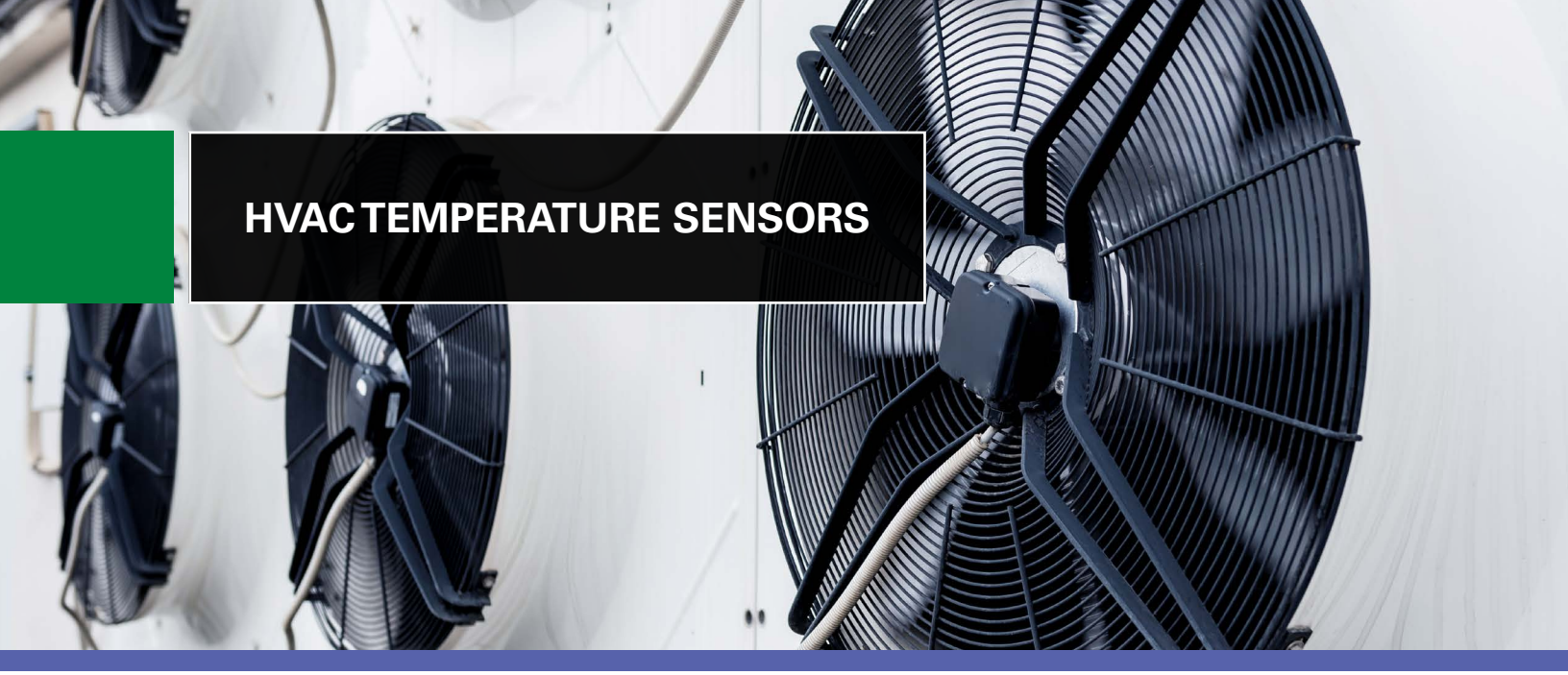

HVAC TEMPERATURE SENSORS

NTC Thermistor Pipe Sensors

Temperature Sensors with Aluminum Housings

Water Immersion Temperature Sensors

Reed Switch Position Sensors

The Littelfuse line of HVAC/R temperature sensing products go beyond safeguarding system components and protecting your investment.

A temperature sensor is a small device whose resistance changes as its temperature changes. The resistance can be measured with a remote electronic device and used to determine the temperature.

In the HVAC industry, temperature sensors can be used to prevent energy waste and improve the efficiency of a system's primary job of regulating temperature. Temperature sensors accurately measure the air and water temperature to allow programmable thermostats to increase energy efficiency.

Temperature sensors prevent systems from overworking to maintain a room or building's temperature settings, maintain optimal comfort, and provide data regarding airflow and air quality.

Typical Temperature Sensing Applications

- Residential & Commercial A/C
- Chilled Water Systems
- Outdoor Temperature Sensors
- Condenser, Evaporator & Duct Sensors
- Instant Water Heaters

Littelfuse Success Story

Enabling Peak System Efficiency

A rooftop unit manufacturer was able to significantly reduce wasted energy by using custom-designed temperature sensors on the refrigerant pipes to control the defrost cycle of a heat pump. The sensors provided quick thermal response and helped reduce energy consumption.

To view our HVAC capabilities and contact a technical representative, please scan QR code.

Littelfuse®

Expertise Applied | Answers Delivered

Littelfuse
Expertise Applied | Answers Delivered

The Littelfuse line of HVAC/R temperature sensing products go beyond safeguarding system components and protecting your investment.

NTC Thermistor Pipe Sensors

Negative temperature coefficient (NTC) thermistor pipe sensors are ideal for measuring temperature on pipe surfaces, enabling better control of heating/cooling functions to drive energy efficiency.

Typical Applications

- Available in a variety of housing types for potable water and other applications
- Temperature sensing element and other physical properties available to best fit your needs

Water Immersion Temperature Sensors

Custom temperature sensors using negative temperature coefficient (NTC) or resistance temperature detector (RTD) technology with threaded or sealed housings are ideal for measuring water temperature in tanks or a process flow.

Typical Applications

- Moisture resistant
- Supplied with copper-plated mounting clips
- Custom options available for dimension requirements
- 105 °C max operating temperature

Aluminum Housing Temperature Sensors

Littelfuse offers aluminum probe housings engineered for a wide range of HVAC temperature sensing applications. Customized solutions tailored for your needs are available by request.

Typical Applications

- Suitable for a wide range of temperature sensing applications
- Temperature sensing element available that best fits your needs, along with other physical properties (lead wire type, termination, etc.)

Reed Switch Position Sensors

Littelfuse offers a wide variety of reed sensors in both standard and custom packages for simplified mounting and connecting to detect position. Plus, these sensors are sealed from the outside environment for maximum robustness.

Typical Applications

- Zero power consumption
- Contactless position sensing
- Sensing element available that best fits your needs, along with other physical properties (lead wire type, termination, etc.)

LITTELFUSE TEMPERATURE SENSING PRODUCTS	FEATURES	BENEFITS
NTC Thermistors	■ Cost-effective ■ Predictable temperature sensor that enables tighter operating control ■ Diagnostics to achieve energy savings and optimal performance of systems.	■ Exponential resistance-temperature curve ■ Wide operating temperature ranges from -50 °C to 300 °C ■ Metal oxide ceramic compounds
RTDs	■ Robust, extremely stable predictable temperature sensor ■ Suitable for a wide range of temperatures that enable tighter operating control ■ Diagnostics to achieve energy savings and optimal performance of systems	■ Nearly linear resistance-temperature curve provides ease and consistency of measurement ■ Extremely wide temperature ranges, specifically on the higher end, from -50 °C to well above 500 °C ■ Precious metal (typically Pt) on ceramic substrate