



# HUMIDITY

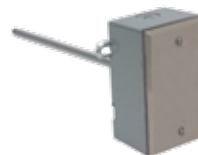
## 3% WALL, DUCT AND OSA HUMIDITY TRANSMITTERS H\_30K SERIES

### 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.



HW30K



HD30K



HO30K



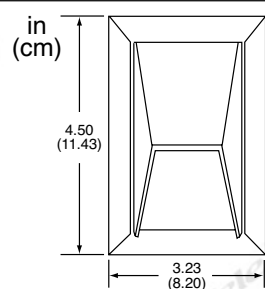
### OPERATION

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

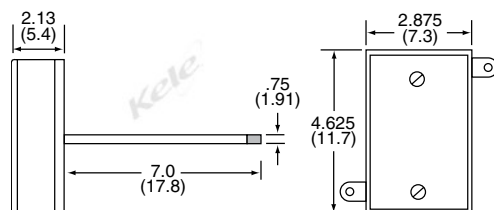
### FEATURES

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

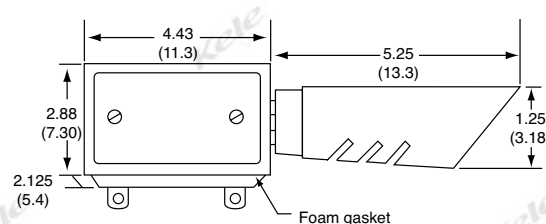
### DIMENSIONS



HW30K



HD30K



HO30K

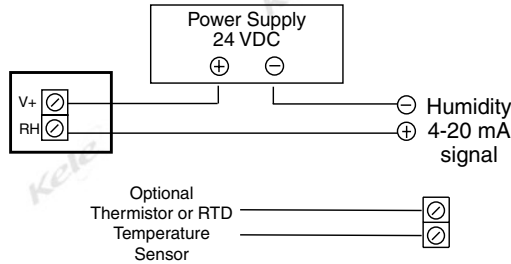
### SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>Accuracy</b>              | 3% RH @ 73°F (23°C) from 5% to 90%; (0-5% & 90%-100%) add 4% typically <0.5% drift per year |
| <b>Stability</b>             | 0.07% per °F  |
| <b>Thermal Effect</b>        | 0.07% per °F  |
| <b>Supply Voltage</b>        | 9.5-28 VDC, loop powered  |
| <b>Signal Output</b>         | 4-20 mA @ 725Ω, optional thermistor, RTD  |
| <b>Measurement Range</b>     |   |
| <b>RH</b>                    | 0-100%  |
| <b>Temperature</b>           | -20° to 140°F (-29° to 60°C) (see ordering information)                                     |
| <b>Sensor Protection</b>     | HDPE FGX filter (duct and OSA)  |
| <b>Operating Temperature</b> | -20° to 158°F (-29° to 70°C)  |
| <b>Operating Humidity</b>    | 0-100% RH non-condensing  |
| <b>Enclosure Rating</b>      |   |

|                            |                               |
|----------------------------|-------------------------------|
| <b>Room</b>                | NEMA 1, Beige plastic         |
| <b>Duct/OSA</b>            |                               |
| <b>Wiring Terminations</b> | Terminal block (22 to 16 AWG) |
| <b>Weight</b>              |                               |
| <b>Wall</b>                | 0.3 lb (0.09 Kg)              |
| <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                        |

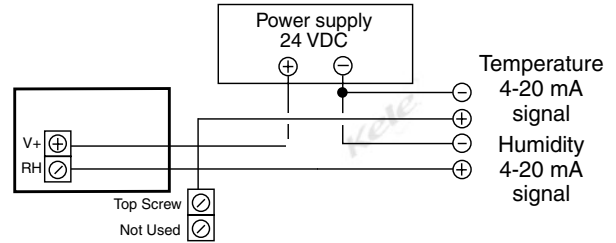


### WIRING - RH ONLY AND "T" TEMPERATURE OPTION



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

### WIRING - RH AND "TT" TEMPERATURE OPTION



Duct and OSA with TT option only

### 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.

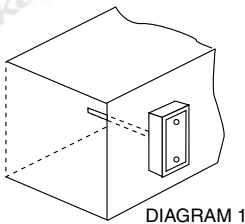


DIAGRAM 1

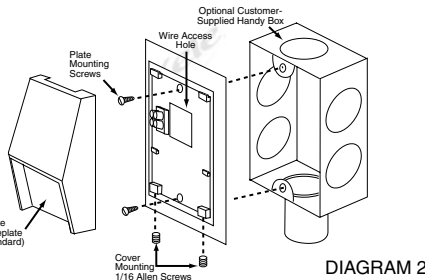
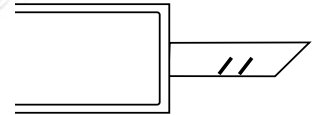


DIAGRAM 2

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 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                              |
| <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) |
| 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 - T3

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

### RELATED PRODUCTS

DCPA-1.2  
DCP-1.5-W

Power supply, 120 VAC IN to 24 VAC/24 VDC OUT  
Power supply, 24 VAC IN to 24 VDC OUT