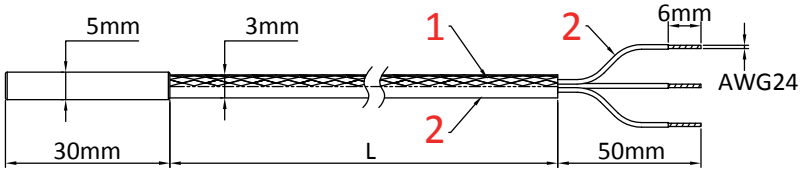
Usual temperature sensors for applications with electronic temperature controls and control boxes

100 Ohms platinum RTD, dia. 5mm × 30mm stainless steel probe

Temperature range	Cable insulation	Probe protection	Temperature sensing device	Signal type	Type
20- 200°C (120- 390°F)	FEP	Stainless steel probe, dia.5mm × 30mm	Pt100 platinum resistance	Ohms, linear	**TSR5**



1: Copper braid; 2: FEP

Main applications

The main advantage of these PT100 sensors in the temperature measurement is their robustness. They are resistant to shocks and vibrations, but their reaction time is longer, and they are more expensive than models with encapsulated measuring element.

Main features

The platinum resistivity has excellent repeatability, and high accuracy over an extended temperature range. The resistance variation curve of platinum as a function of temperature is much more linear than that of thermocouples or thermistors. Electronic controllers using Pt100 are simpler and less expensive than thermocouple ones.
In addition, they do not need temperature-compensated cable such as thermocouples. Pt100 are used worldwide and are interchangeable, using the DIN 43760 curve.
Construction: A platinum film is deposited on a ceramic substrate, conductors are welded to it, and the whole is inserted in a stainless-steel protection probe.
Temperature range: Use temperature limited to 200°C due to FEP insulated cable.
Accuracy and tolerances:
- Nominal value at 0°C: 100 Ohms.
- Nominal value at 100°C: 138.51 Ohms

The international standard IEC 751-1983 and DIN EN 60751 2009-05 give the parameters of the temperature response curve.
Class B, the most common, has a tolerance of ± 0.3°C at 0°C. (± 0.12 Ω at 0°C).
Color Code: The two red wires are connected together to their solder on one of the terminals of the ceramic substrate, and the white wire is connected to the other terminal.
Cable composition: 3 × 0.35mm², (AWG24), FEP insulation + braid + FEP sleeving, T 200°C, O.D. 3mm

Main parts numbers (Accuracy class B)

Part number	Cable length (mm)
TSR50030I0200BK6	200
TSR50030I0500BK6	500
TSR50030I1000BK6	1000
TSR50030I2000BK6	2000

Note: These temperature sensors are not manufactured by Ultimheat, and the information given is that of our suppliers.