

HE-67xx Series

# TrueRH™ Surface-mount Duct Humidity/Temperature Sensors



**HE-67xx Surface-mount Duct Humidity/Temperature Sensors**

## Description

The TrueRH™ product line delivers ±2% and ±3% Relative Humidity (RH) Sensing Products in a full variety of packages. The humidity sensor's All-Polymer™ construction increases resistance to corrosion in HVAC (Heating, Ventilating, and Air Conditioning) environments.

HE-67xx Elements are products whose output signal is 0 to 5 VDC for humidity Indication.

The HE-67xx Series sensors combine humidity and temperature sensing in an all-plastic enclosure used inside ducts and economizer rooftop systems. These models are available with a nickel or one of two thermistor temperature sensors.

The thermistor temperature sensors have a negative temperature coefficient, and a reference resistance of 2.2k ohms or 10.0k ohms. The nickel temperature sensor has a reference resistance of 1.0k ohms. These units can be powered with 14 to 30 VDC or 20 to 30 VAC and feature a 0 to 5 VDC output.

## Features

- TrueRH™ Circuitry and calibration techniques for which patent protection is pending
- All-Polymer humidity sensor's patented sensing element improves sensor's resistance to corrosion
- humidity and temperature sensor in one unit eliminates need for separate sensors; reduces installation time and cost

- 2% RH accurate model includes a National Institute of Standards and Technology (NIST) certificate of conformance that documents higher precision for 2% models
- senses RH over full 0 to 100% range to accommodate a wide range of applications
- protective membrane protects sensors from contamination
- quick-mount, 2-screw installation reduces installation time
- compact enclosure for mounting inside ducts—designed for rooftop unit applications and retrofits; enables surface-mount installation

## To Order

To order a duct-mount humidity/temperature sensor, contact the nearest Johnson Controls representative. Specify the product code number in the following selection chart.

## Specifications

HE-67xx Series TrueRH™ Surface-mount Duct Humidity/Temperature Sensors	
<b>Power Requirements</b>	14 to 30 VDC or 20 to 30 VAC at 50/60 Hz, Class 2
<b>Current Draw</b>	3 mA with no load; 25 mA maximum
<b>Output Signal</b>	0 to 5 VDC, 1k ohm maximum load
<b>Accuracy:</b>	HE-67x2: ±2% RH for 20 to 80% RH at 77°F (25°C), ±4% RH for 10 to 20% and 80 to 90% RH at 77°F (25°C) HE-67x3: ±3% RH for 20 to 80% RH at 77°F (25°C), ±5% RH for 10 to 20%, and 80 to 90% RH at 77°F (25°C)
<b>Temperature Coefficient:</b>	-0.1 to 0.05% RH/C at 41°F (5°C); -0.07 to -0.21% RH/C at 149°F (65°C)
<b>Ambient Operating Conditions</b>	32 to 140°F (0 to 60°C); 0-100% RH, 85°F (29.4°C) maximum dew point
<b>Humidity Transmitter Survival Operating Conditions</b>	-20 to 140°F (-29 to 60°C); 0 to 100% RH, 85°F (29.4°C) maximum dew point
<b>Ambient Storage Conditions</b>	-40 to 140°F (-40 to 60°C); 0-100% RH, 85°F (29.4°C) maximum dew point
<b>Terminal Connections</b>	1/4 in. (6.35 mm) male spade
<b>Acceptable Wire Gauge</b>	16 to 24 AWG wire (18 AWG wire recommended)
<b>Dimensions (H x W x L)</b>	3.00 x 3.00 x 1.23 in. (76 x 76 x 31 mm)

## Selection Chart

Code Number	Temperature Sensor Type	RH Accuracy	
		±2%	±3%
HE-67N2-0N0GS	1.0k ohm Nickel	■	
HE-67T2-0N0GS	2.2k ohm Thermistor	■	
HE-67Y2-0N0GS	10.0k ohm Thermistor	■	
HE-67N3-0N0GS	1.0k ohm Nickel Sensor		■
HE-67T3-0N0GS	2.2k ohm Thermistor		■
HE-67Y3-0N0GS	10.0k ohm Thermistor		■

## Accessories

Code Number	Description
ACC-BRKT-100	Mounting Bracket for mounting the sensor in a duct; 3.25 H x 3.62 W x 0.75 in. D (83 x 92 x 19 mm)
ACC-CBL-100	Wiring Harness, 53 in. (1.3 m)

