

HUMIDITY



3% HUMIDITY TRANSMITTER & OPTIONAL TEMPERATURE TRANSMITTERS MODELS HW31K, HD31K, HO31K

DESCRIPTION

Model H_31K 3% Air Humidity Transmitters are specifically designed for use in HVAC/BAS applications. These instruments measure relative humidity from 0% to 100%. The standard two-wire, 4-20 mA output provides low cost humidity monitoring for building control. The RH transmitter is available with thermistor or RTD temperature sensors or a 4-20 mA rangeable temperature transmitter. **H_31K** models are available in room, duct, and OSA mounting styles.

OPERATION

The transmitter converts the relative humidity into a 4-20 mA signal with 3% accuracy. The optional temperature sensors, thermistor or RTD, offer direct connections to most automation systems. The optional rangeable temperature transmitter offers a 4-20 mA signal and is rangeable from -20° to 250°F (-29° to 121°C).

FEATURES

- 0% to 100% RH measurement
- ±3% accuracy (5% to 95% RH)
- Two-wire, 4-20 mA output



OPTIONS

- Temperature thermistor
- Temperature RTD
- Temperature 4-20 mA for duct and OSA

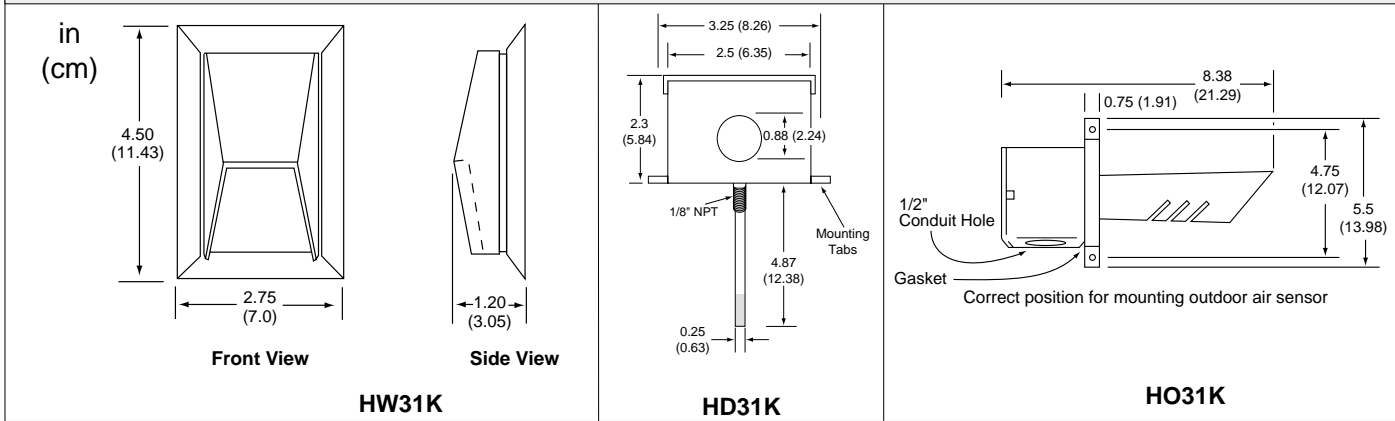
SPECIFICATIONS	
Sensing element	Capacitive sensor
Accuracy	±3% RH @ 77°F (25°C), 5% to 95% RH
Temp effect	Temperature compensated with <0.005% RH per °F (0.01% per °C)
Long-term stability	<±1% drift per year, typical
Output humidity	Two-wire, loop-powered, 4-20 mA = 0% to 100% RH linear
Output temp	Two-wire, loop-powered, 4-20 mA
Temp range limits	-30° to 250°F (-34° to 121°C), min span of 40°F (22°C)
Optional temp	
Thermistor	Type 3, 21, 22, 24, 27,42
RTD	Type 81, 85, 91
Transmitter	4-20 mA, 675Ω @ 24V
Supply voltage	18-35 VDC
Ambient temp	-20° to 140°F (-28° to 60°C)
Storage temp	-58° to 185°F (-50° to 85°C)
Max load impedance	(Supply voltage - 12 VDC) / 0.02 i.e., 600Ω @ 24 VDC
Connections	Screw terminals for loop termination
Enclosure	White plastic
Weight	1.2 lb (0.55 kg)

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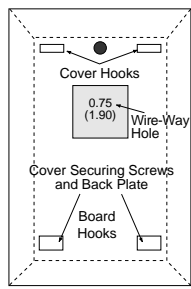


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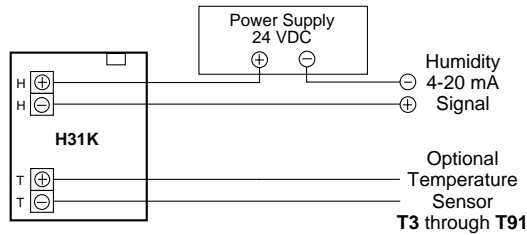
DIMENSIONS



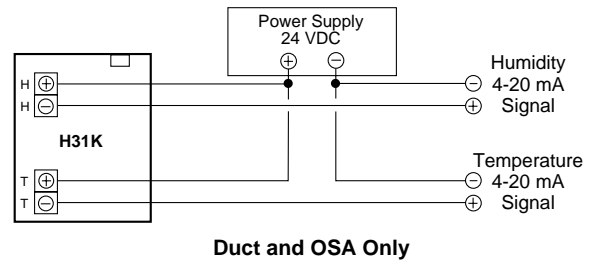
MOUNTING



WIRING FOR RH & "T" OPTION



WIRING FOR RH & "TT" OPTION



ORDERING INFORMATION

MODEL	DESCRIPTION
HW31K	3% Room-Mount Humidity Transmitter, 4-20 mA Output
HD31K	3% Duct-Mount Humidity Transmitter, 4-20 mA Output
HO31K	3% OSA-Mount Humidity Transmitter, 4-20 mA Output
OPTIONS (temperature sensor or transmitter)	
--	No temperature sensor
T3	10,000Ω Thermistor @ 77°F (25°C), type III
T21	2252Ω Thermistor @ 77°F (25°C), type II
T22	3000Ω Thermistor @ 77°F (25°C), type II
T24	10,000Ω Thermistor @ 77°F (25°C), type II
T27	100,000Ω Thermistor @ 77°F (25°C), type II
T42	20,000Ω Thermistor @ 77°F (25°C), type IV
T81	100Ω 385 Platinum RTD
T85	1000Ω 385 Platinum RTD
T91	1000Ω 375 Platinum RTD
TT-XR	Temperature transmitter (special range) (duct and OSA only)
TT-2	-20° to 140°F (-29° to 60°C) Transmitter (duct and OSA only)
TT-3	0° to 100°F (-18° to 38°C) Transmitter (duct and OSA only)

HD31K - T3 *Example:* HD31K-T3 Duct-mount humidity transmitter with 10 kΩ type III temperature sensor