

3% WALL, DUCT AND OSA HUMIDITY TRANSMITTERS

DESCRIPTION

The **Kele Series H_30K humidity transmitters** have been specifically designed for use with HVAC/BAS applications. These instruments measure relative humidity from 5 to 90% with 3% accuracy and produce a two wire, 4-20mA linear output. All can come equipped with an optional passive RTD or thermistor. The duct and OSA versions may also be fitted with a 4-20mA temperature transmitter.

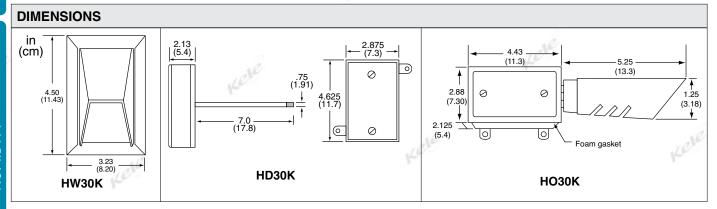


OPERATION

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

FEATURES

- 3% accuracy (5% to 90%)
- Two wire, 4-20mA RH output
- Optional temperature thermistor
- · Optional temperature RTD
- Optional temperature 4-20mA (Duct or OSA)



SPECIFICATIONS

Accuracy 3% RH @ 73°F (23°C) from 5% to 90%; (0-5% & 90%-100%) add 4%

Stability typically <0.5% drift per year

Thermal Effect 0.07% per °F

 $\begin{array}{lll} \textbf{Supply Voltage} & 9.5\text{-}28 \text{ VDC, loop powered} \\ \textbf{Signal Output} & 4\text{-}20 \text{ mA} @ 725\Omega, optional} \\ \end{array}$

thermistor, RTD

Measurement Range

RH 0-100%

Temperature -20° to 140°F (-29° to 60°C) (see

ordering information)

Sensor Protection HDPE FGX filter (duct and OSA)
Operating Temperature -20° to 158°F (-29° to 70°C)
Operating Humidity 0-100% RH non-condensing

Enclosure Rating

Room

Duct/OSA NEMA 1, Beige plastic

Wiring Terminations Terminal block (22 to 16 AWG)

Weight

 Wall
 0.3 lb (0.09 Kg)

 Duct
 1.14 lb (0.52 Kg)

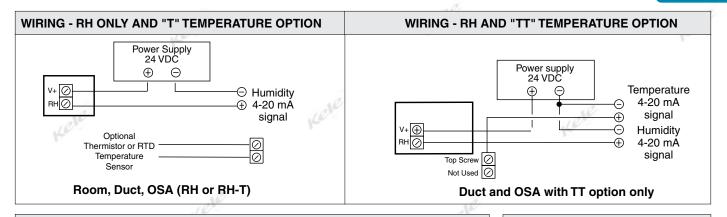
 OSA
 1.2 lb (0.54 Kg)

Approvals RoHs Warranty 1 year



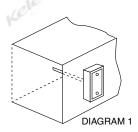
3% WALL, DUCT AND OSA HUMIDITY TRANSMITTERS H_30K SERIES





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.



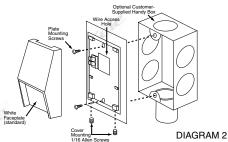
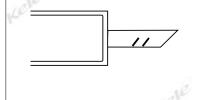


DIAGRAM 2: The sensor should be mounted approximately 5' (12.7 cm) above the floor, on an interior wall, away from any heating or cooling generating devices. Basic model comes with screw terminal block, two #6-32 screws for handybox mounting, and two #6 x 1" screws for direct wall mounting. Cover screws 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 vertically with the sensor slots pointing down.



ORDERING INFORMATION

MODEL	DESC	RIPTION	
HW30K	3% beige room humidity transmitter, 4-20 mA output		
HD30K	3% duct-mount humidity transmitter, 4-20 mA output		
HO30K	3% OS	SA-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	
	T11K	10,000Ω thermistor @ 77°F (25°C), Type III, with 11K shunt	
	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	
	T63	1000Ω nickel SS flush mounted plate RTD @ 70°F (26°C), Type III (yellow leads)	
	T81	100Ω RTD @ 32°F (0°C), 385 platinum curve	
	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)	
	TT-3	0° to 100°F (-18° to 38°C) transmitter, 4-20 mA (duct and OSA only)	
		XN1 NIST 1 point, 30% (Humidity only)	
		XN2 NIST 2 point, 30% and 50% (Humidity only)	
		XN3 NIST 3 point, 30%, 50% and 70% (Humidity only)	
HD30K	Т3	Example: HD30K-T3 Duct-mount humidity sensor with 10 kΩ Type III temperature sensor	

RELATED PRODUCTS

DCPA-1.2 Power supply, 120 VAC IN to 24 VAC/24 VDC OUT **DCP-1.5-W** Power supply, 24 VAC IN to 24 VDC OUT