



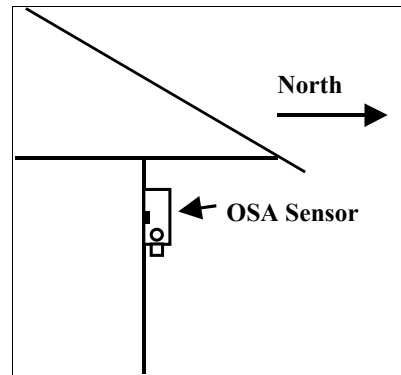
### Outside Air Temperature Sensor

Designed specifically for outside air temperature measurement, this single-unit device comes in a weather-proof gasketed PVC enclosure with a sun and wind shield to protect it from false readings.

### Installation

For best results locate the sensor on the north side of the structure high under an eave to prevent incorrect readings from direct sunlight and damage due to the elements. Mount the OSA enclosure with the sensor module facing down to prevent the accumulation of dirt or water.

### Example Placement



### Specifications

Operating Temperature Range	-40 to 105 °C (-40 to 221 °F)
Wiring Connections	Pig Tail (2 or 3 wire)
Enclosure	4" x 4" x 2" PVC Box
Sensor Types	100 Ω, 1K PT, 1K Nickel RTD's, 1801 Ω, 3K, 10K (type 2 & 3), 20K & 100K Thermistors, IC Sensors

### Typical Wire Resistance Values

When using low resistance sensors (i.e. 100 ohm RTD), long wire runs can add significant error to the readings. Use the following chart to determine errors due to wire resistance or consider using a 1000 ohm sensor or a transmitter for better accuracy. Locate the type of wire being used. Multiply the total length of the wire (distance from the controller to the sensor and back) by the number found in the following chart for total resistance.

GAUGE WIRE TYPE	18 AWG	22 AWG	24 AWG
STRANDED (OHMS/FOOT)	5.85 mΩ	14.75 mΩ	23.29 mΩ
SOLID (OHMS/FOOT)	6.4 mΩ	15.85 mΩ	25.72 mΩ

### Wiring & Color codes

All two-wire sensors are polarity insensitive. The three-wire sensors have the following color code:

<u>Connection</u>	<u>OSA Wire Color</u>
EXCitation	RED
SENse	GREEN
NEGative	BLACK

To connect a three-wire sensor as a two-wire, tie the EXCitation and SENse lines together. All connections should be made using either butt-splices or soldering. The use of wire nuts is not recommended.