



TV

Immersion thermostat, IP54

Serie of immersion thermostats for temperature control in systems for heating, cooling and air conditioning, boilers and heaters.

- Hidden setpoint screw with wide range
- Well suited for use in heavily polluted or industrial applications
- Fixed hysteresis
- Protection class IP54
- Breaking capacity 16 A a 250 V AC

Function

The TV electro-mechanical thermostats are constructed around a fluid-filled capillary tube and sensor housing that transfers the changes in temperature to a micro-switch. The micro-switch is capable of breaking up to 16 A a 250 V AC.

TV is intended for use in temperature control in boilers and heaters.

The thermostat is delivered with an immersion well (DBZ-30/14) for easy mounting and commissioning.

Features

SETPOINT ADJUSTMENT

The thermostat is available with a setpoint adjustment knob on the outside or under the cover.

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Technical data

Sensor element	Copper bulb with 120mm brass pocket (on request with 200 mm length)
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Breaking capacity	With SPDT contact: NC 250 V AC 16 (6) A / NO 250 V AC 6 (4) manual maximum reset: NC 250 V AC 16 (2,5) A / NO 250 V AC 0,5 A
Ambient temperatura	-35...+65 °C
Ambient humidity	10...90 % RH (non-condensing)
Storage temperature	-20...+70 °C
Storage humidity	< 95 % RH
Casing	Base in Bayblend®, cover in ABS (2 stage models: sealed ABS)
Weight	one-stage: 440g two-stage: 560g
Protection class	IP54
Isolation cla	I

Models and accessories

Article	Temp. range 1	Temp. range 2	Hysteresis range 1	Hysteresis range 2	Max. bulb temperature	Function	Hidden setpoint
TV090	0...90 °C	-	4±1 K	-	120 °C	With SPDT contact	-
TV090U	0...90 °C	-	4±1 K	-	120 °C	With SPDT contact	X
TVR6585	65...85 °C	-	20±5 K	-	125 °C	Maximum manual reset	-
TVR90110	90...110 °C	-	20±5 K	-	125 °C	Maximum manual reset	-
TV09090U	0...90 °C	0...90 °C	4±1 K	4±1 K	120 °C	With SPDT contact	X
TV090UR85	0...90 °C	65...85 °C	4±1 K	20±5 K	120 °C	Maximum manual reset with SPDT contacts	-
Description							
DBZ-30/14	Brass pocket 120 mm, Øexternal 8mm, Øinternal 7mm, connection R 1/2"						
DBZ-40/14	Brass pocket 108 mm, Øexternal 16mm, Øinternal 15mm, connection R 1/2"						
DBZ-31/14	Stainless steel AISI 304 pocket 120mm, Øexternal 9mm, Øinternal 7mm, connection R 1/2"						
DBZ-41/14	Stainless steel AISI 304 pocket 120mm, Øexternal 16mm, Øinternal 15mm, connection R 1/2"						

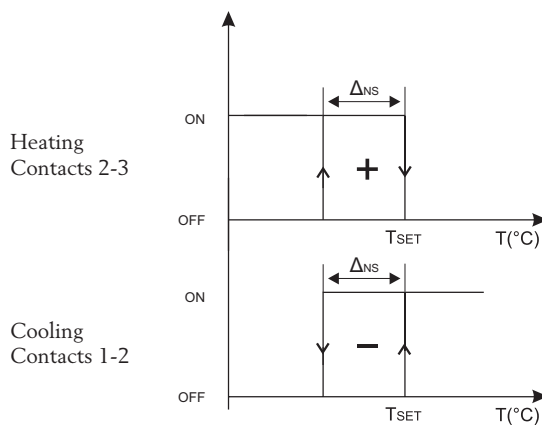
CE

Low Voltage Directive (LVD): This product conforms to the requirements of the European Low Voltage Directive (LVD) 2014/35/EU through product standards EN 60335-1.

RoHS: This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council through standard EN 50581:2012.

Activation logic

Valid only for TR function:



Δ_{NS}: Hysteresis
T_{SET}: setting setpoint
ON: closed contact
OFF: open contact

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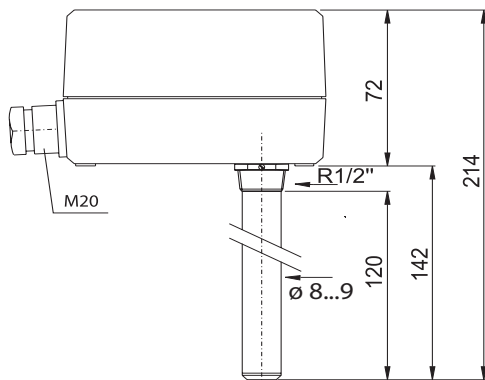
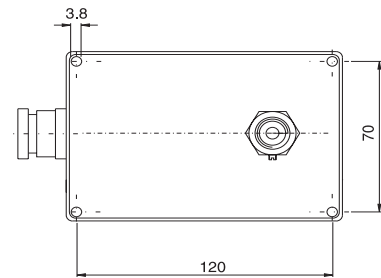
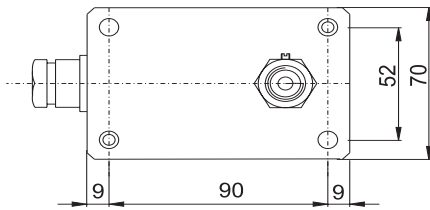
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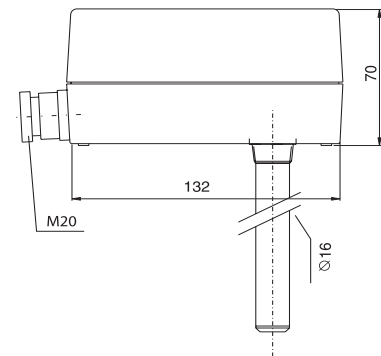
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Dimensions

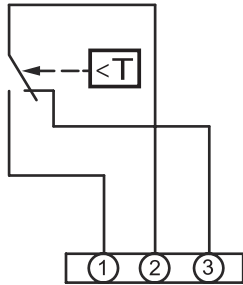


One-stage models



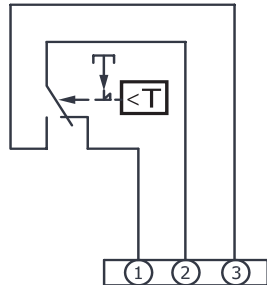
Two-stage models

Wiring



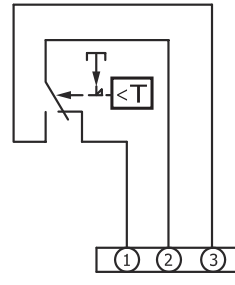
TR

NC 250 Vca 16 (6) A
NO 250 Vca 6 (4) A



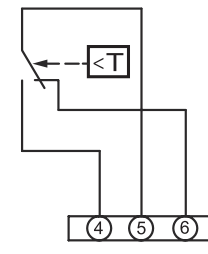
TB

NC 250 Vca 16 (2,5) A
NO 250 Vca 0,5 A



TB

NC 250 Vca 16 (2,5) A
NO 250 Vca 0,5 A



TR

NC 250 Vca 16 (6) A
NO 250 Vca 6 (4) A

TR= with SPDT contact

TB= manual maximum reset

Documentation

Document	Description
Instructions TV_inst_it_en	Instructions for installation

The product documentation can be downloaded from www.industrietechnik.it

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