



Why use a thermistor?

■ ECONOMICAL COST

Thermistors are the economical choice in temperature sensing. Not only are they less expensive to purchase, but there are no calibration costs during installation or during the service life of the sensor. In addition interchangeable thermistors can be swapped out without calibration.

■ QUICK TEMPERATURE RESPONSE

Due to their small size, thermistors can respond very quickly to slight changes in temperature.

■ NO CALIBRATION REQUIRED

Properly manufactured thermistors are aged to reduce drift before leaving the factory. Therefore, thermistors can provide a stable resistance output over long periods of time.

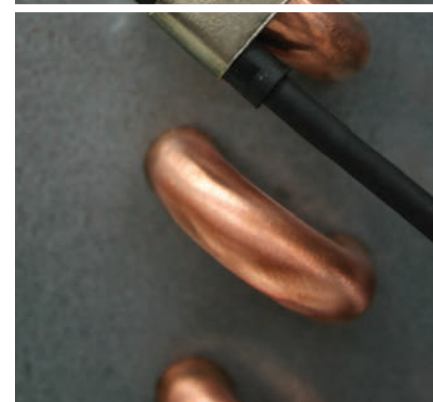
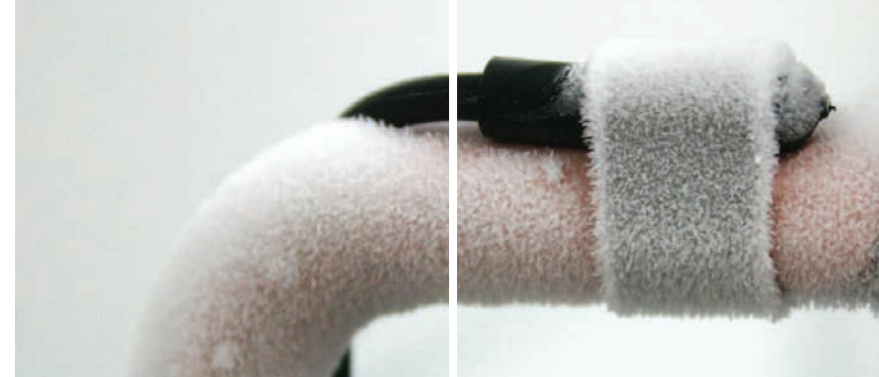
■ GREATER ACCURACY AND RESOLUTION

Thermistors are available with base resistances (at 25°C) ranging from tens to millions of ohms. This high resistance reduces the effect of resistance in the lead wires, which can cause significant errors with low resistance devices such as RTDs.



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HVAC AND
REFRIGERATION
CAPABILITIES GUIDE

NICE TO MEET YOU

QTI is a privately-held manufacturer of temperature sensors and assemblies. Founded in 1977, we have grown to be the trusted supplier of temperature sensing solutions for many world leaders in equipment manufacturing. Our products can be found in a wide variety of applications, from medical catheters to industrial refrigeration equipment to the Curiosity Mars rover.

Why choose QTI? We...

■ ARE THE EXPERTS IN THERMISTOR MANUFACTURING

QTI designs and manufactures the thermistors used in our probes so we know with certainty that our customers receive the most accurate and reliable sensors available.

■ TEST 100% FOR ACCURACY

All of the temperature probes manufactured by QTI are 100% inspected for accuracy. Calibration data is available as an option on all of the probes we manufacture.

■ CARE ABOUT THE DETAILS

Our proprietary manufacturing processes and the materials we use ensure proper sensor placement to optimize thermal time response and minimize thermal load on the sensing element.

■ PROVIDE DESIGN ASSISTANCE

While we trust that the information provided in this guide will assist you, there is no substitute for one-to-one dialogue. We encourage you to contact us to discuss specific design, sales, or customer support needs.

■ MANUFACTURE IN THE USA

We own all of our facilities, allowing production schedule flexibility and control of all processes and materials. Our thermistors are precision manufactured in the USA.



HYDROGUARD IP68

Waterproof to IP68 rating, this sensor is designed to weather harsh freeze/thaw cycles.



RUGGEDIZED

This sturdy water resistant sensor excels in severe environments where response time is critical.



CLIP-IN

This air sensor's unique clip allows for increased sensor accuracy and quick installation.



FLANGED OPEN/CLOSED TIP

High customizability and low cost make this air sensor perfect for many applications.



PIPE AND SAE THREADED FITTING WITH TUBE

Rugged and customizable, this sensor is a low-cost favorite.



CLOSED END TUBE

A versatile sensor with quick response times and superior sensing element protection.



CLIP MOUNT

Save installation time with Hydroguard IP68 and Ruggedized water resistant sensors.



CABLE ASSEMBLY

The cable assembly delivers signal and mechanical strength in the toughest environments.

WATERPROOF

- Double insulated thermoplastic rubber
- Ruggedized housing, corrosion resistant cable
- Waterproof rating to IP68
- Based on the most common industry NTC thermistor curves
- Ideal for harsh freeze/thaw cycles
- Possible applications: refrigeration and air conditioning equipment and high humidity environments
- Optional clip mount for easy installation on copper tubing (see "Clip Mount")
- Cable color and thermistor resistance values customizable

- Robust sensor for a broad range of sensing applications
- Operating temperature range: -40°C to 105°C
- Ideal for industrial applications where response time is crucial
- Swaged end provides cable strain relief and improves moisture resistance
- QTI-manufactured thermistor (made in USA) provides unrivaled accuracy, stability, and reliability
- Optional clip mount for easy installation on copper tubing (see "Clip Mount")

AIR/SURFACE

- Typical wire sizes #22-26 AWG
- Material: stainless steel or nickel plated brass
- Incorporated press-in clip for easy installation and greater sensor accuracy
- Ideal for air temperature sensing in HVAC applications (install in plenums or blower housings)
- Available in several thermistor curves and resistances

- Available in a variety of sizes with or without brazed flange
- Flange can be screwed or riveted in place
- Typical wire sizes #22-28 AWG
- Material: stainless steel
- Flange style, cable length, connector and terminations can be customized
- Available in multiple thermistor accuracies and values

MULTI-USE

- General purpose, rugged high-pressure design
- Typical wire sizes #22-28 AWG
- Material: stainless steel, brass, titanium
- Straight thread option with or without O-rings
- Threads allow for simple sensor installation
- Sensor type and accuracy, connector, and cable length can be customized

- Versatile multi-purpose sensor
- Standard size is 0.040" to 0.250" in diameter
- Typical wire sizes #22-32 AWG
- Material: stainless steel, brass, titanium, Inconel, Hastelloy
- Moisture resistant
- Termination type, cable length, housing style and wire style can be customized
- Available in multiple thermistor accuracies and values

CLIP MOUNT

- Optional clip mount fits Ruggedized and Hydroguard IP68 sensors
- Secures sensor to copper tubing
- Saves installation time and improves sensor performance
- Material: spring steel with nickel plating. Other base metals and platings available upon request
- Sizes available: 1/4", 3/8", 1/2", 5/8", 7/8", and 1 1/8"
- 1/4" and 3/8" clips 0.38" wide. All other clips 0.625" wide

ASSEMBLY

- Built to custom specification, including multiple sensor types and connector
- Meets rigorous environmental, mechanical, and electrical requirements
- Simple, inexpensive design
- Can support multiple types of sensors

Looking for a different configuration? Contact us about customizing a part for you.

Call 800-554-4784 or email qtisales@thermistor.com. Manufactured in the USA.