



HS-O_2X Series

Outside Air Humidity Transmitters, Nema 4X



Overview

The HS-O_2X Series are relative humidity transmitters for outside air. They use a highly accurate and reliable Thermoset-Polymer-based capacitance humidity sensor along with state-of-the-art digital linearization and temperature compensated circuitry in order to monitor humidity levels. A 60-micron HDPE filter protects the sensor from contaminants. Excellent long-term stability and quick response time combined with temperature compensation make the HS-O_2X Series the ideal choice for the HVAC market. Models with RH accuracy of 2%, 3%, or 5% are available.

Applications

- HVAC
- Clean rooms
- Museums / Archives
- Hospitals and Pharmaceuticals

Features & Benefits

- Economical
- Ease of installation
- Highly stable humidity sensor
- Proven long stability and performance
- Field-selectable analog signals

Accessories

HS-FCAL	Factory Calibration Certificate
HS-NIST	NIST Calibration Certificate

Note: Calibration certificates must be purchased at the time of purchasing the relative sensors.

Model Selection

HS-O22XX	2%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs
HS-O22XT	2%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs, 10k Ω , type 2, NTC thermistor.
HS-O32XX	3%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs
HS-O32XT	3%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs, 10k Ω , type 2, NTC thermistor.
HS-O52XX	5%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs
HS-O52XT	5%-accuracy outside-air relative-humidity transmitter, 24 Vac/dc and jumper-selectable outputs, 10k Ω , type 2, NTC thermistor.

Product Specifications

Environmental

Operating Temperature _____ -40 °C to 85 °C (-40 °F to 185 °F)
Storage Temperature _____ -40 °C to 85 °C (-40 °F to 185 °F)
Ambient Humidity _____ 0 to 95% Non-condensing

Humidity Sensor/Probe

Sensor Type _____ Thermoset Polymer based Capacitive
Sensor Accuracy _____ $\pm 2, 3, \text{ or } 5\%$ RH (5% to 95% RH)
Output Signal _____ 4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc
Range _____ 0 to 100%RH
Response Time _____ 15 seconds typical
Temperature Dependence _____ $\pm 0.05\%$ RH/ °C
Hysteresis _____ $\pm 1.5\%$ RH maximum
Repeatability _____ $\pm 0.5\%$ RH typical
Linearity _____ $\pm 0.5\%$ RH typical

Enclosure

Material _____ Grey ABS; Type: UL94-V0; IP65 (NEMA 4X)
Shipping Weight _____ 0.70 lbs (0.32 kg)

Temperature Sensor Option

Type¹ _____ 10,000 Ω , Type 2, NTC Thermistor
Accuracy _____ ± 0.2 C

Electrical

Dissipation Factor _____ 2.2 mW/K (Thermistor)
Max Power @ 25°C (77°F) _____ 75 mW (Thermistor)
Thermal Time Constant _____ Less than 10 s (Thermistor)
Power Supply _____ 18 to 30 Vdc, 15 to 26 Vac
Consumption _____ 22 mA Maximum
Output Drive at 24 Vdc _____ 550 Ω Max for Current Output
10 k Ω Min for Voltage Output
Internal Adjustments _____ Clearly marked ZERO and SPAN pots
Protection Circuitry _____ Reverse voltage protected and output limited
Input Voltage Effect _____ Negligible over specified operating range
Termination _____ Screw terminal block (14 20 22 AWG)

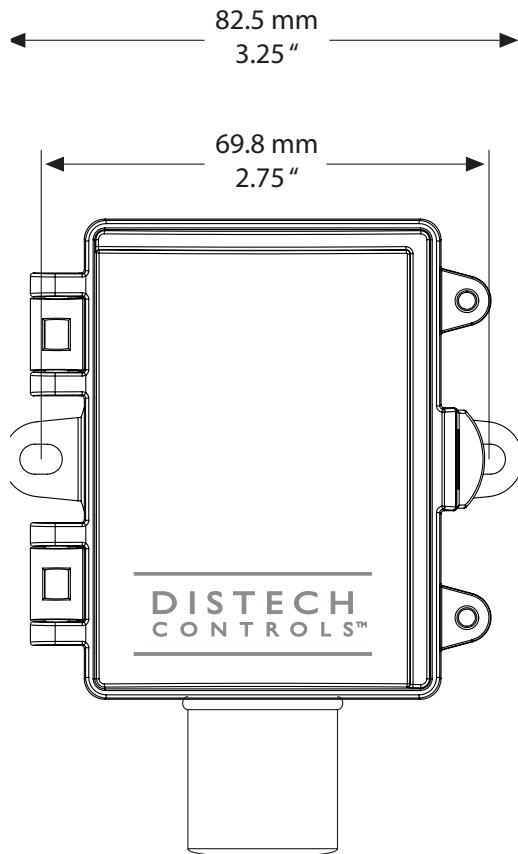
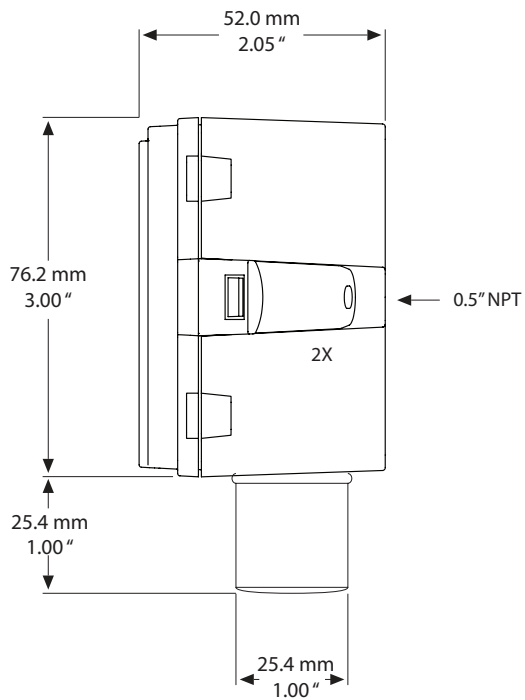
Agency Approval

Material² _____ UL94-V0



1. Temperature sensor type stated is standard. Other temperature sensor types are available.
2. All materials and manufacturing processes comply with the RoHS directive

Dimensions



Specifications subject to change without notice.
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