

# Temperature measurement

**Model 7306**

## Bimetallic thermometer

Lower mount 316 stainless steel male BSPP vertical connection



### Specifications

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

**Temperature range:** -20°C to +250°C

**Usage pressure:** 25 bar

**Accuracy:** class I according to EN 13190

**Material:** 316 stainless steel

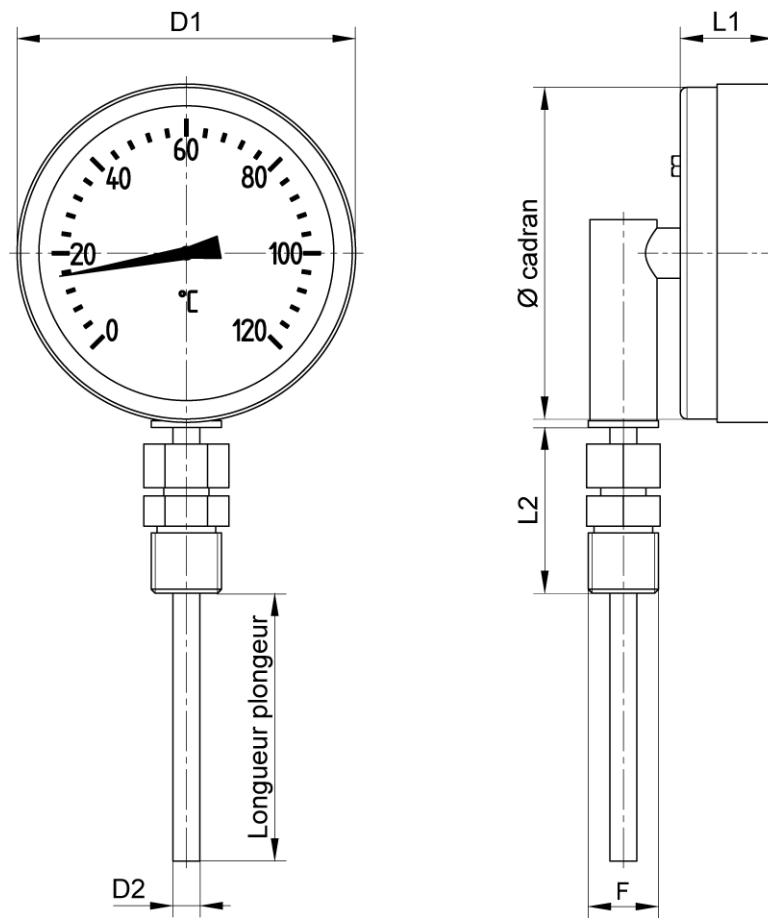
**Protection rating:** IP65



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7306-A V0621



Dial Ø (mm)	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	F (mm)
100	111	8	48	49.5	G 1/2"

Temperature (°C)	Stem length (mm)	Part number Ø100
-20 to +60°C	63	473061-60
0 to +120°C	63	473061-120
0 to +250°C	63	473061-250
-20 to +60°C	100	473062-60
0 to +120°C	100	473062-120
0 to +250°C	100	473062-250
-20 to +60°C	160	473063-60
0 to +120°C	160	473063-120
0 to +250°C	160	473063-250
-20 to +60°C	200	473064-60
0 to +120°C	200	473064-120
0 to +250°C	200	473064-250
-20 to +60°C	300	473065-60
0 to +120°C	300	473065-120
0 to +250°C	300	473065-250
-20 to +60°C	400	473066-60
0 to +120°C	400	473066-120
0 to +250°C	400	473066-250

## Use

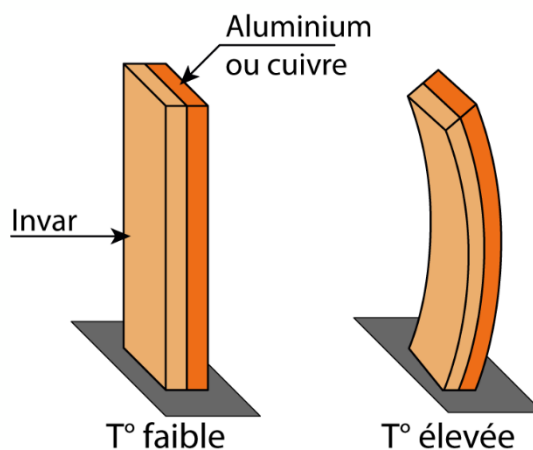
### Description

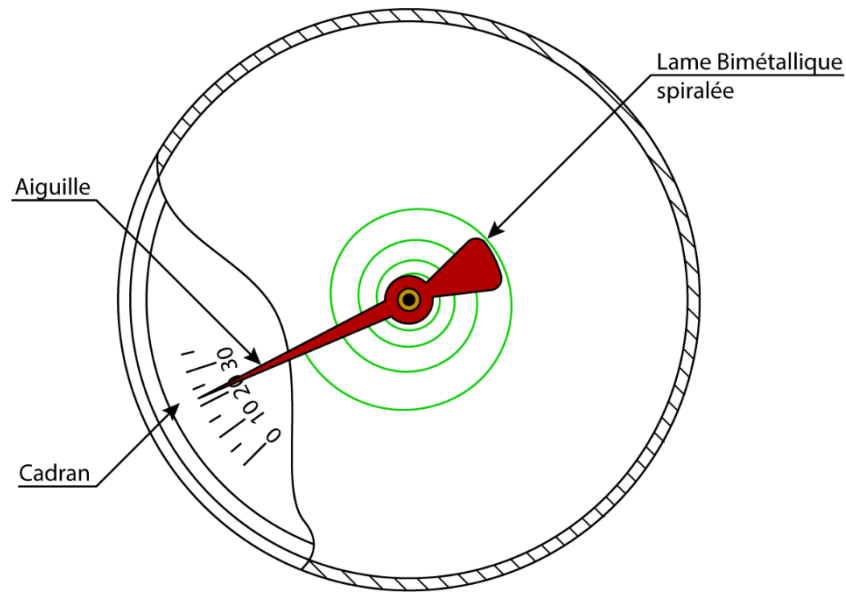
Bimetallic thermometers measure temperature through the difference in thermal expansion coefficient of two different types of metal strip.

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 Ø 9mm - Low cost range - 316 stainless steel - Process connection: BSPP 1/2" male thread
  - Model **7371**: Machine-welded thermowell - inner Ø 8.2mm - TW 45 Shape 5 - 316 Ti stainless steel - Process connection: BSPP 1/2" male thread
  - Model **7373**: Solid machined thermowell - inner Ø 9mm - TW 50 Shape 6 - 316 Ti stainless steel - Process connection: BSPP 1/2" male thread
  - Model **7374**: Solid machined thermowell - inner Ø 9 mm - TW 55 Shape 4 - 316 Ti stainless steel - 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