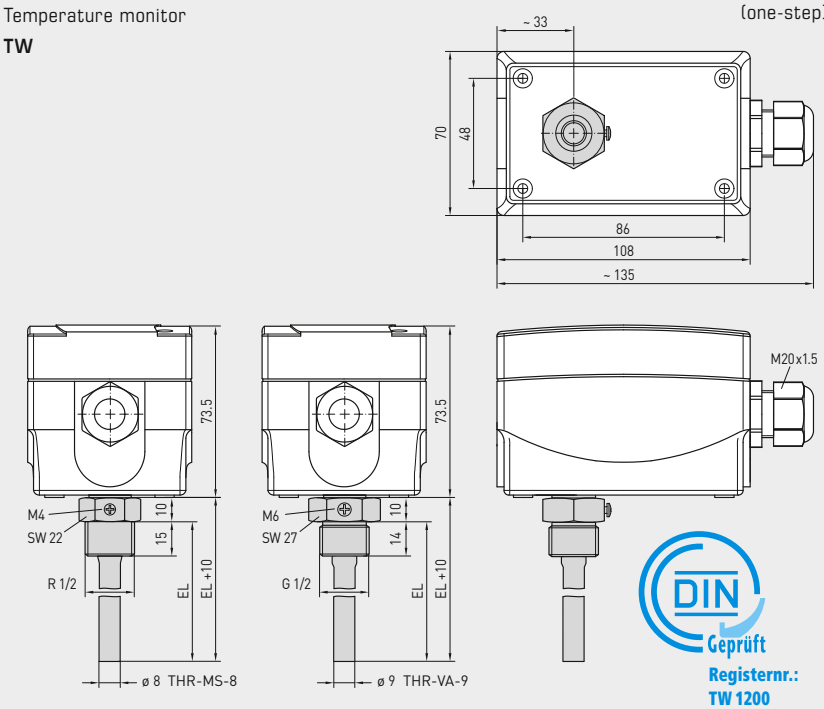
one-step

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)

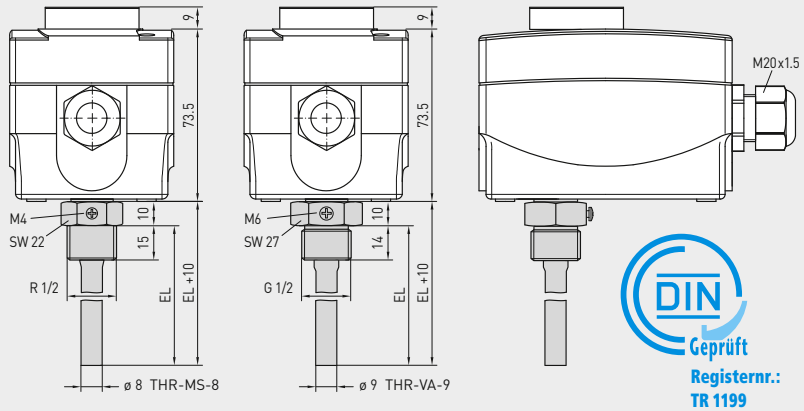


DIN Geprüft
Registernr.: TW 1200

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

Dimensional drawing
Temperature controller
TR

ETR-xx
(one-step)

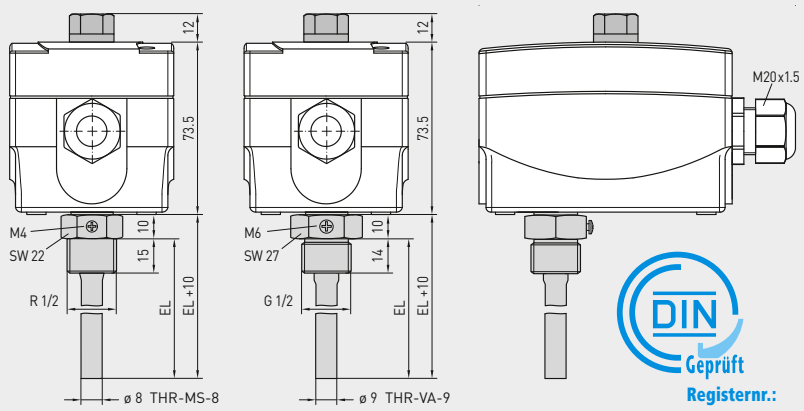


DIN Geprüft
Registernr.: TR 1199

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.**
ETR-060 U					**TW**
ETR-060 U MS/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-380
ETR-060 U MS/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-310
ETR-060 U MS/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-320
ETR-060 U VA/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-390
ETR-060 U VA/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-330
ETR-060 U VA/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-2100-340
ETR-090 U					**TW**
ETR-090 U MS/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-480
ETR-090 U MS/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-410
ETR-090 U MS/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-420
ETR-090 U VA/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-490
ETR-090 U VA/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-430
ETR-090 U VA/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-2100-440
ETR-1					**TR**
ETR-1 MS/100	100 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-180
ETR-1 MS/150	150 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-110
ETR-1 MS/200	200 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-120
ETR-1 VA/100	100 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-190
ETR-1 VA/150	150 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-130
ETR-1 VA/200	200 mm	–35...+35 °C	3 K	+75 °C	1102-2010-1100-140
ETR-060					**TR**
ETR-060 MS/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-380
ETR-060 MS/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-310
ETR-060 MS/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-320
ETR-060 VA/100	100 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-390
ETR-060 VA/150	150 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-330
ETR-060 VA/200	200 mm	0...+60 °C	3 K	+75 °C	1102-2010-1100-340
ETR-090					**TR**
ETR-090 MS/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-480
ETR-090 MS/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-410
ETR-090 MS/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-420
ETR-090 VA/100	100 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-490
ETR-090 VA/150	150 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-430
ETR-090 VA/200	200 mm	0...+90 °C	3 K	+120 °C	1102-2010-1100-440
ETR-0120					**TR**
ETR-0120 MS/100	100 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-580
ETR-0120 MS/150	150 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-510
ETR-0120 MS/200	200 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-520
ETR-0120 VA/100	100 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-590
ETR-0120 VA/150	150 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-530
ETR-0120 VA/200	200 mm	0...+120 °C	5 K	+135 °C	1102-2010-1100-540
ETR-50140					**TR**
ETR-50140 MS/100	100 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-680
ETR-50140 MS/150	150 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-610
ETR-50140 MS/200	200 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-620
ETR-50140 VA/100	100 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-690
ETR-50140 VA/150	150 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-630
ETR-50140 VA/200	200 mm	+50...+140 °C	5 K	+150 °C	1102-2010-1100-640
ETR-R6585					**STB**
ETR-R6585 MS/100	100 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-780
ETR-R6585 MS/150	150 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-710
ETR-R6585 MS/200	200 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-720
ETR-R6585 VA/100	100 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-790
ETR-R6585 VA/150	150 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-730
ETR-R6585 VA/200	200 mm	+65...+85 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-740
ETR-R90110					**STB**
ETR-R90110 MS/100	100 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-880
ETR-R90110 MS/150	150 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-810
ETR-R90110 MS/200	200 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-820
ETR-R90110 VA/100	100 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-890
ETR-R90110 VA/150	150 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-830
ETR-R90110 VA/200	200 mm	+90...+110 °C	+0 / –15...20 K	+120 °C	1102-2010-6100-840

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

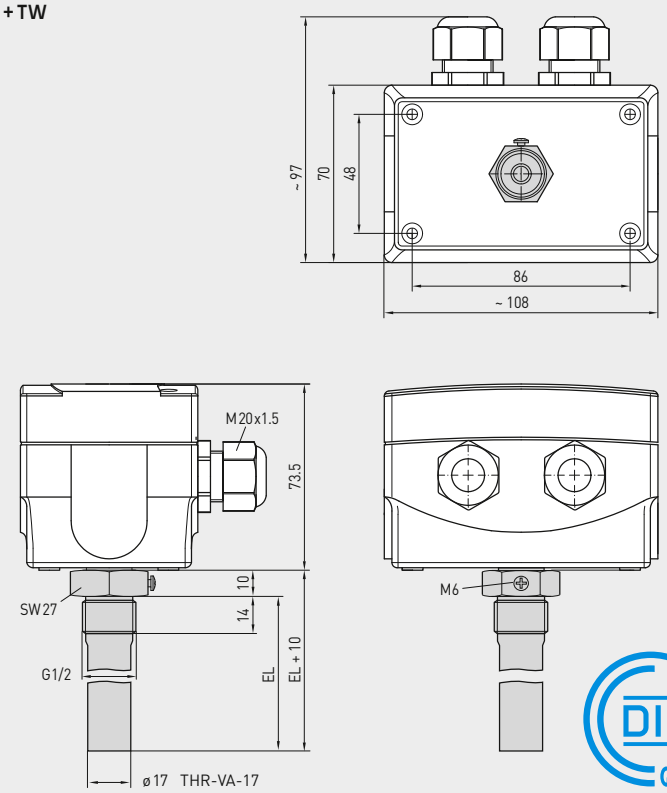
For further information and accessories see next page...

**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)

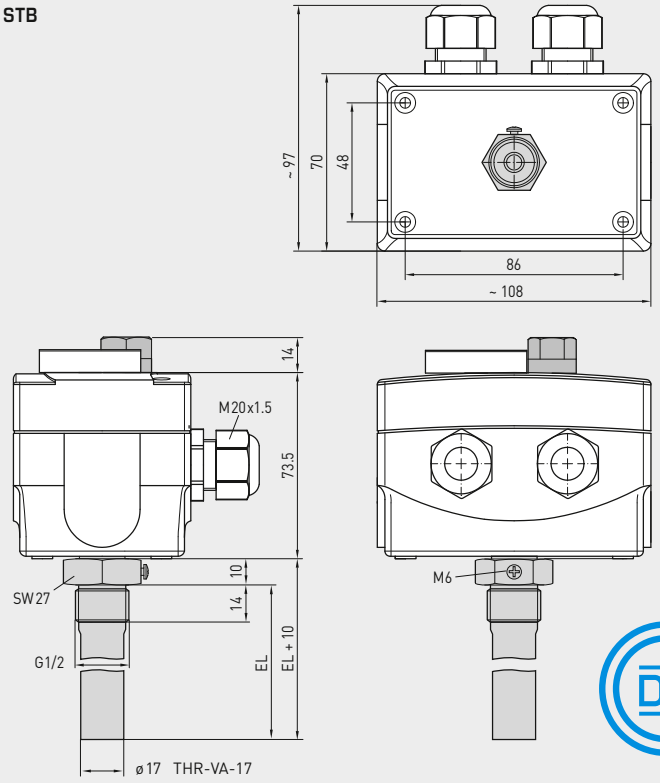


DIN Geprüft
Registernr.: TW / TW 1241

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.
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
ETR-090090 U VA/200	**200 mm**	0...+90 °C	0...+90 °C	3K	3K	+120 °C	1102-2010-2205-140
ETR-060 R 85							**TR + STB**
ETR-060R85 VA/150	**150 mm**	0...+60 °C	+65...+85 °C	3K	+0 / –15...20K	+120 °C	1102-2010-7205-230
ETR-060R85 VA/200	**200 mm**	0...+60 °C	+65...+85 °C	3K	+0 / –15...20K	+120 °C	1102-2010-7205-240
ETR-090 R110							**TR + STB**
ETR-090R110 VA/150	**150 mm**	0...+90 °C	+90...+110 °C	3K	+0 / –15...20K	+135 °C	1102-2010-7205-330
ETR-090R110 VA/200	**200 mm**	0...+90 °C	+90...+110 °C	3K	+0 / –15...20K	+135 °C	1102-2010-7205-340

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	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
	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
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
THR-MS-08/150	10 bar	+150 °C	106 s	18 s	53 s	**150 mm**	7100-0011-3404-000
THR-MS-08/200	10 bar	+150 °C	106 s	18 s	53 s	**200 mm**	7100-0011-3403-000
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
THR-VA-09/150	25 bar	+150 °C	92 s	17 s	41 s	**150 mm**	7100-0012-3032-000
THR-VA-09/200	25 bar	+150 °C	92 s	17 s	41 s	**200 mm**	7100-0012-3042-000
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
THR-VA-17/200	25 bar	+150 °C	–	45 s	55 s	**200 mm**	7100-0012-3404-000

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	