

INTRODUCTION

This humidity transmitter uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and state-of-the-art digital linearization and temperature compensated circuitry in an attractive, low profile enclosure to monitor room humidity levels. An optional temperature sensor is also available.

BEFORE INSTALLATION

Read these instructions carefully before installing and commissioning the humidity transmitter. 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. Take electrostatic discharge precautions during installation. **Do not exceed the device ratings.**

MOUNTING

The humidity sensor installs on a standard electrical box or can be mounted directly to the wall. The humidity transmitter should be mounted five feet from the floor of the area to be controlled. Do not mount the sensor near doors, opening windows, supply air diffusers or other known air disturbances. Avoid areas where the sensor is exposed to vibrations or rapid temperature changes.

Begin by removing the cover. Grasp the bottom of the cover and pull outward from the backplate as shown in Figure 1. Set cover aside. Do not remove the PCB from the enclosure base.

Feed at least 6" of wire through the wall and out of the junction box. Feed connection wires through center hole on backplate and PCB, then secure backplate to electrical box or wall with suitable screws (not supplied) as shown in Figure 3. The mounting holes allow for up/down & side to side movement to compensate for an unlevel electrical box installation.

Make wire connections as per the "Wiring illustrations" on Page 2 and re-install decorative cover by placing the top of the cover into the cover holders on the top of the backplate and snapping the bottom into place.

Two 1/16" Allen Key set screws are provided on the bottom of enclosure to add security and lock cover in place. To engage, insert Allen Key and turn counter-clockwise 2-3 rotations. As seen in Figure 4.

Figure 1

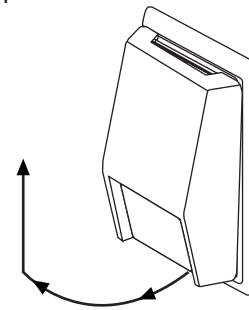


Figure 2

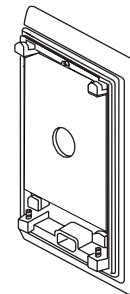


Figure 3

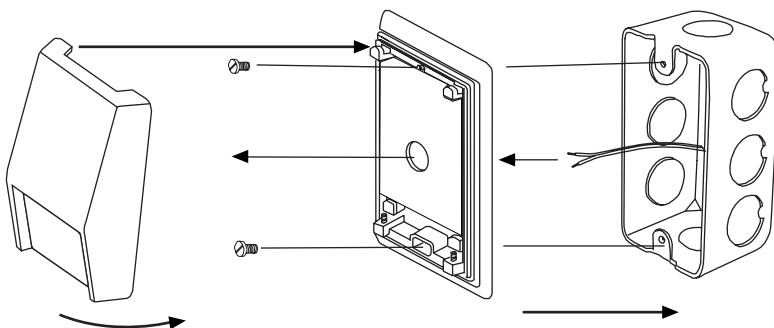
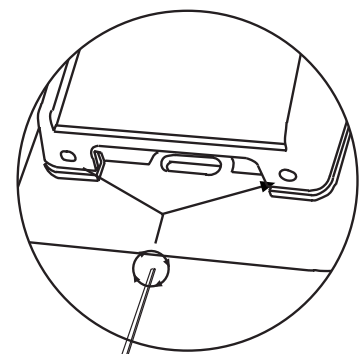
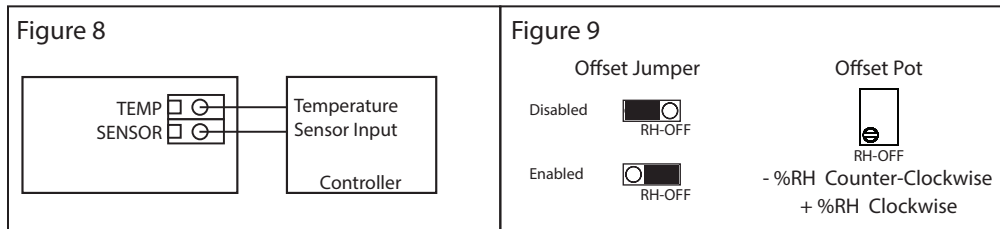
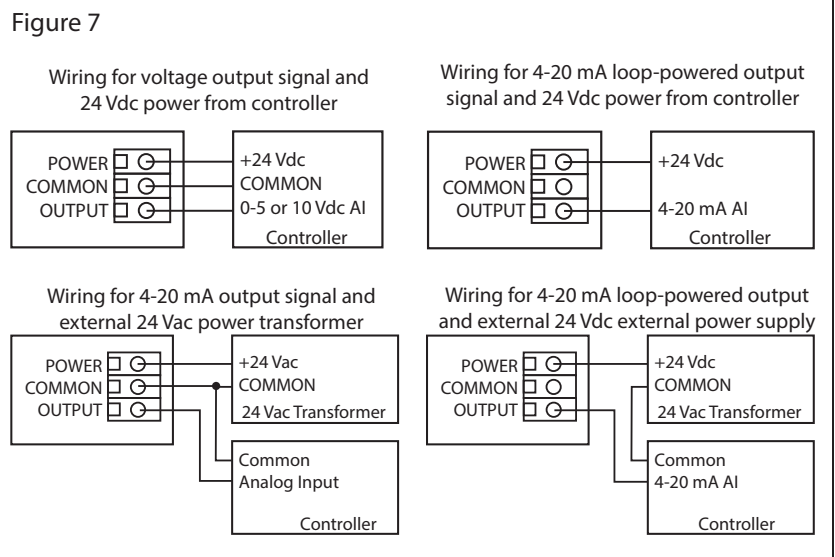
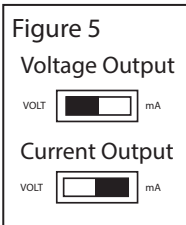
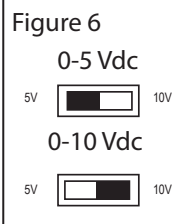
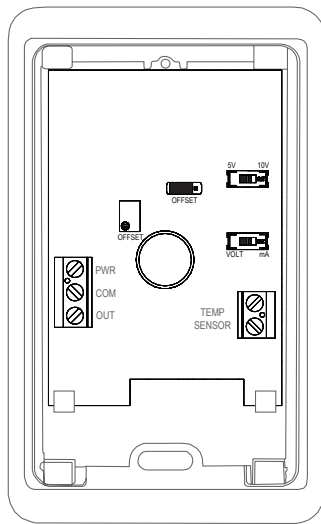


Figure 4



WIRING

- Deactivate the 24 Vac/dc power supply until all connections are made to the device to prevent electrical shock or equipment damage.
- Select desired signal output type by sliding the output switch to the required position, as shown in Figure 5.
- If voltage output is required, slide the Voltage Span Switch to desired span position, as shown in Figure 6. I.E. 10 = 0-10 Vdc.
- Connect the plus dc or ac voltage hot side to the POWER terminal. For voltage output or AC power, the supply common is connected to the COMMON terminal. The device is reverse voltage protected and will not operate if connected backwards. It has a half-wave power supply so the supply common is the same as the signal common. See Figure 7.
- The analog output is available on the RH OUTPUT terminal. Check the controller Analog Input to determine the proper connection before applying power. See Figure 7.
- If installed, the resistance temperature signal is available on the two terminals labeled TEMPERATURE SENSOR. See Figure 8.



RH OFFSET ADJUSTMENT

The humidity sensor has an adjustable offset that allows the user to adjust the output by -10 to + 10% RH. To add an offset, set the Offset Jumper to the enabled position as shown in Figure 9. Adjust the Offset Pot until reaching the desired output. Rotating the pot counter-clockwise lowers the output by up to -10% RH. Rotating the pot clockwise raises the output by up to +10% RH.

SPECIFICATIONS

Sensor Type	Thermoset polymer based capacitive
Accuracy	±2, 3, or 5 %RH (5 to 95 %RH)
Measurement Range.....	0 to 100 %RH
Resolution	±0.01 %RH
Hysteresis	±0.8 %RH @ 25°C (77°F)
Sensor Response Time.....	8 seconds
Stability	<0.25 %RH/year
Operating Temperature.....	0 to 50°C (32 to 122°F)
Power Supply	18 to 35 Vdc, 15 to 26 Vac
Consumption.....	22 mA maximum
Output Signal.....	4-20 mA / 0-1, 0-5 or 0-10 Vdc (field selectable)
Output Drive @ 24 Vdc	Current: 550Ω max Voltage: 10KΩ min
RH Adjustments	RH offset potentiometer -10 to + 10 %RH
Wiring Connections	Screw terminal block (14 to 22 AWG)
Optional Temp Sensor	Various RTDs and thermistors available as two wire resistance output
Enclosure	White ABS, IP20 (NEMA 1)
Dimensions.....	70W x 114H x 30D mm (2.75" x 4.5" x 1.2")
Country of Origin.....	Canada

DIMENSIONS

