DBET

Capillary thermostats, IP65

Serie of capillary thermostats IP65 for use in cooling, heating and ventilation systems

- Wide setpoint range
- Adjustable or fixed hysteresis
- Protection class IP65
- Breaking capacity 15 A at 230 V AC
- 2-step design available

Function

The MTIC electro-mechanical thermostats are constructed around a fluid-filled capillary tube and sensor housing that transfers the changes in temperature to a microswitch. The micro-switch is capable of breaking up to 15 A at 230 V AC. It comes in a 1-step or 2-step model.

Features

HYSTERESIS

1-step models are available featuring either fixed or adjustable hysteresis.

2-step models have fixed hysteresis.

STEP DIFFERENTIAL

In the 2-step thermostats, the step differential can be adjusted 2...5 K.

SETPOINT ADJUSTMENT

The thermostat is available with a setpoint adjustment knob on the outside or under the cover. It is also possible to recalibrate the scale using the hexagonal nut under the knob.

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Technical data

Sensor element	Liquid-filled coiled copper bulb
Bulb	Ø 9.5 (Ø 8 for range 50...120 °C)
Capillary length	1,5 m
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Breaking capacity	15 (8) A, 24…250 V AC
Ambient temperature	–35…+65 °C
Ambient humidity	10…90 % RH (non-condensing)
Storage temperature	-40…+70 °C
Storage humidity	<95 % RH
Weight	400g
Protection class	IP65
Isolation class	I

CE UK CA

This product carries the CE-mark. More information is available at www.industrietechnik.it.

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.

Material

Casing	Base in Bayblend®, cover in ABS

Models

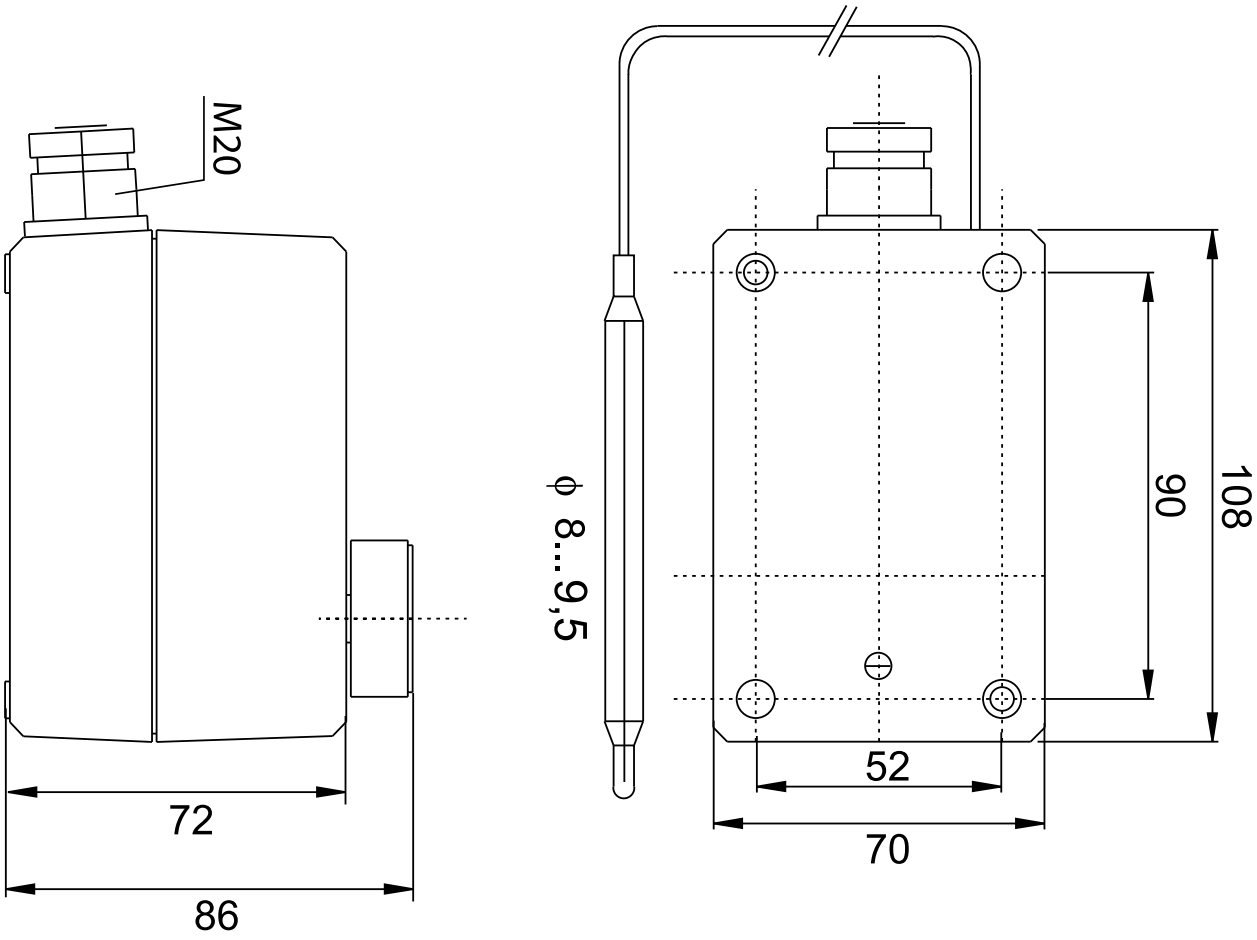
Article	Temperature range	Steps	Hysteresis	Step diff.	Max. bulb temperature	Hidden setpoint	Suitable immersion well
DBET-4	-30…+30 °C	1	2…20 K	-	60 °C	-	DBZ-01 DBZ-02
DBET-4U	-30…+30 °C	1	2…20 K	-	60 °C	X	DBZ-01 DBZ-02
DBET-4/2	-30…+30 °C	2	1 K	2…5 K	60 °C	-	DBZ-01 DBZ-02
DBET-5	-30…+30 °C	1	1 K	-	60 °C	-	DBZ-01 DBZ-02
DBET-6	-30…+30 °C	1	Minimum manual reset	-	60 °C	-	DBZ-01 DBZ-02
DBET-16	20…90 °C	1	2…20 K	-	100 °C	-	DBZ-01 DBZ-02
DBET-16U	20…90 °C	1	2…20 K	-	100 °C	X	DBZ-01 DBZ-02
DBET-17	20…90 °C	1	1 K	-	100 °C	-	DBZ-01 DBZ-02
DBET-18	20…90 °C	1	Maximum manual reset	-	100 °C	-	DBZ-01 DBZ-02
DBET-10	50…120 °C	1	2…20 K	-	150 °C	-	DBZ-16 DBZ-17
DBET-5U	-30…30 °C	1	1 K	-	60 °C	X	DBZ-01 DBZ-02
DBET-7	0…60 °C	1	2…20 K	-	75 °C	-	DBZ-01 DBZ-02
DBET-7/2	0…60 °C	2	1 K	2…5 K	75 °C	-	DBZ-01 DBZ-02
DBET-8	0…60 °C	1	1 K	-	75 °C	-	DBZ-01 DBZ-02
DBET-11	50…120 °C	1	1 K	-	150 °C	-	DBZ-16 DBZ-17

Accessories

Article	Description
DBZ-01	Brass pocket 120 mm, Ø external 11 mm, Ø internal 10 mm, connection R 1/2”
DBZ-02	Stainless steel pocket AISI 304 120 mm, Ø external 12 mm, Ø internal 10 mm, connection R 1/2”
DBZ-16	Brass pocket 120 mm, Ø external 10 mm, Ø internal 8,5 mm, connection R 1/2”
DBZ-17	Stainless steel pocket AISI 304 120 mm, Ø external 10 mm, Ø internal 8,5 mm, connection R 1/2”

Dimensions

[mm]

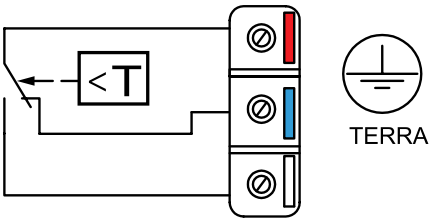


Wiring

1-step model

Heating: Connect to the red and blue terminal. The contact will open when the temperature rises.

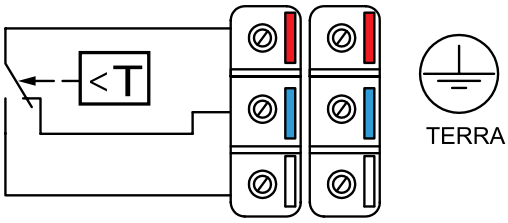
Cooling: Connect to the red and white terminal. The contact will open when the temperature drops.



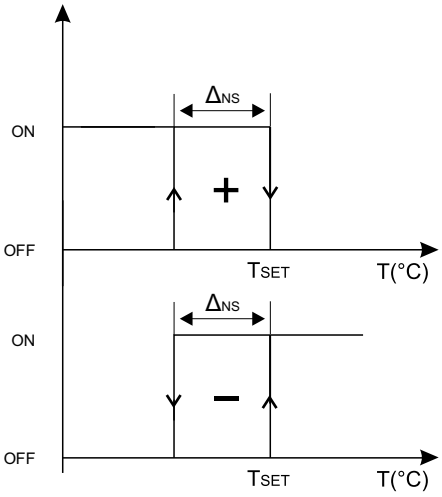
2-steps models

Heating: Connect to the red and blue terminal. The contact will open when the temperature rises. The step 2 contact will open first followed by the step 1 contact.

Cooling: Connect to the red and white terminal. The contact will open when the temperature drops. The step 2 contact will open first when the temperature drops, followed by the step 1 contact.

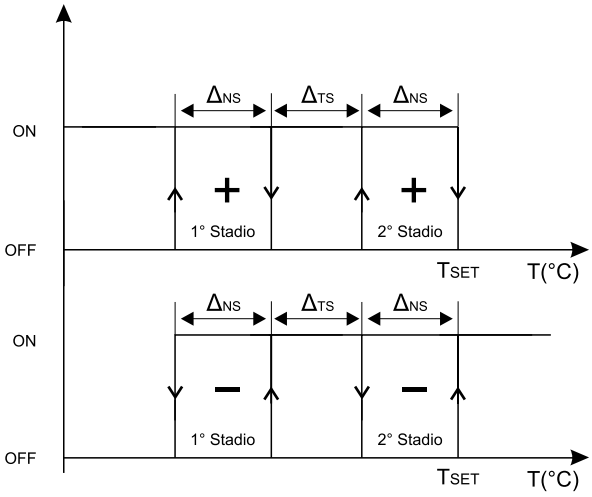


Logic activation single-stage models



ΔNS: hysteresis in the stage
TSET: setting setpoint
ON: closed contact
OFF: open contact

Logic activation two-stage models



ΔNS: hysteresis in the stage
ΔTS: step differential
TSET: setting setpoint
ON: closed contact
OFF: open contact

Documentation

All documentation can be downloaded from www.industrietechnik.it.