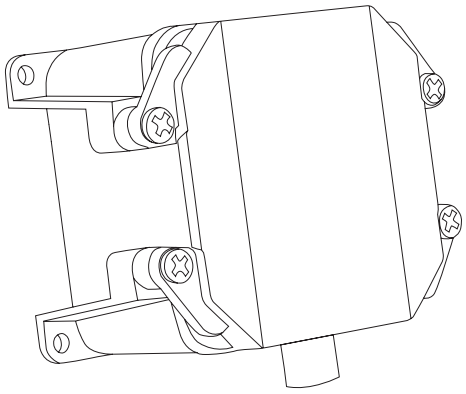
Outside Humidity / Temperature Transmitter

HTOSP Series - Installation Instructions



INTRODUCTION

The outside 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 weatherproof enclosure to monitor outside humidity levels. Sensors are mounted in a sun and wind shield for more accurate monitoring. 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 and do not exceed the device ratings.

Select a suitable mounting spot on an exterior wall where the sensor is best protected from direct exposure to sunlight & wind. Preferably on a north facing wall. Avoid areas where the sensor is exposed to vibrations or rapid temperature changes.

The enclosure provides a connection hole for 1/2" Conduit. Run a length of conduit through exterior wall and seal. Use 14-22 AWG shielded wiring for all connections and 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.

MOUNTING

The sensor installs directly on an exterior wall using the four integrated mounting holes provided on the enclosure. The four mounting holes will facilitate a #10 size screw (not supplied). The sensor fitting must be pointing down. See Figure 1.

The sensor cover is secured with 4 rotating latches. Remove the cover by rotating the latch using a Phillips screwdriver. See Figure 2.

Feed the conduit or cable gland fitting through the provided hole in bottom of enclosure as show in Figure 3. It is recommended that weatherproof conduit or cable gland fittings be used.

Make wiring connections as per the "Wiring" illustrations on Page 2.

Replace cover and secure with the 4 rotating latches.

Figure 1

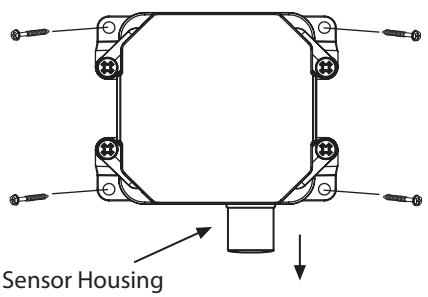


Figure 2

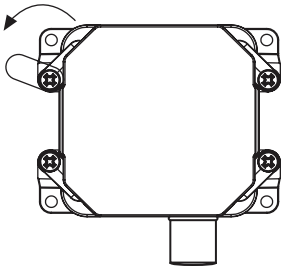
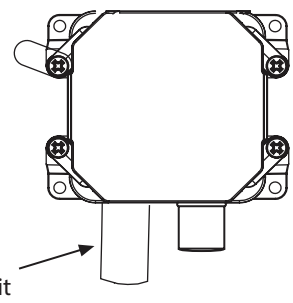


Figure 3



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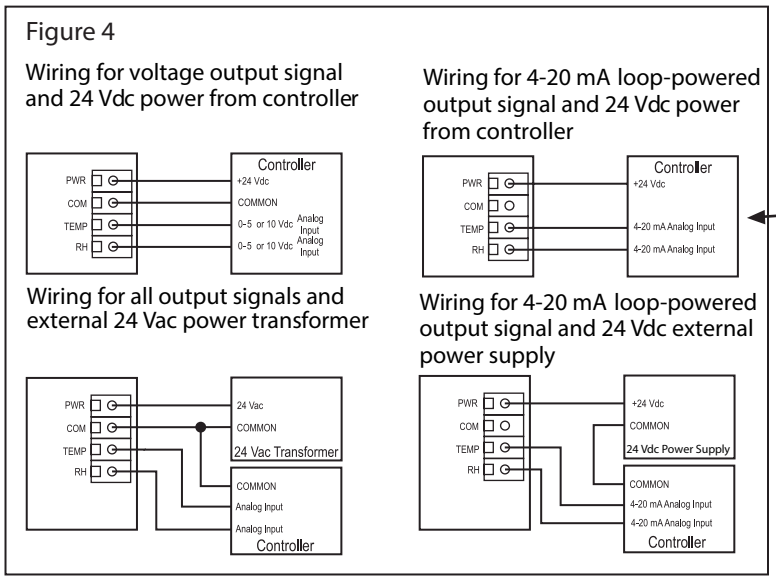
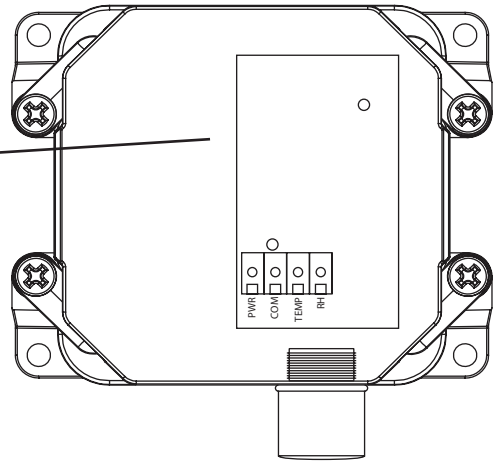
WIRING

- Deactivate the 24 Vac/dc power supply until all connections are made to the device to prevent electrical shock or equipment damage.
- Use 14-22 AWG shielded wiring for all connections and 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 diagram for the applicable power supply and output signal type.
- Connect the plus DC or the AC voltage hot side to the PWR terminal. For voltage output or AC power, the supply Common is connected to the COM 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 4.
- The analog outputs are designated as TEMP and RH by each terminal. Check the controller Analog Input to determine the proper connection before applying power. See Figure 4.

Figure 4

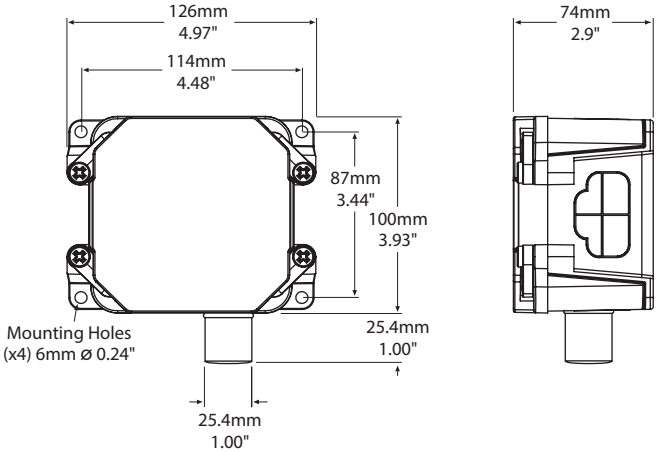




SPECIFICATIONS

Humidity Sensor Type	Thermoset Polymer based capacitive
Accuracy	±2, 3, or 5% RH, (5% to 95% RH)
Measurement Range	0 to 100% RH
Hysteresis	±1.5% RH maximum
Repeatability	±0.5% RH typical
Linearity.	±0.5% RH typical
Sensor Response Time	15 seconds typical
Stability	±1% RH typical at 50% RH in 5 yrs.
Temperature Sensor Type	1000Ω Platinum, IEC 75, 385 Alpha, thin film
Sensor Accuracy	±0.1% of span
Operating Temperature	-40 to 50˚C (-40 to 122˚F)
Operating Humidity	0 to 95% RH non-condensing
Power Supply	18 to 35 Vdc, 15 to 26 Vac
Consumption	22 mA maximum
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected & output limited
Output Signals	4-20 mA, 0-5 or 0-10 Vdc
Output Drive at 24 Vdc	550 ohms max for current output, 10K ohms min for voltage output
Internal Adjustments	Clearly marked ZERO and SPAN pots
Wiring Connections	Screw terminal block (14 to 22 AWG)
Enclosures	PVC, IP65 (NEMA 4X) 126 W x 100 H x 74 D mm (4.97" x 3.93" x 2.9")
Country of Origin	Canada

DIMENSIONS



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