

EHRH Waterproof RH Transmitter

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The Model EHRH Relative Humidity Transmitter is a waterproof RH sensing element and package which is ideally suited for monitoring relative humidity in high RH/harsh environment applications or where washdowns are required. The unit is designed for continuous monitoring of relative humidity and temperature and is available in +/- 2% accuracy.



Both the sensor and electronics are contained in an epoxy-hardened enclosure designed for continuous service. A water-tight membrane filter is installed over the RH sensor for increased protection against high RH, contaminants and washdowns. The unit is designed to withstand 100% saturation.

The sensor incorporates a bulk polymer resistance element. The polymer is impervious to most contaminants and, since it is a bulk resistance device, surface contamination such as dust will not alter the accuracy of the readings.

The unit is provided with continuous temperature compensation which adjusts for temperature -induced change in the RH sensor output. The compensation provides high measurement accuracy over the entire operating range of the instrument.

Features

- Waterproof Sensing Element and Housing
- Compact Transmitter with Built-in Sensor
- Bulk Polymer Resistance RH Sensor
- Resistant to Contamination
- Thermistor Temperature Measurement
- Temperature Compensation

Applications

- Greenhouses
- Textile Mills
- Food Processing
- Shipping Containers
- Swimming Pools
- Hospital Suites

SPECIFICATIONS

Humidity:

Sensing Element: Resistance change of bulk polymer sensor.

Accuracy at 77°F: +/- 2% RH. 30-95% RH including hysteresis, linearity, and repeatability.

Temperature Effect: Less than 0.11% per °F (Less than 0.06% per °C)

Sensitivity: 0.1% RH

Repeatability: 0.5% RH.

Linearity: See Accuracy.

Hysteresis: Less than 1%

Operating Range, Sensor & Electronics: 0% to 100% RH, -20°F to 54°F (-4°C to +129°C).

Max. Air Velocity: 10,000 ft/min

Output Ranges: 4-20mA current, 2-wire, loop-powered for 0-100%, RH (standard) into 0-900 ohms.

Adjustment:

Zero: +/-20%, non-interactive

Span: +/-10%, non-interactive

Long Term Stability: Less than 2% drift per year typical

Power, Supply Voltage: 12-36 VDC

Wiring Connection: Deutsch 4-position waterproof connector (For front wiring only - flying leads for back wiring).

Storage Temperature: -65°F to +70°F (-85°C to +158°C).

Temperature:

Sensing Element: Thermistor, 10K ohm at 25°, 2 wire measurement.

Accuracy at 25° C: +/- 0.5°F (+/- 0.3°C). Also available with 100(RTD with 4-20mA analog output.

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