

# MOVING TEMPERATURE SENSING FORWARD, TOGETHER

WE ENGINEER TEMPERATURE SENSING SOLUTIONS THAT BRING PRECISION, RELIABILITY, AND CONFIDENCE TO CRITICAL APPLICATIONS.

## NTC\* THERMISTOR

Measures temperature by detecting changes in electrical resistance that decrease as temperature increases.

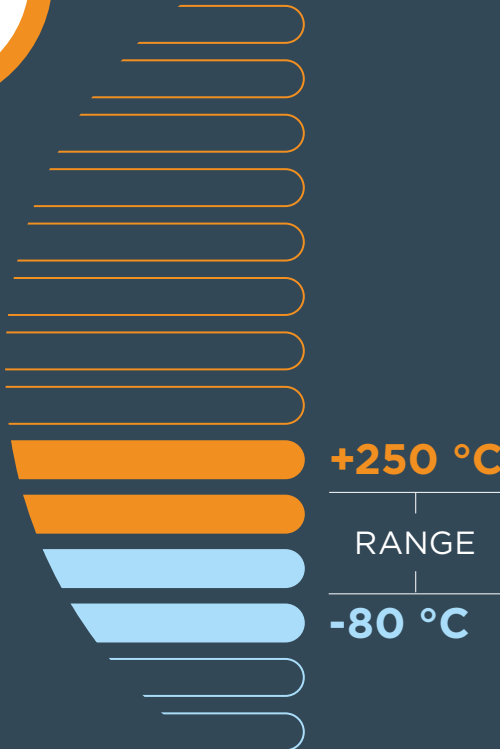


- Bead Thermistor
- Chip / SMD Thermistor
- Probe Assembly
- Glass-coated Thermistor
- Inrush Current Limiter

### Common Specifications

**Accuracy:**  
0.05 to 1.5 °C

**Response Time:**  
Fast (0.12 to 10 sec)



### Example Applications



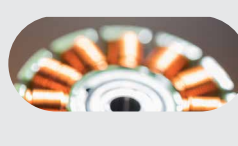
Discrete Automation



Space



Vital Signs



eMotor

Typically used when **high accuracy, harsh-environment tolerance, and cost efficiency** are priorities.

\*Negative Temperature Coefficient

## RTD\* Sensors

Measures temperature by correlating the increase in a metal's electrical resistance with rising temperature.

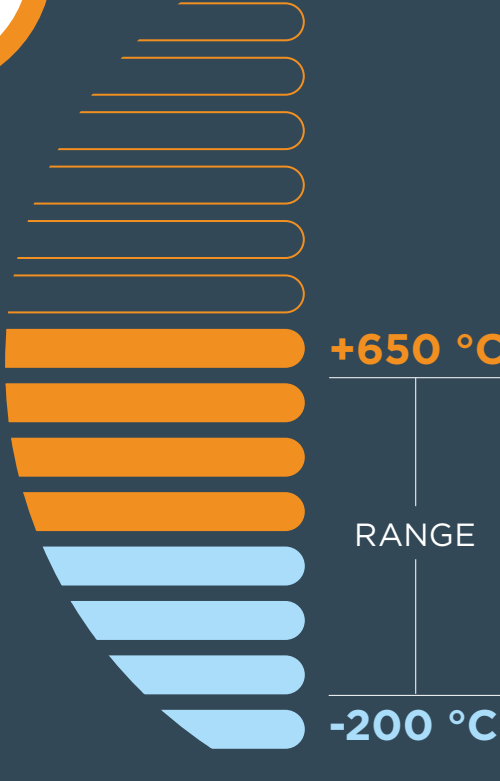


- BPT100
- PT1000
- Thin-Film
- Wire-Wound
- Sheathed Probes

### Common Specifications

**Accuracy:**  
0.1 to 1.0 °C

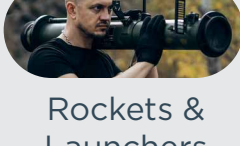
**Response Time:**  
medium (0.5 to 50sec)



### Example Applications



Data Center Cooling



Rockets & Launchers



Condition Monitoring



Medical Pumps

Typically used when **wide temperature range, excellent stability, and repeatability over time** are important.

\*Resistance Temperature Detector

## Thermocouple

Measures temperature by generating a micro-voltage from the junction of two dissimilar metals when exposed to heat.

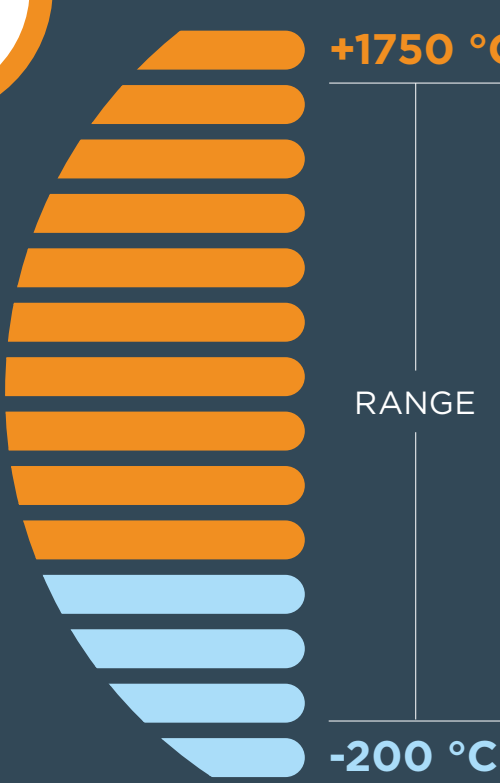


- K-Type
- J-Type
- T-Type
- S-Type / R-Type
- Micro / Miniature

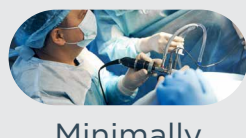
### Common Specifications

**Accuracy:**  
0.5 to 5.0 °C

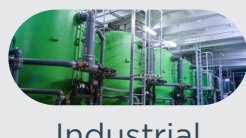
**Response Time:**  
Fast (0.10 to 10 sec)



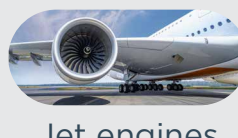
### Example Applications



Minimally Invasive



Industrial Process Control

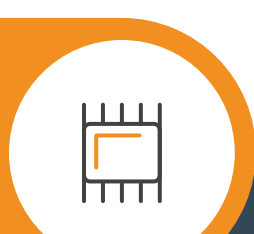


Jet engines

Typically used when **very wide temperature ranges, rugged durability, and harsh-environment tolerance** are needed.

## Digital Temperature Sensor

Factory calibrated device that contains a durable temperature sensor element, A/D converter, and microcontroller to manage data communications via an I2C interface.

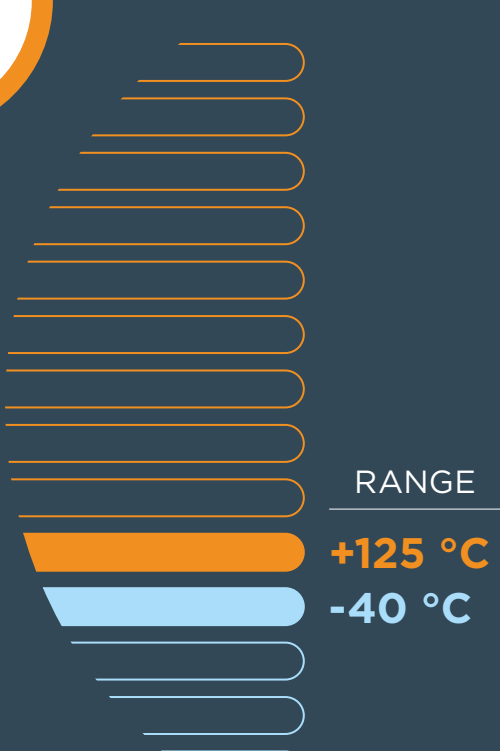


- I2C (Programmable I2C address)
- interface up to 1MHz
- 1-Wire Interface
- Board-level Module
- TDFN8/XDFN6

### Common Specifications

**Accuracy:**  
0.1 to 1.0 °C

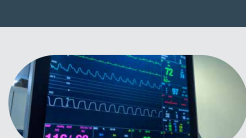
**Response Time:**  
Very fast



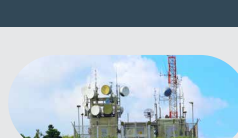
### Example Applications



HVAC



Patient Monitoring



Weather Stations

Typically used when **simple electrical integration, digital output, and low power consumption** are necessary.

**Our temperature sensors transform data into decisions, powering progress in devices that heal, protect, and move the world forward — together.**

EXPLORE TE CONNECTIVITY'S SENSORS >