

CHOOSING YOUR TEMPERATURE SENSOR TYPE

Resistance Thermometer or Thermocouple

When choosing the type of temperature sensor best suited to your application, several questions will need careful consideration including process and environmental conditions.

Question	Resistance Thermometer	Thermocouple
Temperature Range?	-200°C to +650°C	-200°C to +2000°C
Accuracy?	Most accurate	Less accurate
Cost?	Slightly more expensive	Less expensive
Sensitivity?	Measurement taken in first 15mm	Tip sensitive
Long-term Stability?	Excellent	Less satisfactory
Vibration?	Susceptible	Less susceptible
Size?	From 3mm OD upwards	From 0.5mm upwards
Connecting Leads?	Ordinary copper	Thermocouple material to reference junction
Power Supply?	Required	Not required
Self-heating?	Applicable	Not applicable
Response?	Generally slower	Faster
Robustness?	Generally less suitable	More suitable
Surface Measurement?	Less suitable	Suitable

Please note

The above table should only be used as a guide as it has taken into account a general application. Our sales engineers are available to offer technical support to help you decide on a suitable thermometer for your specific requirements. Please contact us for assistance.