

HX98

Relative Humidity Transmitter

INSTRUCTION
SHEET

M3499/0899

The Omega HX98 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.

Both 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 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

Specifications**Humidity**

Sensing Element: Resistance change of bulk polymer sensor

Performance

Accuracy: at 25°C (75°F) ±2% RH. 30-95% RH including hysteresis, linearity and repeatability

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

Sensitivity: 0.1% RH

Repeatability: 0.5% RH

Linearity: See Accuracy

Hysteresis: Less than 1%

Operating Range:

Sensor and Electronics: 0% to 100% RH, -20 to 54°C (-4 to 129°F)

Max. Air Velocity: 10,000 ft/min

Output Ranges

4-20 mA current, 2-wire, loop-powered for 0-100% RH (standard) into 0-900 Ω

0-5 volt for 0-100% RH

0-10 volt for 0-100% RH

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

Max. Lead: Ω = $\frac{\text{Supply}-10 \text{ Vdc}}{.02\text{A}}$

Note: Minimum supply voltage of 15 Vdc is required for 10 volt output units.

Wiring Connections

HX98-1: Deutsch 4-position waterproof connector (for front wiring only)

HX98-2: Flying Leads (for back wiring)

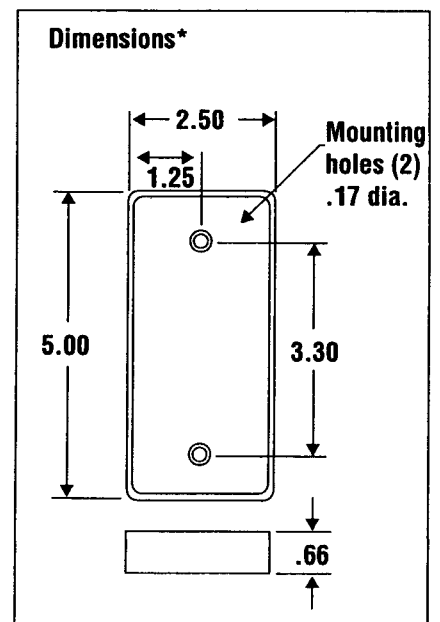
Storage

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

Temperature

Sensor Element: Thermistor, 10K ohm at 25°C, 2-wire measurement

Accuracy: at 25°C (77°F) - ±0.3°C (±0.5°F)



* Dimensions are in inches



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WARNING: These products are not designed for use in, and should not be used for, patient-connected applications.



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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