



# HS-O Series

Outside Air Humidity Transmitters



## Overview

The HS-O Series are relative humidity transmitters for outside air. They use a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and state-of-the-art digital linearization and temperature compensated circuitry 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 Series the ideal choice for the HVAC market. All models are available with RH accuracies of 2%, 3% or 5%.

## 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-O2PSX	2% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs
HS-O2PST	2% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs, 10k $\Omega$ , type 2, NTC thermistor.
HS-O3PSX	3% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs
HS-O3PST	3% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs, 10k $\Omega$ , type 2, NTC thermistor.
HS-O5PSX	5% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs
HS-O5PST	5% accuracy outside air relative humidity transmitter, 24 Vac/dc and jumper selectable outputs, 10k $\Omega$ , 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: UL94-5VB IP65(NEMA 4X)  
Shipping Weight \_\_\_\_\_ 0.70 lbs (0.32 kg)

## Temperature Sensor Option

Type<sup>1</sup>: \_\_\_\_\_ 10,000 $\Omega$ , Type 2, NTC Thermistor  
Accuracy \_\_\_\_\_  $\pm 0.2$  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  $\Omega$  Max for Current Output  
\_\_\_\_\_ 10 k $\Omega$  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)

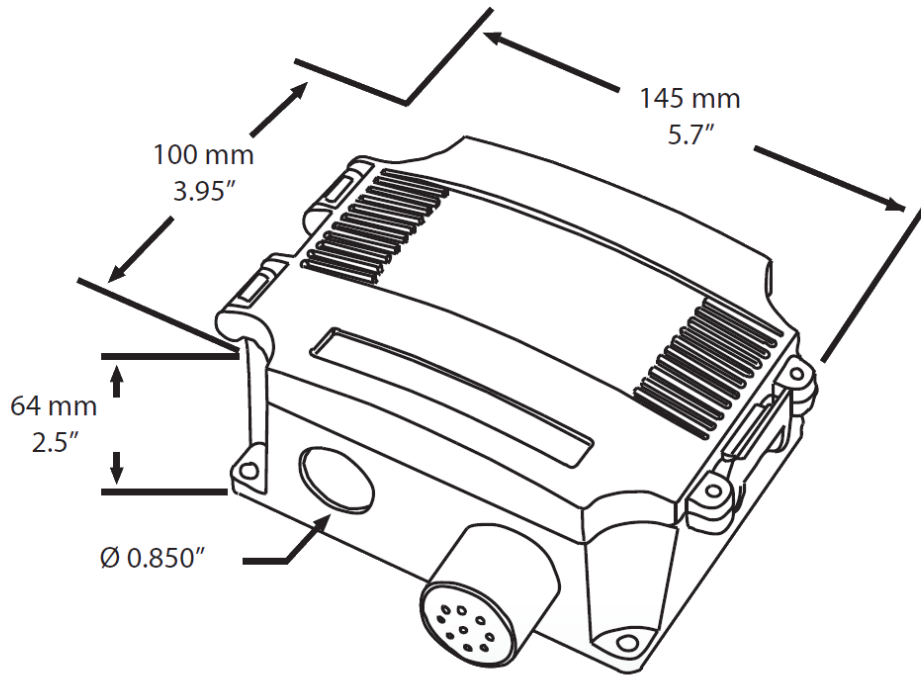
## Agency Approval

Material<sup>2</sup> \_\_\_\_\_ UL94-VB

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



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