

Temperature measurement

Model **7307** Bimetallic thermometer

Axial BSPP 316 stainless steel connection



Specifications

Connection: male G 1/2" according to ISO 228-1

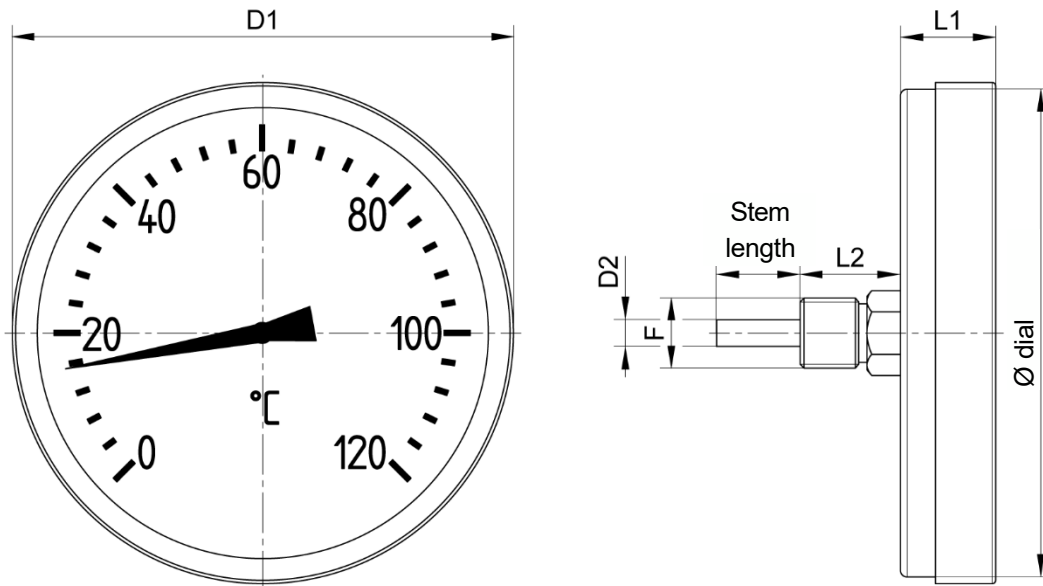
Temperature range: -30°C to +250°C

Usage pressure: 25 bar

Accuracy: class I according to EN 13190

Material: 316 stainless steel

Protection rating: IP65



Ø dial (mm)	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	F (mm)
100	111	8	18	30	G 1/2"
150	161	8	25.5	30	G 1/2"

Temperature (°C)	Stem length (mm)	Part number Ø100	Part number Ø150
-30 to +50°C	45	473071-3050	473075-3050
-20 to +60°C	45	473071-2060	473075-2060
0 to +60°C	45	473071-60	473075-60
0 to +120°C	45	473071-120	473075-120
0 to +200°C	45	473071-200	473075-200
0 to + 250°C	45	473071-250	473075-250
-30 to +50°C	63	473072-3050	473076-3050
-20 to +60°C	63	473072-2060	473076-2060
0 to +60°C	63	473072-60	473076-60
0 to +120°C	63	473072-120	473076-120
0 to +200°C	63	473072-200	473076-200
0 to + 250°C	63	473072-250	473076-250
-30 to +50°C	100	473073-3050	473077-3050
-20 to +60°C	100	473073-2060	473077-2060
0 to +60°C	100	473073-60	473077-60
0 to +120°C	100	473073-120	473077-120
0 to +200°C	100	473073-200	473077-200
0 to + 250°C	100	473073-250	473077-250
-30 to +50°C	160	473074-3050	473078-3050
-20 to +60°C	160	473074-2060	473078-2060
0 to +60°C	160	473074-60	473078-60
0 to +120°C	160	473074-120	473078-120
0 to +200°C	160	473074-200	473078-200
0 to + 250°C	160	473074-250	473078-250

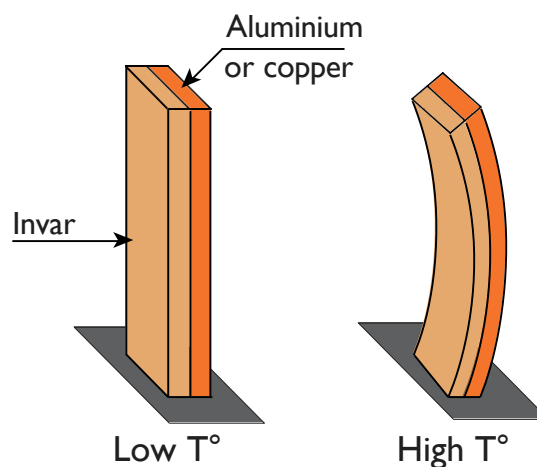
Use

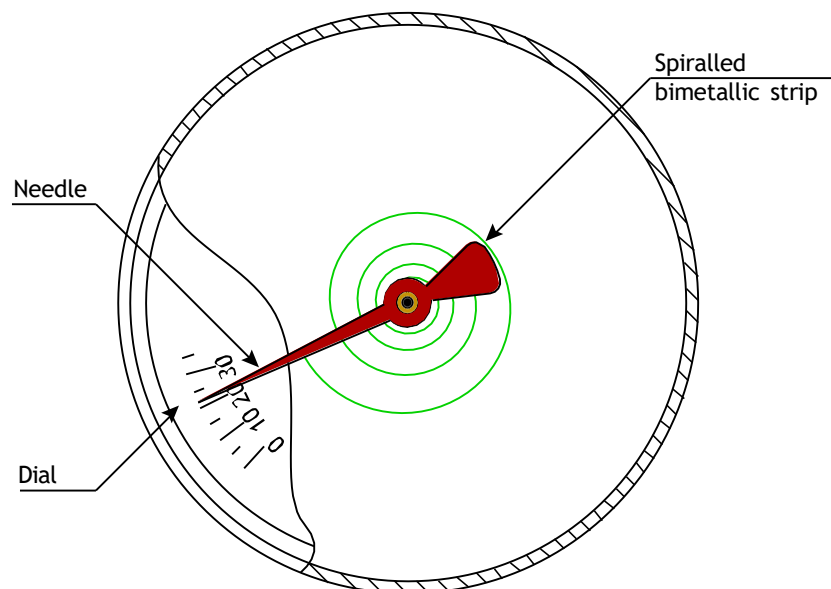
Description

Bimetallic thermometers measure temperature through the difference in thermal expansion coefficient of two different types of metal strip.

They contain either one copper or aluminium strip, as these metals have a high thermal expansion coefficient, and one invar strip, as this metal has a low thermal expansion coefficient. These two strips are glued together to form a bimetallic strip.

When the temperature increases, the copper (or aluminium) strip distorts more than the invar strip. The higher the temperature, the more the bimetallic strip will curve.





The bimetallic system contains a bimetallic strip wound helically or in a spiral.

The strip is linked to the needle by a pin. When the bimetallic system distorts, the pin rotates and this rotates the needle.

The thermometer includes a graduated dial so that the needle points to the measured temperature.

Fluids

Bimetallic thermometers can be used with aggressive, viscous or crystallising fluids.

However, the fluid must be compatible with 316 stainless steel.

Accessories

Here is a list of all of our thermometer accessories.

- The thermometer can be installed in a thermowell to facilitate maintenance and so that you do not need to purge the piping if you need to carry out maintenance on the measuring instrument. The thermometer can also be combined with a thermowell for use in critical processes:
 - Model **7370**: Machine-welded thermowell - inner \varnothing 9mm - Low cost range - 316 stainless steel - Process connection: BSPP male thread 1/2"
 - Model **7371**: Machine-welded thermowell - inner \varnothing 8.2mm - TW 45 Shape 5 - 316 stainless steel Ti - Process connection: BSPP male thread 1/2"
 - Model **7373**: Solid machined thermowell - inner \varnothing 9mm - TW 50 Shape 6 - 316 stainless steel Ti - Process connection: BSPP male thread 1/2"
 - Model **7374**: Solid machined thermowell - inner \varnothing 9 mm - TW 55 Shape 4 - 316 stainless steel Ti - Process connection: plain to be welded
- You can use contact grease to improve the thermal contact between the thermometer's stem and the thermowell:
 - Model **7376**: Contact grease for thermometers