domat
control system

ETR...	# Immersion thermostats

Summary

The ETR... is a series of mechanical pocket thermostats for water, hot water, and gases.

Applications

- ▪ **HVAC systems – heat generation, heat exchange stations, DHW preparation, safety elements at heating circuits etc.**

Functions

The measuring element actuates changeover contacts. TR, STW: Contacts 2 – 3 open if the temperature is higher than the setpoint. STB: Contacts 2 – 1 open if the temperature is higher than the setpoint.

The devices do not need any servicing or maintenance and can be mounted in any position except those when condensate may cumulate at operating elements or cable glands.

The temperature sensing elements, torsion element with liquid filling, are mounted into pockets which are part of delivery.

Technical data

Recommended measuring circuit	24...250 V + 10 %, 10 A, cos φ = 1.0 24...250 V + 10 %, 1.5 A, cos φ = 0.6 min. 150 mA at 24 V AC
Contact	dustproof contact block with potential-free one-pole or two-pole changeover contact
Cover	polyamide, 30% glass fiber, color white, similar to RAL 9010
Dimensions	108 x 70 x 73,5 mm
Cable gland	M20x 1,5

Ambient temperature	-10...65 °C
Tolerance	+/- 3...5 K
Pocket	nickel plated brass G1/2", SW22, Pmax = 10 bar, tmax = 150 °C, $\varnothing$ 8 mm
	stainless steel 1.4571, V4A, G1/2", SW22, Pmax = 25 bar, tmax = 150 °C, $\varnothing$ 9 mm
	Optional:
	double stainless steel 1.4571, V4A, G1/2", SW22, Pmax = 40 bar, tmax = 450 °C, $\varnothing$ 9 mm
Media	Water, oil, air, exhaust gases
Pocket length	150 mm, 200 mm
Terminals	screw terminals for wires 0,14 – 2,5 mm²
Protection class	IP65 (according to EN 60529)

Type overview

Type	Temp. range (°C)		Hysteresis, fixed (K)		Max. pocket temperature (°C)	Function
ETR (1-stage)	*1.*		*1.*			
ETR-1	-35...+35		3		+75	TR
ETR-060	0...+60		3		+75	TR
ETR-060-U	0...+60		3		+75	TW
ETR-090	0...+90		3		+120	TR
ETR-090-U	0...+90		3		+120	TW
ETR-0120	0...+120		5		+135	TR
ETR-50140	+50...+140		5		+150	TR
ETR-R6585	+65...+85		0/-15...20		+120	STB
ETR-R90110	+90...+110		0/-15...20		+120	STB
ETR (2-stage)	*1.*	*2.*	*1.*	*2.*		
ETR-090090-U	0...+90	0...+90	3	3	+120	TW+TW
ETR-060R85	0...+60	+65...+85	3	0/-15...20	+120	TR+STB
ETR-090R110	0...+90	+90...+110	3	0/-15...20	+135	TR+STB

TR: temperature controller (setpoint external)
TW: temperature monitor (setpoint internal)
STB: safety temperature limiter (setpoint internal), external button for manual reset

Pocket lengths

	Available length	Diameter	Marking
1-stage			
brass	150 or 200 mm	8 mm	_ms/150, _ms/200
stainless steel	150 or 200 mm	9 mm	_VA/150, _VA/200
2-stage			
brass	150 mm	16 mm	_ms/150
stainless steel	150 or 200 mm	16 mm	_VA/150, _VA/200

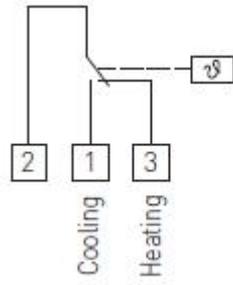**Optional:** double sleeve stainless steel (p_{max}= 40 bar) is on demand.

Ordering

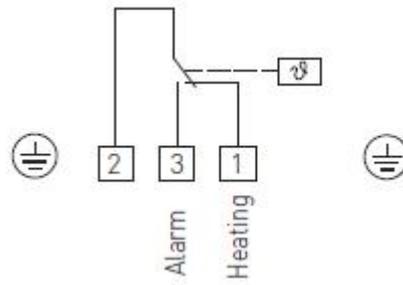When ordering, specify pocket material and length.
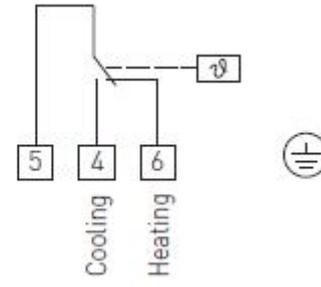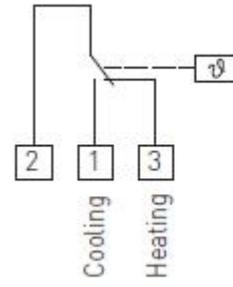Example:

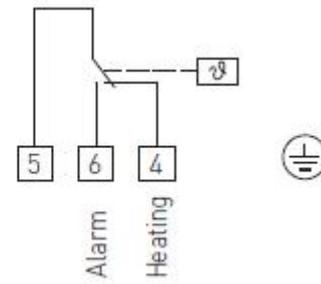3 pcs.   ETR-50140_ms/150

Terminals

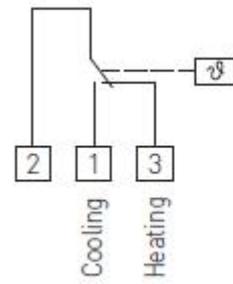**ETR – TW, TR**   **ETR – STB**

ETR – TW+TW
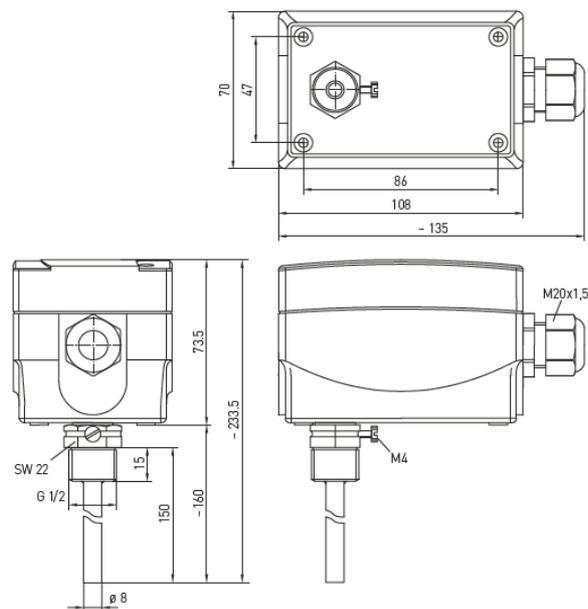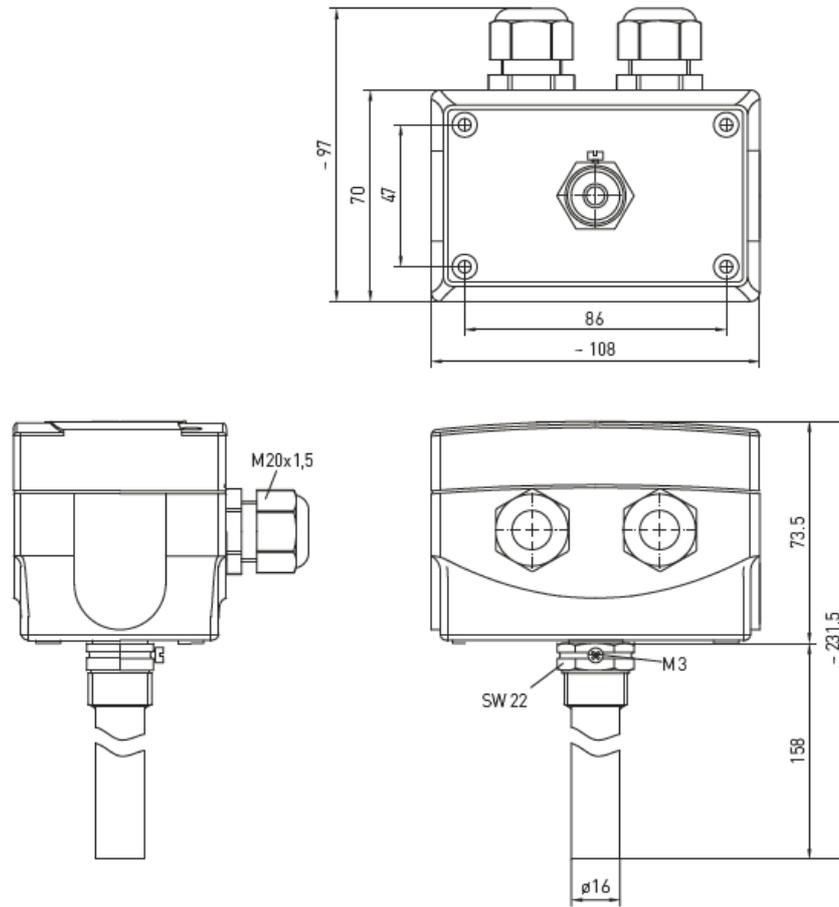

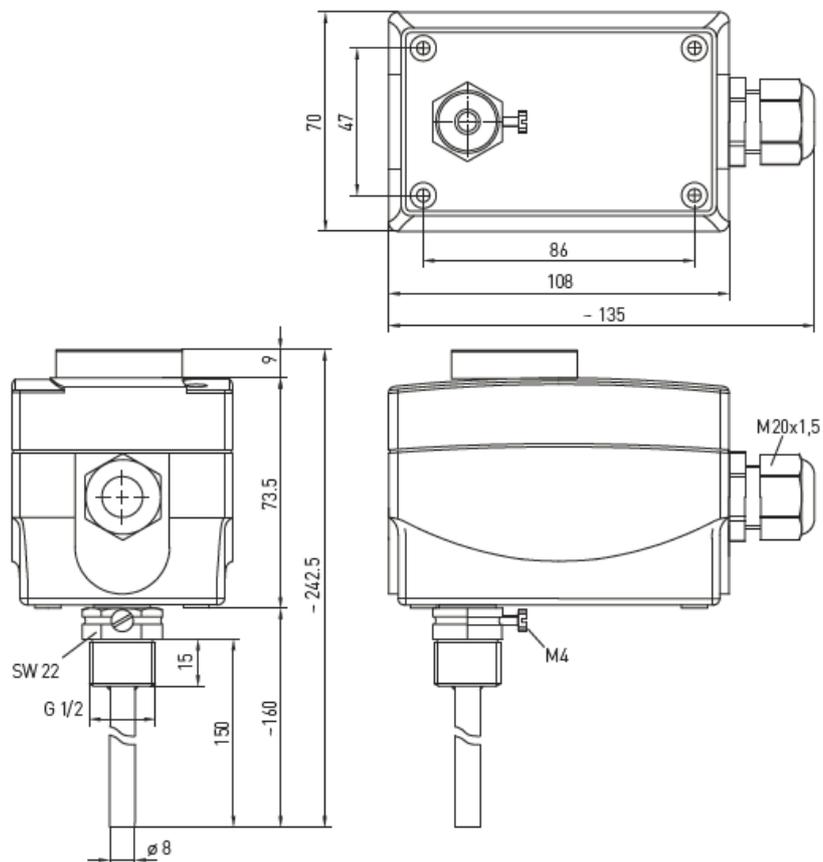**ETR – TR+STB**

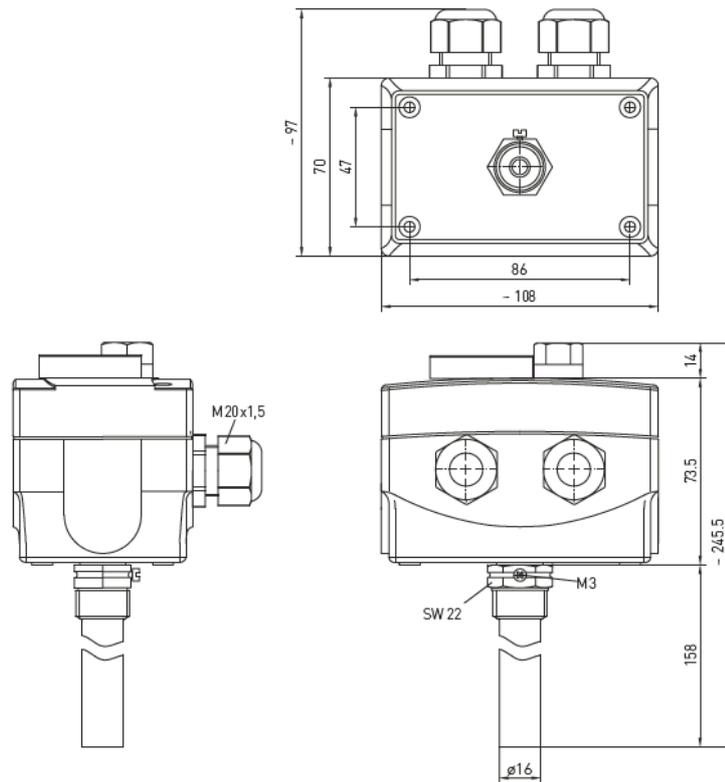**Dimensions**

ETR 060, 090 – U (TW)

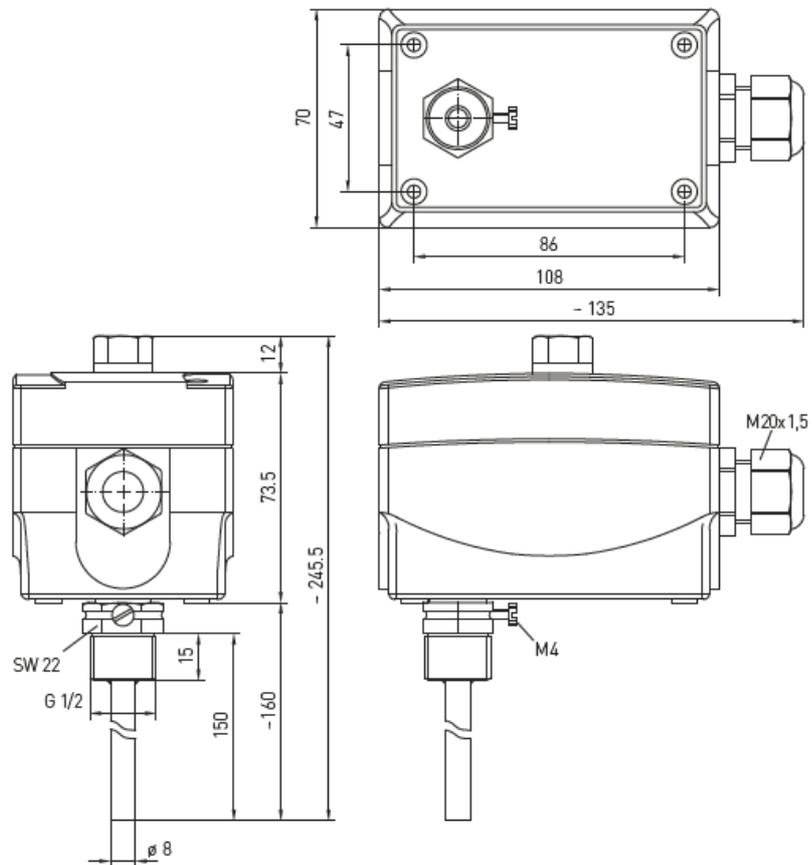**ETR-090090-U**
(TW+TW)

ETR 1, 060, 090, 0120, 50140
(TR)

**ETR 060R85, 090R110
(TR+STB)**

**ETR R6585, R90110
(STB)**

Release notes

Version 02/2015 – Changes in sleeve dimensions.

02/2015 Subject to technical changes.

domat ETR