



HUMIDITY

± 3% ROOM/ DUCT/ OSA HUMIDITY TRANSMITTERS H_30K SERIES

DESCRIPTION

The Series H_30K humidity transmitters have been specifically designed for use with HVAC/BAS applications. These instruments measure relative humidity from 5 to 95% RH with $\pm 3\%$ accuracy and produce a two-wire, 4-20 mA linear output. All can come equipped an optional passive RTD or thermistor. The duct and OSA versions may also be fitted with a 4-20 mA temperature transmitter.

OPERATION

The temperature compensated circuitry converts the relative humidity into a 4-20 mA signal. The optional temperature sensors, RTDs or thermistors, offer direct connection to most automation systems. On duct and OSA units, an optional 4-20 mA temperature transmitter may also be employed and is rangeable from -30° to 250°F (-34° to 121°C).



HW30K



HD30K



HO30K

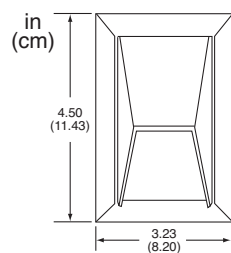
FEATURES

- $\pm 3\%$ accuracy (5% to 95%)
- Two wire, 4-20mA RH output
- Optional temperature thermistor
- Optional temperature RTD
- Optional temperature 4-20 mA (duct or OSA)

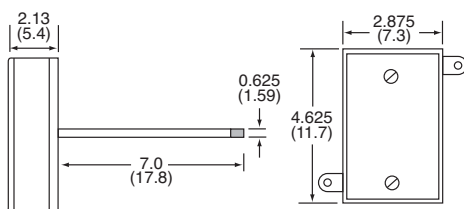
SPECIFICATIONS

Sensor	Capacitive	Load impedance	(Supply voltage - 10V) / 0.02 e.g., 700Ω @ 24VDC
Accuracy	$\pm 3\%$ RH @ 77°F (25°C) from 5% to 95% RH	Operating range	
Stability	Typically less than 1% drift per year	RH	0-100% RH non-condensing
Temperature effect	Temperature compensated with less than 0.005% per °F (0.01% per °C)	Ambient temp	-20° to 140°F (-28° to 60°C)
Supply voltage	18-35 VDC	Electrical connections	Terminal block (22 to 16 AWG)
RH output	Two wire 4-20 mA = 0-100% RH	Sensor protection	Sintered filter (duct and OSA)
Temperature output	Optional thermistor, RTD or two-wire, loop-powered, 4-20 mA with temperature range limits -20° to 140°F (-29° to 60°C)	Enclosure material	White plastic (room), weather proof cast aluminum (duct and OSA)
		Weight	Room 0.18 lb (0.08kg), Duct/OSA 1.2 lb (0.55kg)
		Warranty	18 months

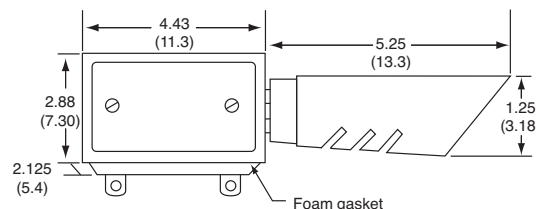
DIMENSIONS



HW30K



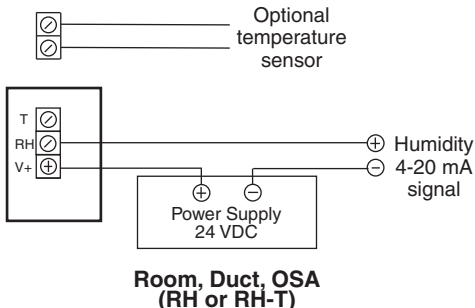
HD30K



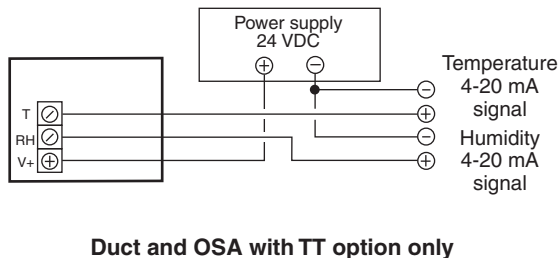
HO30K



WIRING FOR RH ONLY AND "T" TEMPERATURE OPTION



WIRING FOR RH AND "TT" TEMPERATURE OPTION



MOUNTING ROOM SENSOR

DIAGRAM 1: The transmitter should be mounted so that the 9" (22.86 cm) probe is in the center of the duct. The transmitter should be duct mounted away from fans, corners, heating and cooling coils, and other equipment that will affect the measurement of relative humidity.

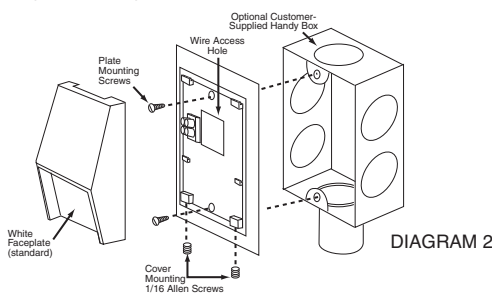
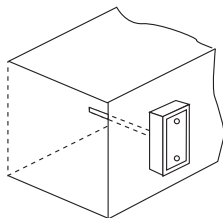
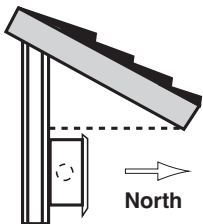


DIAGRAM 2: The sensor should be mounted approximately 5' (12.7 cm) above the floor, on an interior wall, away from any heating or cooling generating devices. Basic model comes with screw terminal block, two #6-32 screws for handybox mounting, and two #6 x 1" screws for direct wall mounting. Cover screws are #6-32 with a 1/16 allen key head. Precautions should be taken to prevent air infiltration from inside the wall.

MOUNTING OSA SENSOR

The transmitter should be mounted preferably on the north side (Northern Hemisphere) of a building under the eave, not above windows or doors. The transmitter should be mounted horizontally with the sensor slots pointing down.



ORDERING INFORMATION

MODEL	DESCRIPTION
HW30K	3% beige room humidity transmitter, 4-20 mA output
HD30K	3% duct-mount humidity transmitter, 4-20 mA output
HO30K	3% OSA-mount humidity transmitter, 4-20 mA output
OPTIONS (Temperature Sensors or Transmitters)	
--	No temperature sensor
T3	10,000Ω thermistor @ 77°F (25°C), Type III
T24	10,000Ω thermistor @ 77°F (25°C), Type II
T85	1000Ω 385 platinum RTD
T91	1000Ω 375 platinum RTD
TT-2	-20° to 140°F (-29° to 60°C) transmitter, 4-20 mA (duct and OSA only)

Other temperature options available

HD30K - T3

Example: HD30K-T3 Duct-mount humidity sensor with 10 kΩ Type III temperature sensor