



### Relative Humidity Transmitter

The Relative Humidity transmitter uses a capacitive type humidity sensor and microprocessor temperature compensation for reliable, accurate readings.

**NOTE:** The humidity sensor used in these devices is static sensitive. Anti-static precautions should be followed to prevent damage to the sensor.

### Electrical Connection

The transmitter should be connected to the controller using 18 to 22 AWG wire. The outside air and duct models require four wires (power, common, RH and Temperature output signals) for voltage and AC operation while only three wires (power, RH and Temperature output signals) are required for DC 4-20mA loop-powered operation. The space mount model requires three wires (power, RH and Temperature output signals) with the power jumpered between the RH and Temp power inputs. The use of shielded cable is optional but recommended for the highest noise immunity. Do not route signal wires in the same conduit with power cables as signal degradation may occur. The controller Analog Input (AI) must be selected to match the transmitter output before power is applied. The AI type must be a high impedance voltage input for use with 0-1, 0-5 or 0-10 Vdc transmitters, or a current input with 250 or 500 ohm impedance. All transmitters have an operating range of 0 - 70 °C (32 - 158 °F) except the O.S.A. which is -40 - 85 °C (-40 - 185 °F). The transmitter board should not be mounted where temperatures will exceed these values. See the connection diagram for more details.

If the unit comes with a remote sensor (Duct or O.S.A.), the sensor is connected to the transmitter board by a 5-pin plug to a 14-pin connector. Should this plug become disconnected, it is to be reconnected to the pins indicated by the markings on the board, with the green stripes on the plug facing the middle of the board. Do not mix and match sensors and boards as the boards are calibrated to the sensor it is shipped with. Changing sensors will have a significant effect on the accuracy of the product.

### Specifications

Accuracy	+/- 2,3,5% RH / +/- 0.1% FSO (Temp)
Power Supply	24Vac/dc (space 24Vdc only)
Wiring Connections	Screw connectors (18 - 24 awg)
Output (Duct & OSA)	4-20mA, 0-1, 0-5, 0-10 Vdc
Output (Space)	4-20mA (loop powered)
Operating Temp	0-70 °C (Duct/Space), -40-85 °C (OSA)

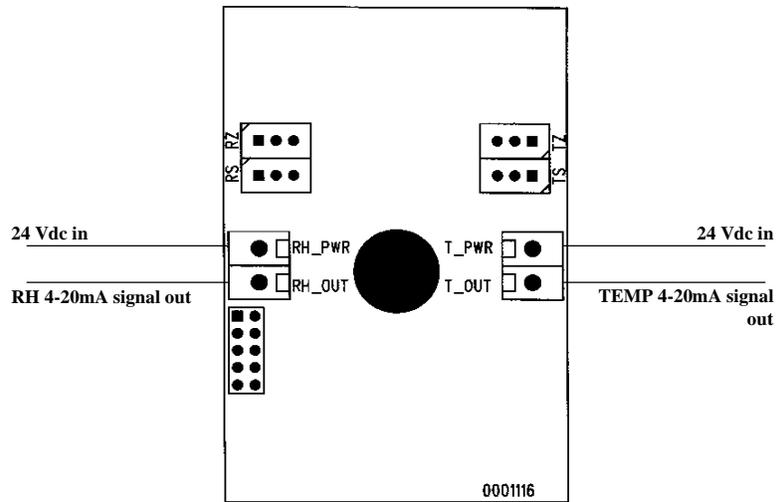
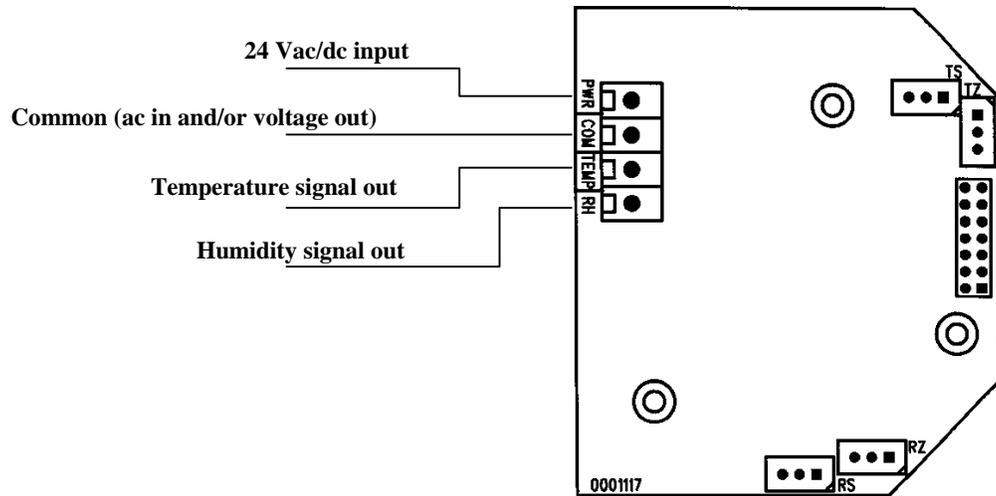
### Mounting

**Room** - Unit should be mounted away from any supply air exhausts or other sources of heat or cold. Mount the unit to an electrical box on an inside wall approximately 3 to 5 feet from the floor.

**Duct** - Drill a 5/8" (or larger) hole in the return air duct. Remove the protective plastic sleeve from the probe and place it through the hole and secure the enclosure to the duct with sheetmetal screws. Orientation of the enclosure and probe will have no effect on the operation of the device.

**Outside Air** - 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

# WIRE CONNECTIONS FOR RH/TEMP COMBINATION BOARDS



## ENCLOSURE OPTIONS

