FIELD CONTROLS

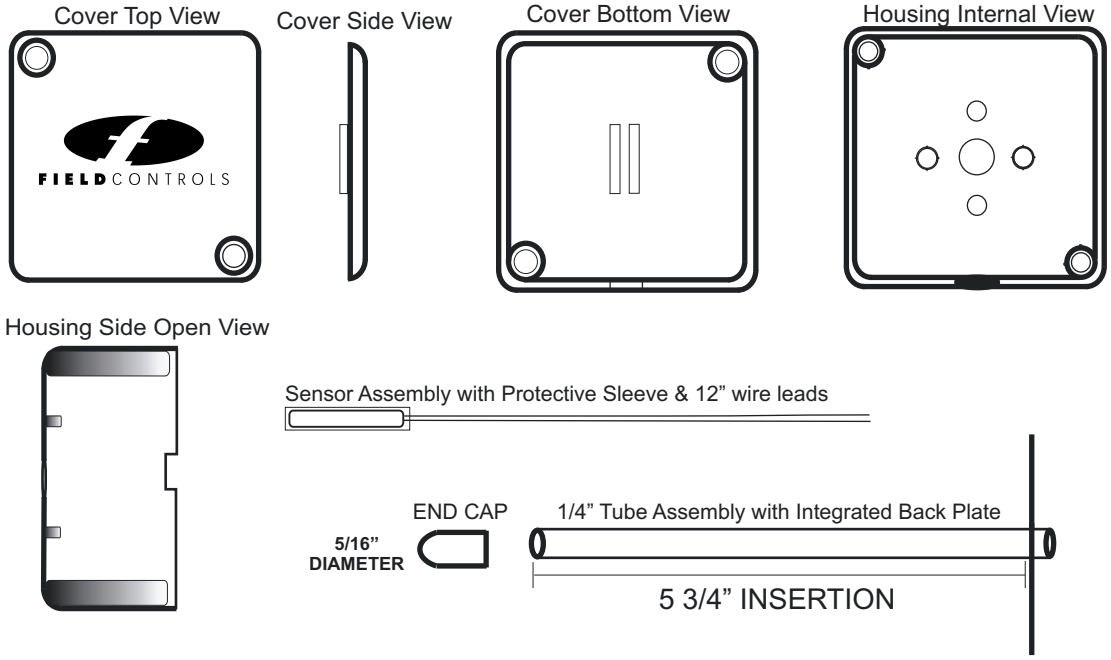
SUBMITTAL SHEET
Model OAS
(OUTSIDE Air Sensor)

The OAS comes standard with the 072000 Smart Digital Humidity Control. Refer to the 072000 Technical Bulletin for the specific Outside Air Features & Functions provided.

The OAS is a versatile device because it can be mounted on an outside wall or an outside air duct. See Page 2 & 3. Make sure the OAS is mounted completely outside of the house, on the North, East, or West side of the building. Avoid direct sunlight. Do not mount the OAS low to the ground where snow can cover it. Do not mount the OAS close to exhaust vents of any type. ***Use a dedicated 2 conductor 18AWG solid copper jacketed thermostat cable to connect the OAS to the Smart Humidistat. Avoid running cable in close proximity to line voltage circuits, or inside a conduit with other circuits. Avoid wire runs in excess of 100 ft.***

The Sensor wiring is not polarity sensitive. OAS equipped panels have a designated terminal block for the OAS. Be sure to enable the OAS Dip switch. Now dial in the Outside Air Changeover setting you desire. Dual fuel Heat Pumps and Multi-Stage Heating systems can be controlled without the need for bulky mechanical outside air thermostats or expensive dual fuel kits. To test an OAS disconnect the wire leads from the control panel and remove it from the duct. At room temperature (75F.) the ohm reading on an OAS will be approximately 10.5K ohms (10,500 ohms). Or leave the OAS where it is and place a separate temperature probe of known accuracy in the same location as the OAS and measure the OAS resistance against the table provided on page 4. You should measure a value within 5% of the table value and the separate temperature probe reading.

MAJOR PARTS INCLUDED IN THE "OAS" OUTSIDE AIR SENSOR ASSEMBLY



SUBMITTAL FORM

SUBMITTED BY:
JOB:
ARCHITECT:
ENGINEER:
CONTRACTOR:
LOCATION:

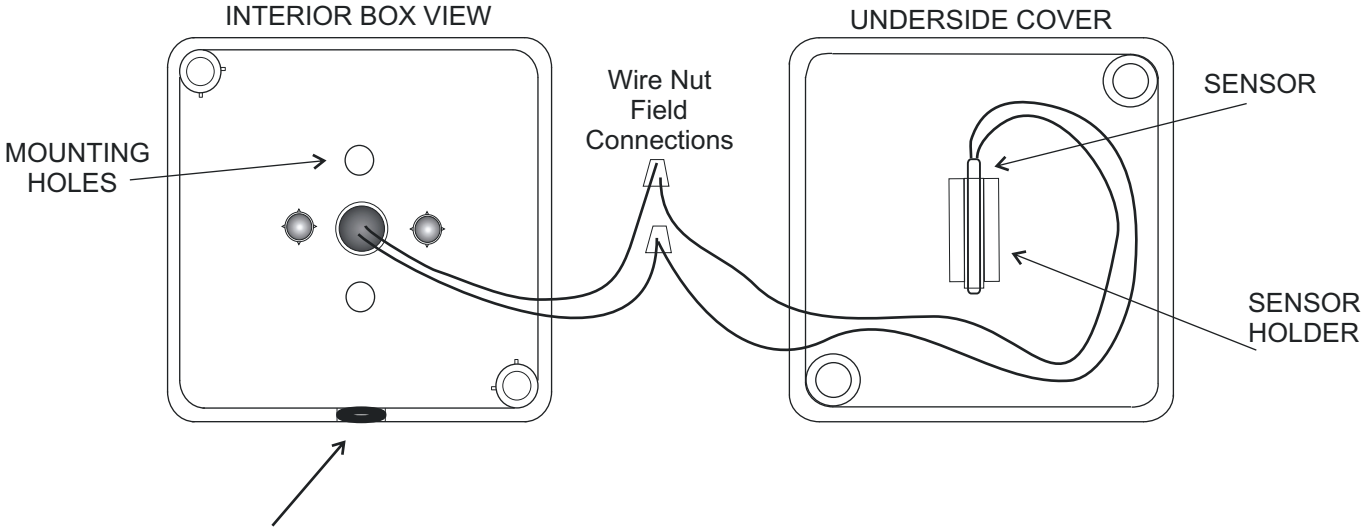
FIELD CONTROLS

P/N 090377A0073 REV. D

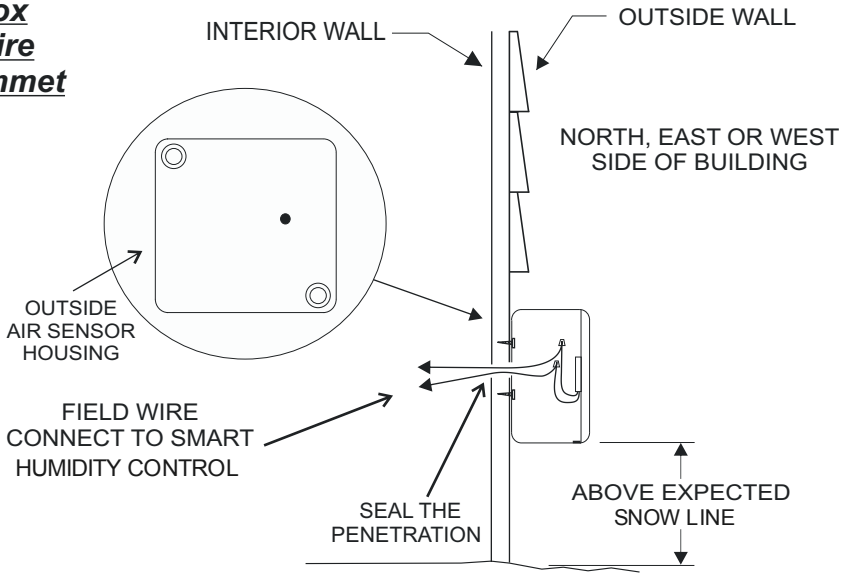
FIELD CONTROLS

Model OAS
(OUTSIDE Air Sensor)

Choose a suitable location to mount the OAS. The OAS can be configured to mount on an outside air duct or an outside wall. **If mounting on a wall,** simply fasten the box to the outside wall using the two 1/4" hex head self-tapping screws and wall anchors provided. The box should cover the hole penetration made in the wall. Now route 2x18AWG field wire through the center hole and into the box. Press the sensor into the brackets on the underside of the front cover. Use the provided wire nuts to connect to the SAS sensor wires. Place the cover back on and secure it. Connect the #18AWG field wires to the correct terminals on your Field Controls control panel. The 1/4" bracketed tube and rubber end cap are not used in this configuration. See Page 3 for duct mounting configuration.



NOTE: Orient the box housing with the Wire Entrance hole/Grommet facing down!



FIELD CONTROLS

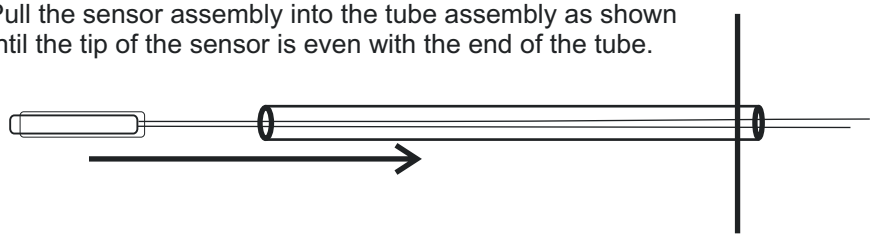
Field Controls Inc. 2630 Airport Road Kinston, NC 28504 PH: 252.522.3031 FAX: 252.522.0214

FIELD CONTROLS

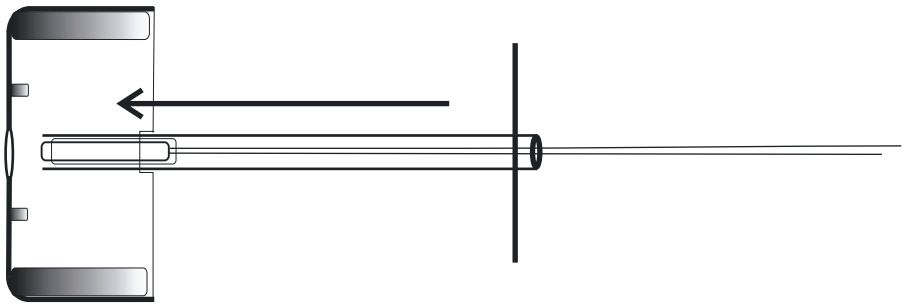
Model OAS
(OUTSIDE Air Sensor)

Choose a suitable location to mount the OAS. The OAS can be configured to mount on an outside air duct or an outside wall. **If mounting on a duct**, make sure there are no critical components behind the duct and drill a 3/8" hole into the duct. Assemble the components as shown below to allow the sensor to sense outside air moving through the duct. Now fasten the box to the duct using the two 1/4" hex head self tapping screws provided. Route 2x18AWG field wire through the wire entrance grommet and into the box. Use the provided wire nuts to connect to the OAS sensor wires. Place the cover back on and secure it. Connect the #18AWG field wires to the correct terminals on your Field Controls control panel. **NOTE: Choose your sensor location and configuration carefully.** Sensing Outside Air Temperature in a duct can lead to inaccurate readings if the air is not actually moving through the duct.

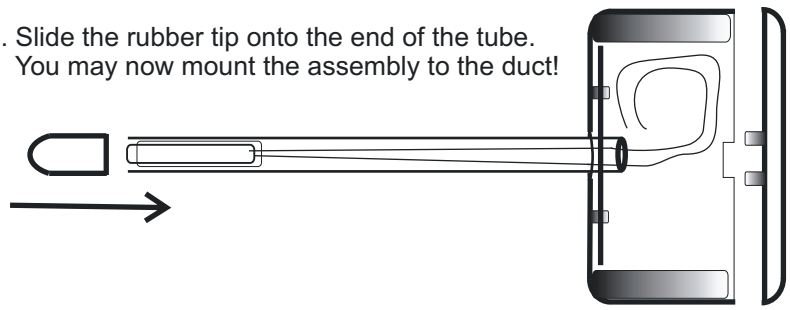
1. Pull the sensor assembly into the tube assembly as shown until the tip of the sensor is even with the end of the tube.

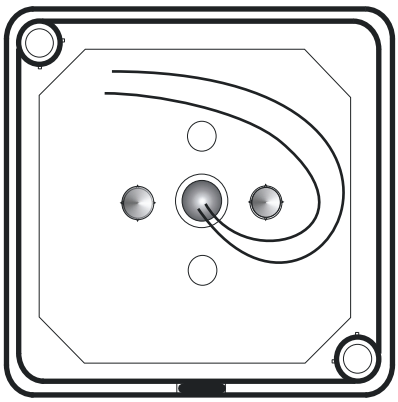


2. Slide the tube assembly through the center hole of the box all the way and press the bracket down onto the alignment posts.



3. Slide the rubber tip onto the end of the tube. You may now mount the assembly to the duct!





INSIDE VIEW AFTER ASSEMBLY

FIELD CONTROLS

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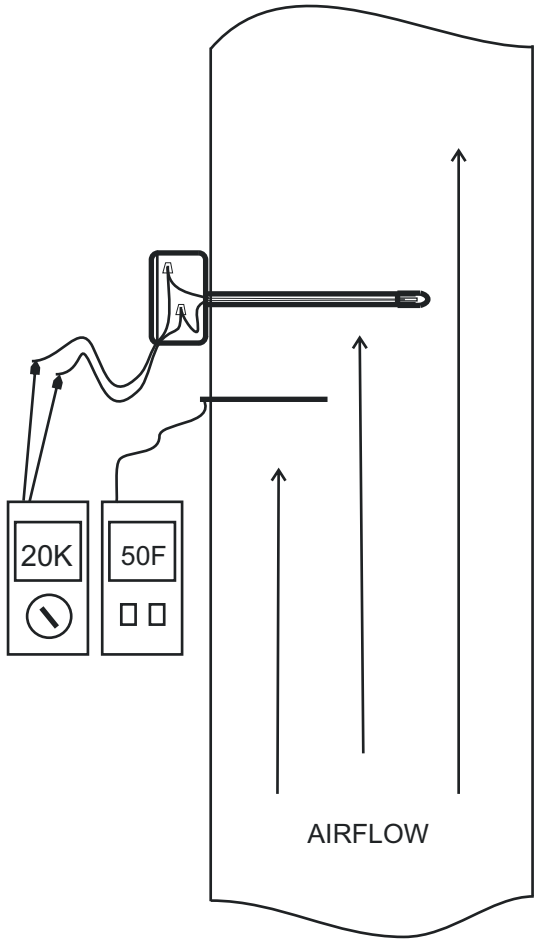
The "OAS" is constructed of UV stabilized Poly Carbonate Plastic with seamless aluminum tubing frame and a highly accurate thermistor with 24AWG 12" leads. The unique construction provides a thermal barrier between the temperature probe and the duct work allowing precise air temperature measurements.

To test an OAS, disconnect the wire leads from the control panel and remove it from the duct. At room temperature (75F.) The ohm reading on an OAS will be approximately 10.5K ohms (10,500 ohms). Or leave the OAS where it is and place a separate temperature probe of known accuracy in the same location as the OAS and measure the OAS resistance against the table provided below. You should measure a value within 5% of the table value and the separate probe reading.



TEMPERATURE (F)	RESISTANCE/OHMS	TEMPERATURE (F)	RESISTANCE/OHMS
-5	100184	50	19903
0	85340	55	17438
5	72906	60	15313
10	62460	65	13475
15	53658	70	11884
20	46220	75	10501
25	39917	80	9298
30	34562	85	8249
35	30000	90	7333
40	26104	95	6530
45	22767	100	5826

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