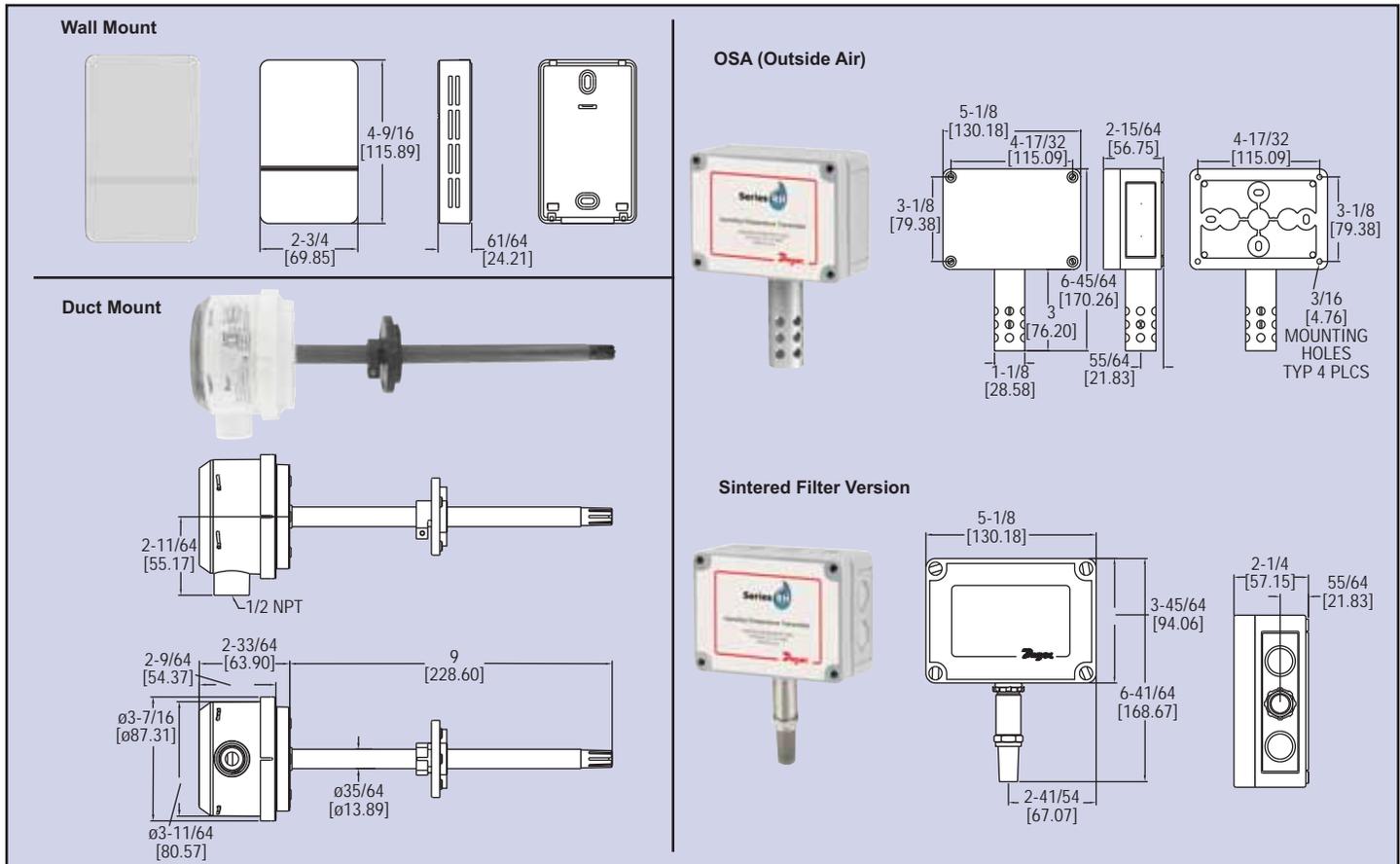


Series  
RH/RHL

# Humidity/Temperature Transmitter

Calibration-Free, 2% Or 3% Accuracy, Optional Display



**Demanding humidity/temperature applications require the Series RH/RHL Transmitter** which offers high accuracy, long term stability, and reliable operation. The Series RH/RHL is designed for monitoring and controlling humidity or both humidity and temperature in building energy management systems, HVAC, commercial, residential, clean rooms, museums, climate chambers, and other space monitoring applications.

The Series RH/RHL is a two-wire transmitter with a 4-20 mA loop powered output or 0 to 10 VDC output. The state of the art sensor recovers from 100% saturation and is calibration-free. A variety of mounting configurations are available including wall mount, duct mount, and OSA (outside air) models. Select humidity monitoring or humidity and temperature models.

The combined humidity/temperature version (RHT) provides dual 4-20 mA or 0 to 10 VDC output signals to control both humidity and temperature with one sensor which reduces installation costs. The duct mount version is also available with an optional alpha-numeric LCD to provide local indication of humidity and temperature simultaneously. The displayed temperature is field selectable for °F or °C. Monitor humidity in ducts, rooms, and outside air.

## APPLICATIONS

- Room temperature/humidity monitoring
- Supply air temperature/humidity monitoring
- Exhaust air temperature/humidity monitoring
- Outside air temperature/humidity monitoring

## SPECIFICATIONS

**Relative Humidity Range:** 0 to 100% RH.

**Temperature Range:** -40 to 140°F (-40 to 60°C).

**Accuracy:** (RH): ±2% @ 10 - 90% RH; (RHL): ±3% @ 20-80% RH; ±0.9°F @ 72°F (±0.3°C @ 25°C).

**Temperature Limits:** -40 to 140°F (-40 to 60°C).

**Storage Temperature:** -40 to 176°F (-40 to 80°C).

**Compensated Temperature Range:** -4 to 140°F (-20 to 60°C).

**Power Requirements:** 10-35 VDC.

**Output Signal:** 4-20 mA or 0-10 VDC, 2 channels for humidity/temperature models (loop powered on RH current models).

**Response Time:** 5-15 seconds.

**Electrical Connections:** Screw terminal block.

**Conduit Connection:** Duct mount: 1/2" NPS; OSA: 1/2" (22.3 mm).

**Drift:** <1% RH/year.

**RH Sensor:** Capacitance polymer.

**Temperature Sensor:** Solid state band gap.

**Housing Material:** Wall Mount: ABS; Duct Mount: PBT; OSA: Polycarbonate.

**Enclosure Rating:** NEMA 4X (IP65) for OSA mount only.

**Display:** Optional 2-line alpha-numeric, 8 characters/line for duct mount only.

**Display Resolution:** RH: 0.1%; 0.1°F (0.1°C).

**Weight:** Wall Mount: 0.5 lb (0.25 kg); Duct Mount: 0.6 lb (0.3 kg); OSA: 1 lb (0.45 kg).

**Agency Approvals:** CE.

# Designed for Demanding Humidity/Temperature Applications

## FEATURES

- Long term stability
- Selectable temperature units
- Designer wall, duct or outside air models
- ±2% or ±3% accuracy for RH
- Dual 4-20 mA or 0-10 VDC outputs on humidity/temperature models
- Two-line alpha-numeric display for local indication
- Completely recovers from 100% saturation

### Designer Wall Models

Model	Accuracy	Humidity Outputs	Temperature Outputs
RHUL-W	3%	4 to 20 mA	None
RHTL-W	3%	4 to 20 mA	4 to 20 mA
RHUL-W1	3%	0 to 10 VDC	None
RHTL-W1	3%	0 to 10 VDC	0 to 100 VDC
RHU-W	2%	4 to 20 mA	None
RHT-W	2%	4 to 20 mA	4 to 20 mA
RHU-W1	2%	0 to 10 VDC	None
RHT-W1	2%	0 to 10 VDC	0 to 100 VDC

### Outside Air Models

Model	Accuracy	Humidity Outputs	Temperature Outputs
RHUL-O	3%	4 to 20 mA	None
RHTL-O	3%	4 to 20 mA	4 to 20 mA
RHUL-O1	3%	0 to 10 VDC	None
RHTL-O1	3%	0 to 10 VDC	0 to 10 VDC
RHU-O	2%	4 to 20 mA	None
RHT-O	2%	4 to 20 mA	4 to 20 mA
RHU-O1	2%	0 to 10 VDC	None
RHT-O1	2%	0 to 10 VDC	0 to 10 VDC

### Duct Mount Models

Model	Accuracy	Humidity Outputs	Temperature Outputs
RHUL-D	3%	4 to 20 mA	None
RHTL-D	3%	4 to 20 mA	4 to 20 mA
RHUL-D1	3%	0 to 10 VDC	None
RHTL-D1	3%	0 to 10 VDC	0 to 10 VDC
RHU-D	2%	4 to 20 mA	None
RHT-D	2%	4 to 20 mA	4 to 20 mA
RHU-D1	2%	0 to 10 VDC	None
RHT-D1	2%	0 to 10 VDC	0 to 10 VDC
RHT-D-LCD	2%	4 to 20 mA	4 to 20 mA
RHT-D1-LCD	2%	0 to 10 VDC	0 to 10 VDC
RHTL-D-LCD	3%	4 to 20 mA	4 to 20 mA
RHTL-D1-LCD	3%	0 to 10 VDC	0 to 10 VDC

### Sintered Filter Models

Model	Accuracy	Humidity Outputs	Temperature Outputs
RHUL-S	3%	4 to 20 mA	None
RHTL-S	3%	4 to 20 mA	4 to 20 mA
RHUL-S1	3%	0 to 10 VDC	None
RHTL-S1	3%	0 to 10 VDC	0 to 10 VDC
RHU-S	2%	4 to 20 mA	None
RHT-S	2%	4 to 20 mA	4 to 20 mA
RHU-S1	2%	0 to 10 VDC	None
RHT-S1	2%	0 to 10 VDC	0 to 10 VDC

