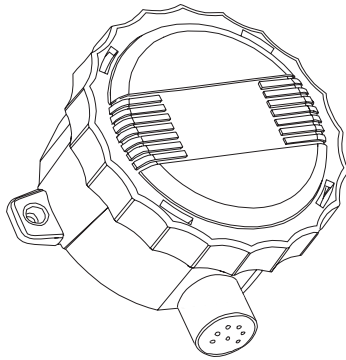




## High Accuracy Outside Temperature Sensor

### HATSOSE Series - Installation Instructions



#### INTRODUCTION

The single point outside air temperature sensor utilizes a high accuracy sensor. All probes are constructed to provide excellent heat transfer, fast response and are potted to resist moisture penetration. A sun and wind shield is integrated into the enclosure. A variety of enclosures are available.

#### BEFORE INSTALLATION

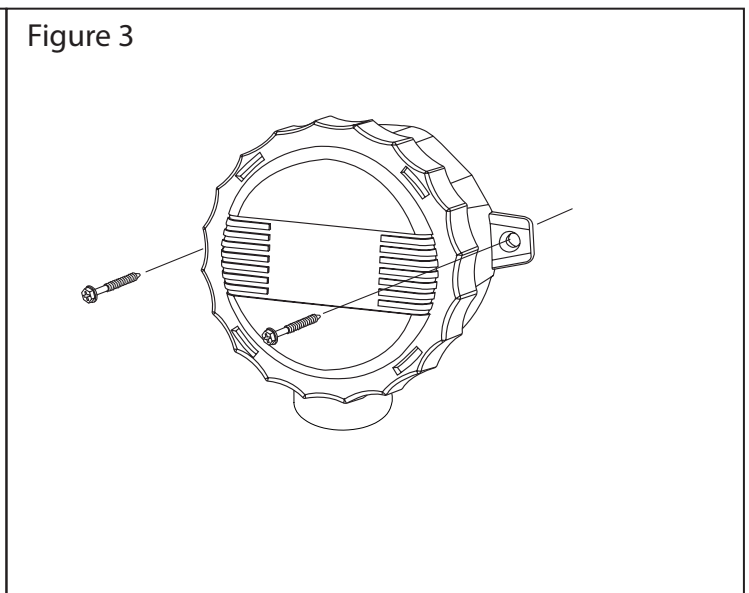
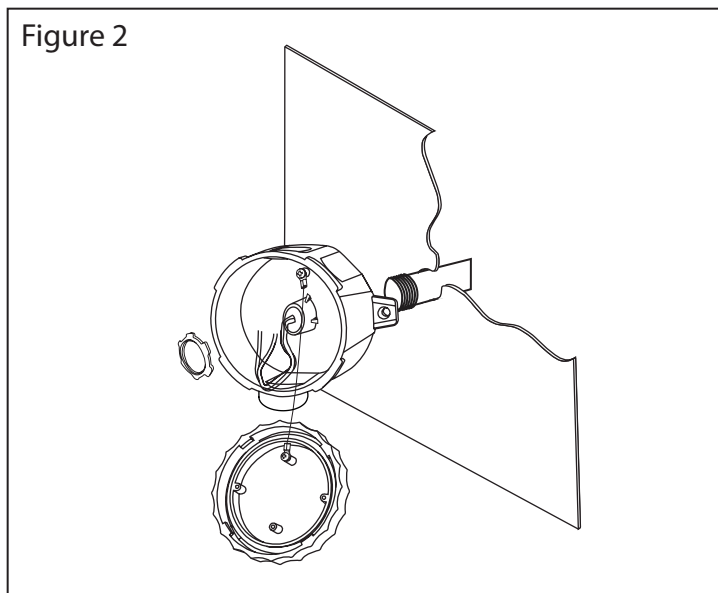
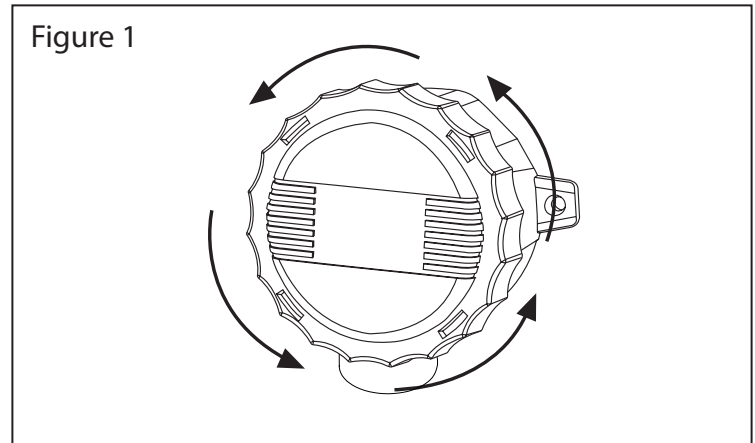
Read these instructions carefully before installing and commissioning the temperature sensor. Failure to follow these instructions may result in product damage. Do not use in an explosive or hazardous environment, with combustible or flammable gases, as a safety or emergency stop device or in any other application where failure of the product could result in personal injury. **Do not exceed the device ratings.**

#### MOUNTING

The temperature sensor should be mounted on an outside north facing wall, under the eaves which will provide protection from direct sunlight. Remove cover by grasping firmly with hand and twisting approximately a quarter turn counter-clockwise. See Figure 1. A lanyard is attached between the cover and the box to allow the cover to hang during wiring and set up as shown in Figure 2, feed wires through and connect using the wiring instructions on page two.

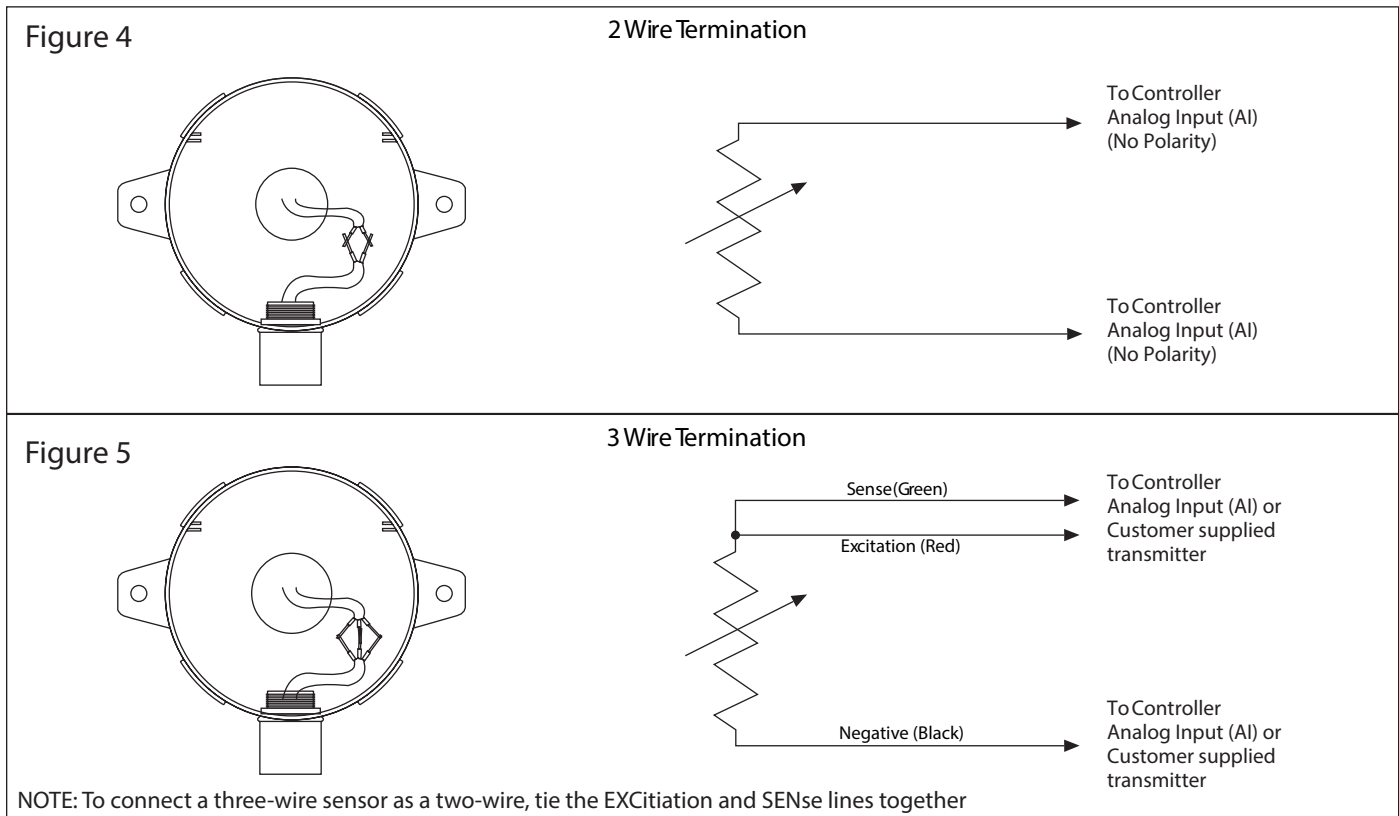
The sensor is mounted by extending a threaded end of the 1/2" conduit used for wiring through the building wall so that it extrudes at least 1-2" from the wall face. The sensor can be threaded directly onto the conduit until the unit tight and secured with a locknut as shown in Figure 2. The sensor is to be pointing towards the ground.

The sensor can be mounted directly to the building's wall face using the two integrated mounting holes. The two mounting holes are suitable for a #10 size screw (not supplied). See Figure 3.



## WIRING

- Use 18-24 AWG shielded wiring for all connections. Do not locate the device wires in the same conduit with wiring used to supply inductive loads such as motors. Make all connections in accordance with national and local codes.
- Pull at least six inches of wire into the enclosure, then complete the wiring connection according to the wiring diagrams below.
- All thermistors and most RTD's are a two wire hook up and are not polarity sensitive. See Figure 4.
- For RTD's that are 3 wire connection see Figure 5.

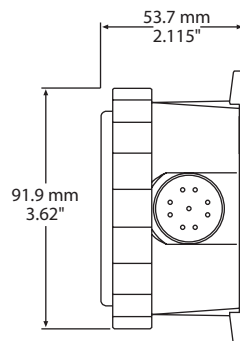
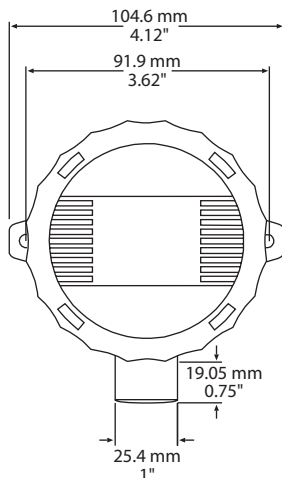


## TYPICAL WIRE RESISTANCE VALUES

When using low resistance sensors, 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 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 chart below 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

## DIMENSIONS



## SPECIFICATIONS:

Sensor Type: .....Platinum RTD, 1000 Ω, 385 Alpha @ 0°C  
 NTC Thermistor, 10,000 Ω @ 25°C, Type 2 or 3

Sensor Accuracy: .....**RTD Class A:** ±0.15°C @ 0°C  
**RTD 1/3 DIN:** ±0.1°C @ 0°C  
**RTD 1/10 DIN:** ±0.03°C @ 0°C  
**NTC Thermistor Type 39:** ±0.05°C, 0 to 70°C  
**NTC Thermistor Type 55:** ±0.03°C, 0 to 70°C  
**NTC Thermistor Type 40/46:** ±0.1°C, 0 to 70°C

Temperature Range: ..-20 to 105°C (-4 to 221°F)

Wire Material: .....PVC insulated, parallel bonded

Enclosure: .....ABS, UL94-V0, IP65 (NEMA 4X)

Termination: .....Pigtail, 2 or 3 wire

Country of Origin: .....Canada