



# TV

## Immersion thermostat, IP54

Series 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 16A a 250 V AC

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## 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 16A a 250 V AC.

TV is intended for use in temperature control in coolers 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

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

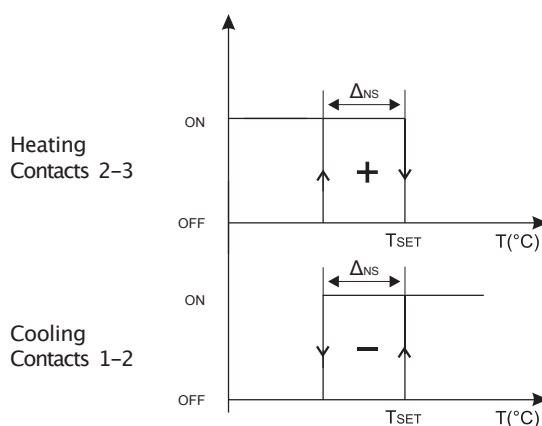
## CE

**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.

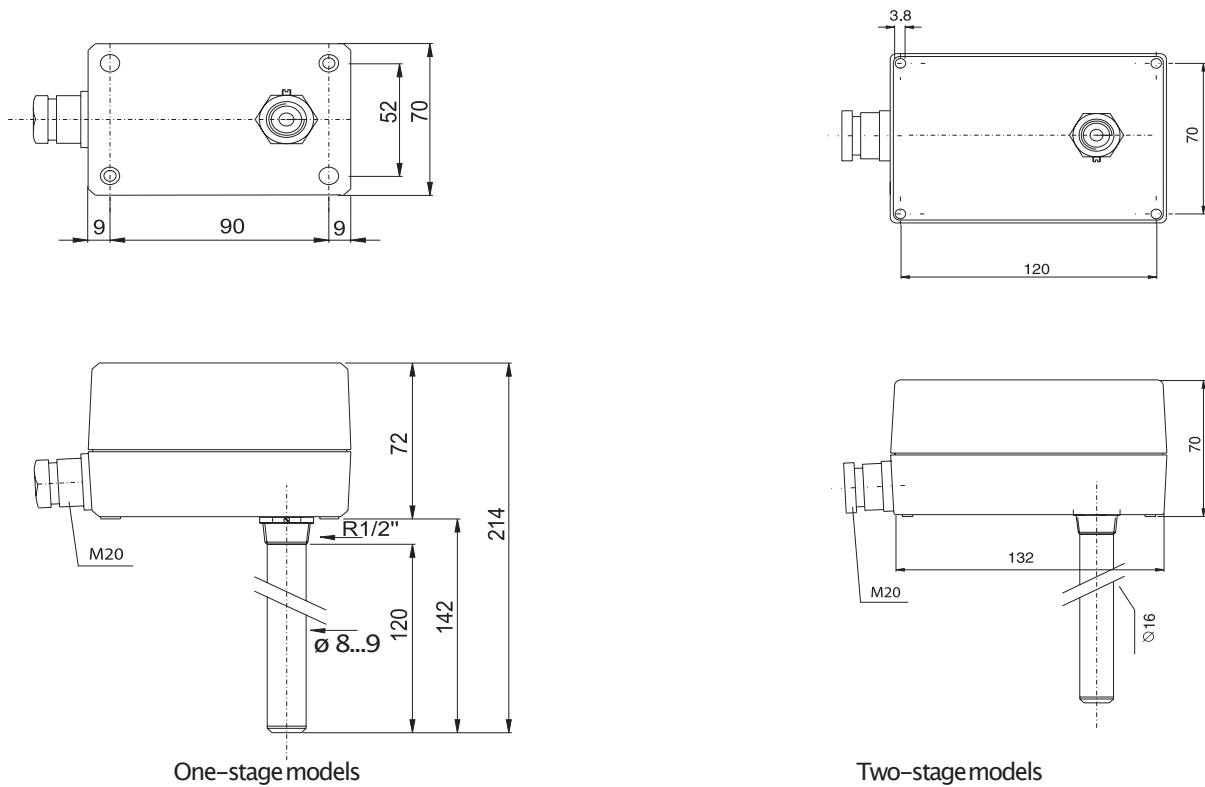
## Activation logic

Valid only for TR function:

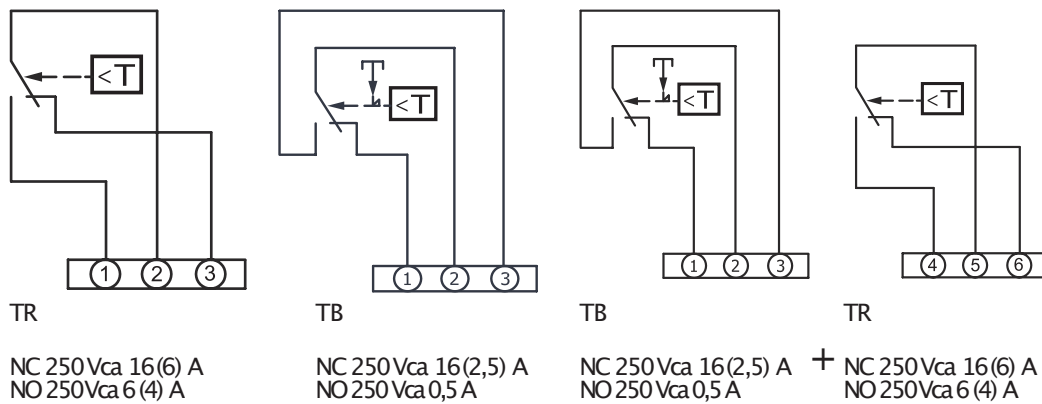


Δ<sub>NS</sub>: Hysteresis  
T<sub>SET</sub>: setting setpoint  
ON: closed contact  
OFF: open contact

## Dimensions



## Wiring



TR=with SPDT contact  
TB=manual maximum reset