

# Usual temperature sensors for applications with electronic temperature controls and control boxes

(Installation in thermo-wells, ambient or pipe surface mounting)



## Room temperature sensors with housing

The correct measurement of ambient temperature requires to install the sensor at a location representative of the average temperature of the room where it is located. We have developed a series of boxes incorporating temperature sensors, and allowing an effective measure of this temperature.

Inside these boxes, the sensor is thermally insulated from the wall on which it is installed, and mechanically protected by a black painted copper or nickel plated probe in order to eliminate measurement errors due to thermal conduction, while ensuring good durability. The housing is provided with retractable lateral mounting legs.

### Variants:

#### 2 types of housing

- 1: Black PC-ABS, IP65, side output by two M20 cable glands for industrial applications or outdoor installation.
- 2: Cream-colored PC-ABS rear output, IP20, for domestic applications or indoor installation.

#### 3 temperature measuring systems

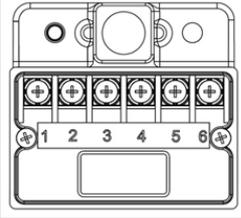
- 1: Measurement of the temperature of the ambient air flowing around the sensor and transmitted by conduction through the probe wall to the temperature sensor (This heat component called "convection")
- 2: Measurement of the temperature radiated mainly in the infrared, and transmitted to the temperature sensor by means of a "black body" that absorbs these radiations (This heat component called "radiation")
- 3 Measurement of both conduction and radiation.

#### 2 temperature measurement sensing elements

- 1: NTC (R25 10Kohms, B25/50 = 3380)
- 2: Pt100

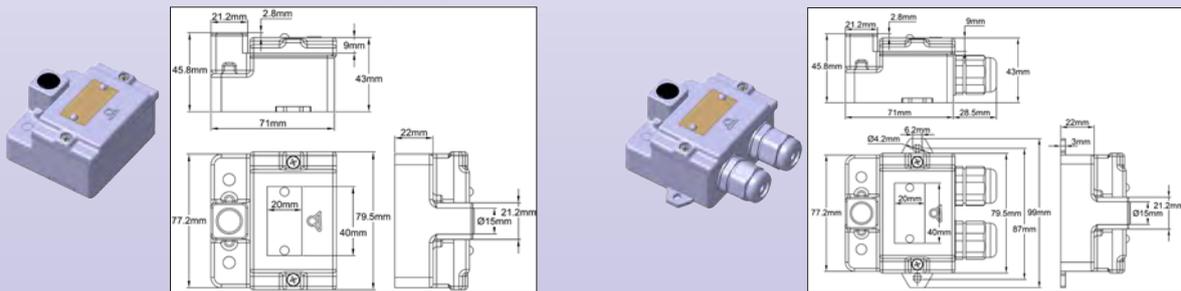
Other sensing elements such as Pt1000, Thermocouple J or E, Cu50 RTD, can be installed. Contact us.

**Internal connections :** built in terminal block , 2 to 6 screw terminals, 4 mm<sup>2</sup>



## « Convection » sensor

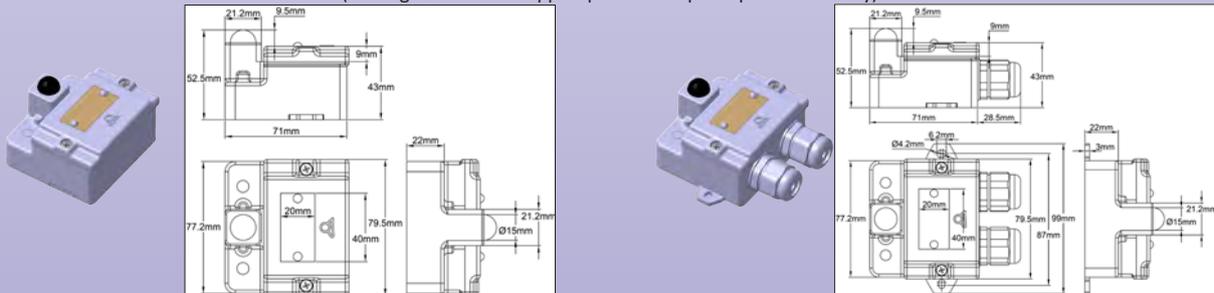
(Sensing element protected by nickel plated bracket)



References	Temperature sensor	Connection	Color
TSRC071077045ACB	Pt100	Backside	Cream, RAL1010
TSRC071077045ABP	Pt100	2 M20 cable glands	Black
TNRC0710770451CB	NTC	Backside	Cream, RAL1010
TNRC0710770451BP	NTC	2 M20 cable glands	Black

## « Radiation » sensor

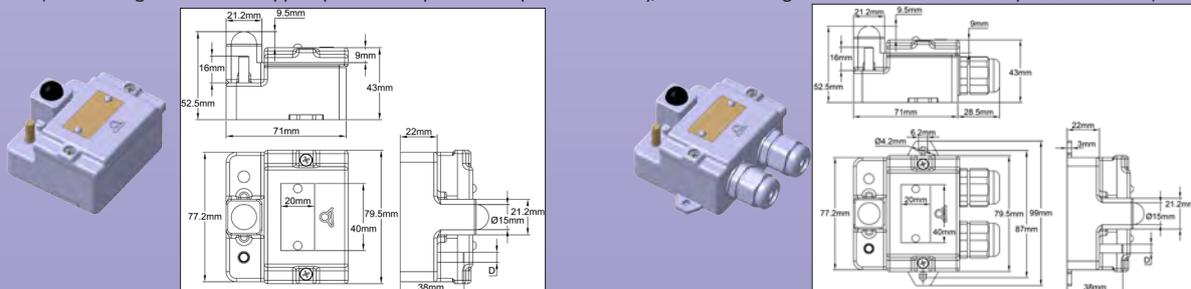
(Sensing element in a copper sphere with special paint black body)



References	Temperature sensor	Connection	Color
TSTR071077045ACB	Pt100	Backside	Cream, RAL1010
TSTR071077045ABP	Pt100	2 M20 cable glands	Black
TNRR0710770451CB	NTC	Backside	Cream, RAL1010
TNRR0710770451BP	NTC	2 M20 cable glands	Black

## Sensor « Convection + radiation »

(One sensing element in a copper sphere with special black paint black body, and one sensing element in a stainless steel pocket dia.6 mm)



References	Temperature sensor	Connection	Color
TSRM071077045ACB	2 x Pt100	Backside	Cream, RAL1010
TSRM071077045ABP	2 x Pt100	2 M20 cable glands	Black
TNRM0710770451CB	2 x NTC	Backside	Cream, RAL1010
TNRM0710770451BP	2 x NTC	2 M20 cable glands	Black

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

