
ETR-090R110 VA/150	150 mm	0...+90 °C	+90...+110 °C	3K	+0 / -15...20K	+135 °C	1102-2010-7205-330	161,53 €
ETR-090R110 VA/200	200 mm	0...+90 °C	+90...+110 °C	3K	+0 / -15...20K	+135 °C	1102-2010-7205-340	175,58 €
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						10,98 € 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...20K below switching temperature (+0K / - 15...20K); 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	5,13 €
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:			Inserted Length (EL)	Item No. Ø	Price
			Air	Water	Oil			
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	17,02 €
THR-MS-08/150	10 bar	+150 °C	106 s	18 s	53 s	150 mm	7100-0011-3404-000	17,16 €
THR-MS-08/200	10 bar	+150 °C	106 s	18 s	53 s	200 mm	7100-0011-3403-000	20,37 €
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	43,83 €
THR-VA-09/150	25 bar	+150 °C	92 s	17 s	41 s	150 mm	7100-0012-3032-000	45,23 €
THR-VA-09/200	25 bar	+150 °C	92 s	17 s	41 s	200 mm	7100-0012-3042-000	48,46 €
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	45,23 €
THR-VA-17/200	25 bar	+150 °C	-	45 s	55 s	200 mm	7100-0012-3404-000	48,46 €
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							