

Temperature sensors

Temperature measurement in water applications provides an important back up to measurements such as pH, Dissolved Oxygen, Suspended Solids and Turbidity



Temperature is a critical water quality and environmental parameter because it regulates the maximum dissolved oxygen concentration of the water and influences the rate of chemical and biological reactions. Temperature is a measurement for the thermal state of a material. The movement of the material's molecules and atoms produces heat (kinetic energy) and the greater the movement, the more heat that is generated.

One of the most-used methods for understanding temperature is by measuring with a resistance thermometer. Resistance thermometers offer great stability, accuracy and repeatability. The advantages of platinum resistance thermometers include: high accuracy, wide operating range and suitability for precision applications. The resistance thermometer (RTD)'s electrical resistance sensor changes with temperature and the resistance increases as temperature rises. This is commonly referred to as PTC (Positive Temperature Coefficient).

PT100 or PT1000 measuring resistors are normally used for industrial applications. They are the most common type of platinum resistance thermometer. Pt refers to that the sensor is made from Platinum (Pt). 100 refers to that at 0°C sensor has a resistance of 100 ohms (Ω). The most common type (PT100) has a resistance of 100 ohms at 0°C and 138.4 ohms at 100°C. There are also PT1000 sensors that have a resistance of 1000 ohms at 0°C.



PT100 NUT



Technical features

Measuring range 0 – 100°C

Pressure range 0 – 7 bar

Body material PP

2-wire cable 3 m ; Mechanical connection 3/4" or 1/2" Gas M

PT100 V



Technical features

Measuring range 0 – 100°C

Pressure range 0 – 7 bar

Body material Pyrex

3-wire cable 6 m ; Mechanical connection 12 mm

PT100 VPG



Technical features

Measuring range 0 – 100°C

Pressure range 0 – 7 bar

Body material Pyrex

3-wire cable 6 m ; Mechanical connection PG13.5