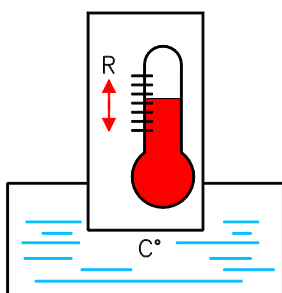
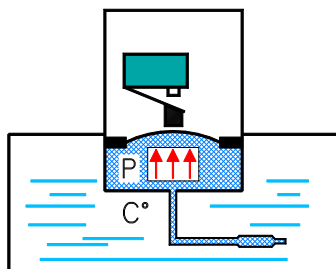
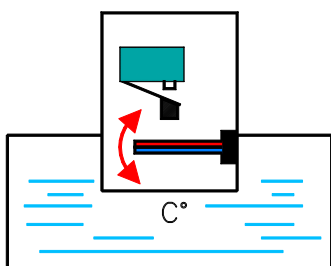


TECHNOLOGY



Bimetal

A bimetallic element is realized through the union of two strips of two metals with different thermal coefficient welded together in a spiral shape. The dilatation of the different metals, when the temperature changes, causes a bending of the element itself actuating a microswitch.

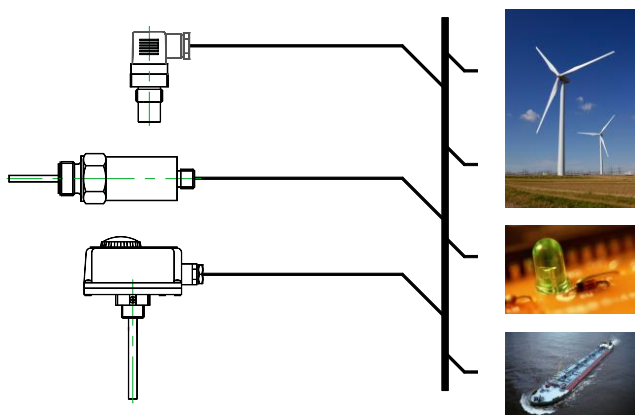
Expansion of liquid or gas

A bulb filled with a liquid (mercury, alcohol, etc.) or a gas (nitrogen or helium) is connected, with a capillary tube, to an elastic element (diaphragm or bellow). The expansion or the decrease of the volume, due to the temperature variation, causes a movement of the system.

Platinum resistance [Pt100 / Pt1000]

The electrical resistivity of the metal conductors varies with temperature. The most commonly used system is constituted by a resistance of pure platinum, deposited on a ceramic surface, properly resinate and protected.

FIELDS OF APPLICATION

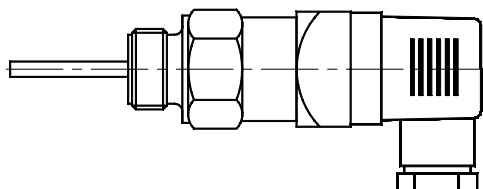
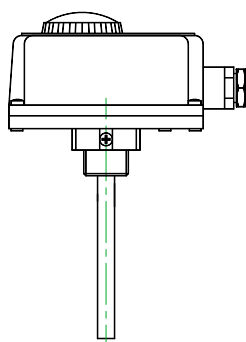
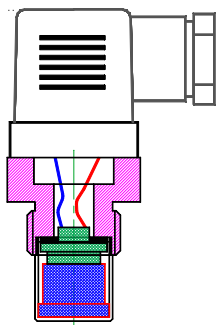


- Temperature monitoring in industrial processes.
- Activation of audible or visible alarm.
- Motors protection.
- Lubrication and cooling circuits.
- Machine tools, machining centers.
- Compressors.

ADVANTAGES

- Simple and flexible device.
- Reliable and durable.
- Maintenance free.
- Fixed or adjustable settings.

SYSTEM DESCRIPTION



Bimetal

The sensing element of a bimetallic thermostat is constituted by a body made in hard thermosetting plastic and by a metal surface with a high coefficient of heat transmission. Inside the body is enclosed a bimetallic element, with a specific temperature threshold. When the temperature reaches this threshold the bimetallic element is deformed and actuates an electrical contact connected with faston terminals.

Expansion of liquid or gas

The instrument consists of a probe, a capillary tube and an elastic element (bellow or diaphragm). The system is filled with a liquid or gas and then sealed. The diaphragm or the bellow interacts with an antagonist spring and with an electrical contact. Rising the temperature, the liquid or the gas will expand and overcome the reaction force of the antagonist spring actuating the electrical contact.

Platinum resistance [Pt100 / Pt1000]

The platinum sensing element is passed through by a constant current. The temperature change causes at its terminals a voltage variation that is amplified and converted into an industrial signal.

The temperature measurement can be performed with the 2-wires or 4-wires technique, with this last the errors due to the connection line are minimized.

TECHNICAL DATA

Concept	Bimetal, Expansion, Pt100/ Pt1000
Process connection	1/8" ÷ 1/2" DN06 ÷ DN15
Type of connection	Threaded
PN	16 – 200 bar
Max. temperature	250 °C
Output signal	Switch – (0)4-20 mA
Adjustable	Yes
Materials	Brass – Stainless steel.

EXECUTIONS

- **IP65 Protection**
DIN 43650A plug output or cable output
- **IP65 Protection**
AMP Timer connector output
- **IP67 Protection**
M12x1, 4 poles connector output
- **IP40 Protection**
ABS housing, external adjustment knob