

# Relative Humidity/Ambient Temperature Transmitters

## For Duct or Wall Mounting

### HX94B Series



Optional

- ✓ Accurate to  $\pm 2.5\%$  Relative Humidity and  $\pm 0.6^\circ\text{C}$  ( $\pm 1^\circ\text{F}$ ) Temperature
- ✓ Two Separate Analog Outputs, Humidity and Temperature
- ✓ Four Analog Outputs available, 4 to 20 mA, 0 to 1V, 0 to 5V, 0 to 10V
- ✓ Stainless Steel NEMA 4 (IP66) Enclosure
- ✓ Three Different Output Connection Styles Available
- ✓ Includes Hardware for Wall and Duct Mounting
- ✓ Removable Stainless Steel Sensor Cap

The OMEGA® HX94B Series temperature/relative humidity transmitter provides a linearized and temperature compensated output signal of 4 to 20 mA, 0 to 1 Vdc, 0 to 5 Vdc or 0 to 10 Vdc depending upon the model selected for both temperature/relative humidity measurement. The output signals have been calibrated and scaled to 0 to 100°C for temperature and 0 to 100% for relative humidity. The digital temperature and relative humidity sensor is protected by a stainless steel cap that is easily

HX94BC shown smaller than actual size.



All models include mounting kit, shown here.

Connector pair included with models HX94BC and HX94BV only.

removed for cleaning. The NEMA 4 stainless steel enclosure and cable entry connection provides weather tight protection. The stainless steel enclosure terminates to a 6 feet shielded cable. The cable end is either stripped leads or terminates to a 4-pin connector.

### Specifications

#### TEMPERATURE

**Measuring Range:** 0 to 100°C (32 °F to 212°F)

**Accuracy:**  $\pm 0.6^\circ\text{C}$  from 0 to 50°C (32 to 122°F),  $\pm 1.25^\circ\text{C}$  from 50 to 100°C (122 to 212°F)

**Repeatability:**  $\pm 0.2^\circ\text{C}$  (0.4°F)

**Response Time:** 5 seconds minimum, 30 seconds maximum

**Sample Rate:** 1 sample every 4 seconds

#### RELATIVE HUMIDITY

**Measuring Range:** 0 to 100% RH

**Accuracy:**  $\pm 2.5\%$  from 20 to 80% RH,  $\pm 3.5\%$  from 5 to 20% and 80 to 95% RH,  $\pm 4\%$  from 0 to 5% and 95 to 100% RH

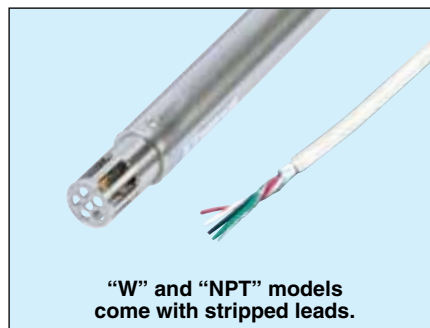
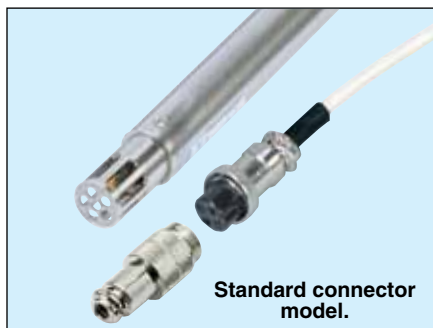
**Hysteresis:**  $\pm 1\%$  RH

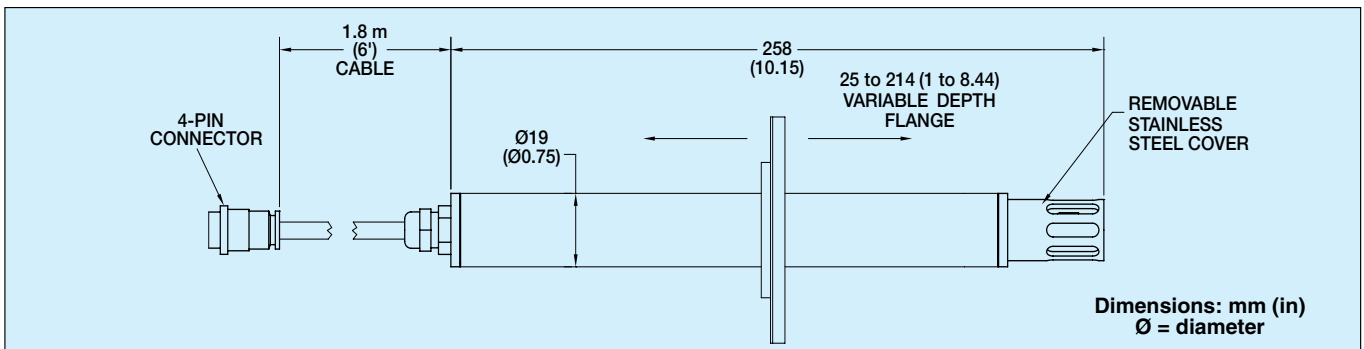
**Repeatability:**  $\pm 0.1\%$  RH

**Response Time:** 8 seconds typical

**Sample Rate:** 1 sample every 4 seconds

### MODELS AVAILABLE WITH THREE DIFFERENT CONNECTION STYLES SHOWN BELOW!





**Operating Temperature Range:**

0 to 100°C (32 to 212°F)

**Analog Outputs for Temperature and Humidity:** 4 to 20 mA, 0 to 1V, 0 to 5V, 0 to 10V

**Input Power Supply:** 9 to 30 Vdc @ 100 mA: 4 to 20 mA, 0 to 1V, 0 to 5V output, 12 to 30 Vdc @ 100 mA: 0 to 10V output

**Max Current Loop Resistance:**

$\Omega = [(V \text{ supply} - 4V)/0.02A]$  -50; 200 $\Omega$  @ 9V supply or 1250 $\Omega$  @ 30V supply

**Max Load Resistance:** 1.25K (for all voltage outputs)

**Sensor Type:** Digital sensor

**Enclosure Housing:** 316 stainless steel, NEMA 4; non-NPT version includes IP68-rated cable gland

**Electrical Connections:**

**HX94B\*\*W, HX94B\*\*NPT:** 1.8 m (6') 4 conductor PTFE shielded cable with stripped leads termination

**HX94B\*\*:** 1.8 m (6') 4 conductor PTFE shielded cable with a 4-pin connector termination; a 4-pin mating connector is included that accepts 18 to 26 AWG wire

**Dimensions:** 258 L x  $\phi$ 19 mm OD (10.15 x 0.75")

**Weight:** 200 g (7 oz) with mounting kit

**To Order**

Model No.	Description
HX94BC	Relative humidity/temperature transmitter (4 to 20 mA output) with 4-pin connector
HX94BV0	Relative humidity/temperature transmitter (0 to 1 Vdc output) with 4-pin connector
HX94BV1	Relative humidity/temperature transmitter (0 to 5 Vdc output) with 4-pin connector
HX94BV2	Relative humidity/temperature transmitter (0 to 10 Vdc output) with 4-pin connector
HX94BCW	Relative humidity/temperature transmitter (4 to 20 mA output) with 1.8 m (6') lead wires
HX94BV0W	Relative humidity/temperature transmitter (0 to 1 Vdc output) with 1.8 m (6') lead wires
HX94BV1W	Relative humidity/temperature transmitter (0 to 5 Vdc output) with 1.8 m (6') lead wires
HX94BV2W	Relative humidity/temperature transmitter (0 to 10 Vdc output) with 1.8 m (6') lead wires
HX94BCNPT	Relative humidity/temperature transmitter (4 to 20 mA output) with 1/2" male NPT fitting and 1.8 m (6') lead wires
HX94BV0NPT	Relative humidity/temperature transmitter (0 to 1 Vdc output) with 1/2" male NPT fitting and 1.8 m (6') lead wires
HX94BV1NPT	Relative humidity/temperature transmitter (0 to 5 Vdc output) with 1/2" male NPT fitting and 1.8 m (6') lead wires
HX94BV2NPT	Relative humidity/temperature transmitter (0 to 10 Vdc output) with 1/2" male NPT fitting and 1.8 m (6') lead wires

*Comes complete with mating connector (models HX94BC, HX94BV0, HX94BV1, HX94BV2 only), removable stainless steel cap, removable duct flange, wall mounting kit, and quick start manual.*

**Accessories**

Model No.	Description
HX94-MC	Spare 4-pin mating connector
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output @ 400 mA, screw terminal, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output @ 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output @ 400 mA, stripped leads, CE
CAL-3-HU	NIST traceable calibration option
TX4-100	4-conductor metal foil shielded cable, 30 m (100')
TX4W-50	4-conductor metal braid shielded cable, 15 m (50')