

Air Temperature Sensors

060
062
064

Met One Instruments' Temperature Sensors are precision, extended range thermistor devices that are used for the accurate measurement of ambient air temperature. They are particularly well suited for field applications, as they exhibit a very high resistance sensitivity. Problems associated with line lead length, noisy environments, and poor connections are virtually eliminated. Sensors may be interchanged without requiring system recalibration. Difference among these sensors are associated with packaging and accuracy, allowing for the precise solution to sensor selection.

Features

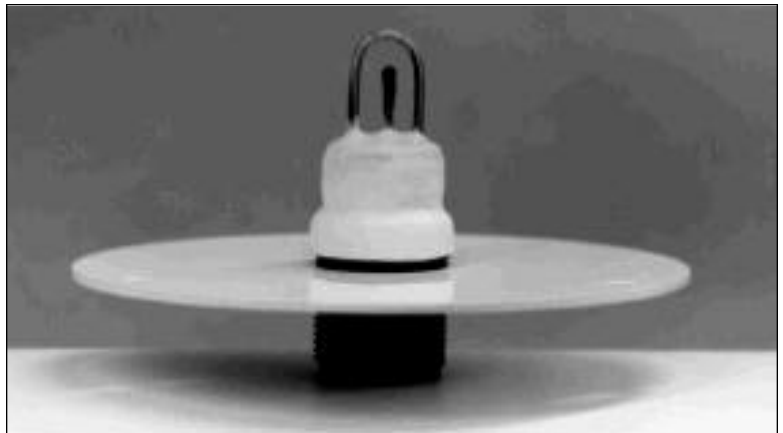
- Rapid response time
- Calibration traceable to NIST
- Interchangeable without recalibration
- High resistance values to minimize signal line resistance
- 'Free air' suspension of thermistor bead
- Several ranges available

Operation

The solid state multi-element thermistor produces a relatively large resistance change per degree of temperature change,



Model 060A, Model 062



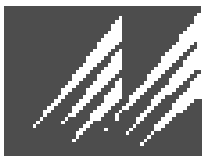
Model 060A, Model 062

allowing the use of normal signal voltages without self-heating of the sensor. When used with signal conditioning modules, the resultant output is a precise analog voltage.

Construction

The thermistor has a speed of response of 10 seconds in still

air. In order to insure this response time, the thermistor bead is supported in free air and protected by the sensor body. In addition to providing minimum response time, this mounting configuration prohibits the sensor from measuring the strain that may be caused by potting compounds.



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Specifications

Common Specifications

Sensing Element: Multi-stage solid state thermistor, highly linearized
Time Constant: Less than 10 seconds in still air
Self-Heating: None

Model 060A

The Model 060A-2 is designed for general purpose measurements of ambient air temperature.

Housing: 3/8 in (9.5 mm) OD x 6 in (152.4 mm)
Range: -50°C to +50°C (Other ranges available to meet special requirements)
Accuracy: $\pm 0.1^\circ\text{C}$ throughout range, PSD compliant
Cable: 1 ft pigtailed (for use with 076 or 077 Radiation Shield)
Additional length may be supplied, specify length

Model 062

The Model 062 is a highly accurate version of the Model 060A-2. It is used in pairs for the measurement of differential temperature (T), or singly for highly critical ambient temperature measurement.

Housing: 3/8 in (9.5 mm) OD x 6 in (152.4 mm)
Range: -50°C to +50°C
Accuracy: $\pm 0.05^\circ\text{C}$, PSD Compliant
Linearity Deviation: For a system range of: Max. error per degree of differential temperature: Max. error over range:
-5°F to +5°F .02°F .05°F
-5°C to +5°C .02°C .05°C
-5°F to +10°F .02°F .1°F
-5°C to +10°C .02°C .1°C
-10°F to +20°F .02°F .2°F
Cable: 1 ft pigtailed (for use with 076 or 077 Radiation Shield)
Additional length may be supplied, specify length

Model 064

The Model 064 utilizes the same sensing network as the Model 060, but is configured to mount directly to the Model 073B or 075B Radiation Shield. The sensor is supplied with a screw-type connector which allows the direct connection of the signal cable. Thermistor bead is protected by a stainless steel bumper.

Housing: Mounting plate, white epoxy finished aluminum, 4" diameter, with screw connector for sensor cable. Thermistor bead is protected by a stainless steel bumper.
Range: 064-1 -30°C to +50°C
064-2 -50°C to +50°C
Other ranges available to meet special requirements
Accuracy: 064-1 $\pm 0.15^\circ\text{C}$
064-2 $\pm 0.1^\circ\text{C}$, PSD compliant
Cable: PN 1958-xx (xx=length in ft)
