



# HUMIDITY

## 2% WALL, DUCT AND OSA HUMIDITY TRANSMITTERS H\_20K SERIES

### DESCRIPTION

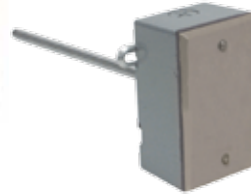
The Kele Series H\_20K Humidity Transmitters have been specifically designed for use in HVAC/BAS applications. These instruments measure relative humidity from 5% to 90% RH with 2% accuracy and produce a two wire 4-20 mA linear output. All are available with an optional passive RTD or thermistor. The duct and OSA versions may also be fitted with a 4-20mA temperature transmitter.

### APPLICATION

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).



HW21K



HD20K



HO20K

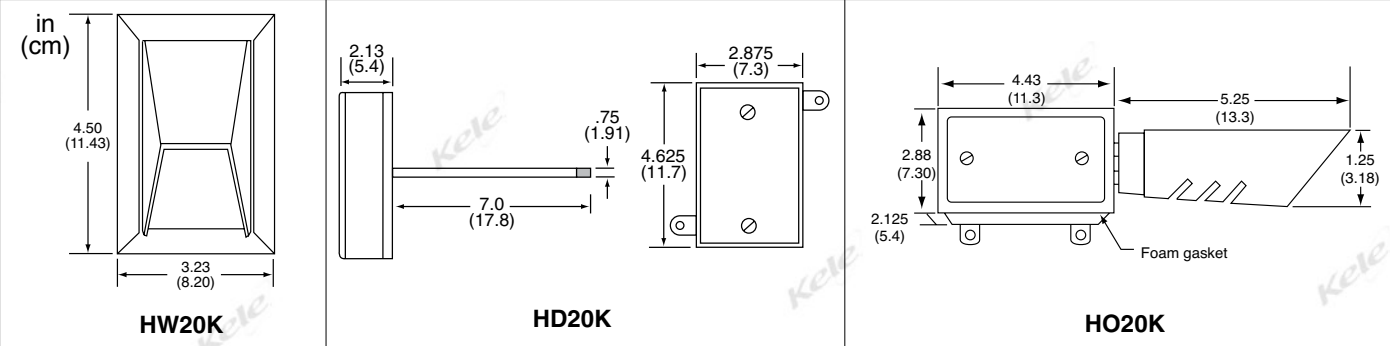


### FEATURES

- 2% accuracy (5% to 90%)
- Two-wire, 4-20 mA RH output
- Optional temperature thermistor
- Optional temperature RTD
- Optional temperature 4-20mA (duct or OSA)

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### DIMENSIONS



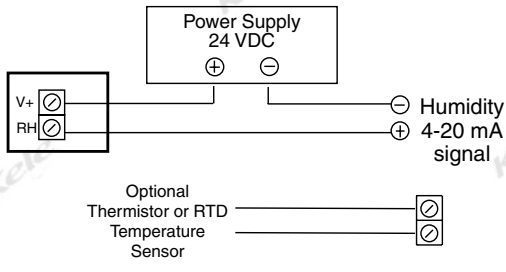
### SPECIFICATIONS

<b>Accuracy</b>	2% RH @ 73°F (23°C) from 5% to 90% RH; (0-5% & 90%-100%) add 3%	<b>Operating Temperature</b>	-20° to 158°F (-29° to 70°C)
<b>Stability</b>	0.5% drift per year	<b>Operating Humidity</b>	0-100% RH non-condensing
<b>Thermal Effect</b>	0.07% per °F	<b>Enclosure Rating</b>	
<b>Supply Voltage</b>	9.5-28 VDC, loop powered	<b>Room</b>	NEMA 1, Beige plastic
<b>Signal Output</b>	4-20 mA @ 750Ω, optional thermistor, RTD	<b>Duct/OSA</b>	NEMA 4, weather resistant cast aluminum
<b>Measurement Range</b>		<b>Wiring Terminations</b>	Terminal block (22 to 16 AWG)
<b>RH</b>	0-100%	<b>Weight</b>	
<b>Temperature</b>	-20° to 140°F (-29° to 60°C) (see ordering information)	<b>Room</b>	0.3 lb (0.09 Kg)
<b>Sensor Protection (Duct and OSA)</b>	Plastic filter	<b>Duct</b>	1.14 lb (0.52 Kg)
		<b>OSA</b>	1.2 lb (0.54 Kg)
		<b>Approvals</b>	RoHs
		<b>Warranty</b>	1 year

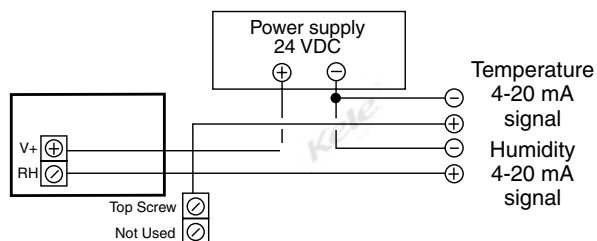


## 2% WALL, DUCT AND OSA HUMIDITY TRANSMITTERS H\_20K SERIES

### WIRING FOR RH ONLY AND "T" TEMPERATURE OPTION WIRING OR RH AND "TT" TEMPERATURE OPTION



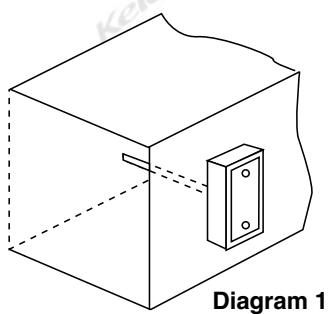
**Room, Duct, OSA (RH or RH-T)**



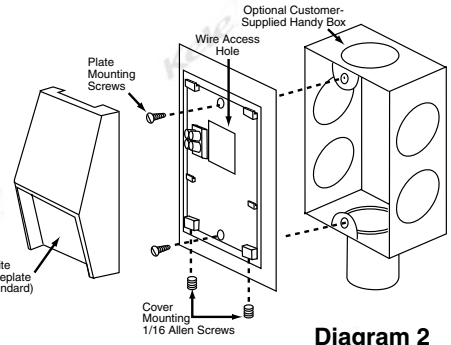
**Duct and OSA with TT option only**

### MOUNTING ROOM AND DUCT 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 1**

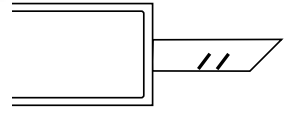


**Diagram 2**

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	DESCRIPTION
HW20K	2% beige room humidity transmitter, 4-20 mA output
HW21K	2% white room humidity transmitter, 4-20 mA output
HD20K	2% duct-mount humidity transmitter, 4-20 mA output
HO20K	2% OSA-mount humidity transmitter, 4-20 mA output
<b>OPTIONS (Temperature Sensors or Transmitters)</b>	
--	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)
T71	100Ω SS flush mounted plate RTD @ 32°F (0°C), Type III (blue 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)

**Example:** HD20K-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