



# Temperature/Relative Humidity Transmitters

## Wall, Duct Mount, and Remote Probe Models With Optional Built-In Digital Display

### HX93B Series



Optional

- ✓ 4 to 20 mA, 0 to 1 Vdc, 0 to 5 Vdc or 0 to 10 Vdc Outputs for Both Temperature and Relative Humidity
- ✓ Rugged Industrial Splashproof Enclosure NEMA 13 (IP54)
- ✓ Accurate to  $\pm 0.6^{\circ}\text{C}$  (0 to  $50^{\circ}\text{C}$ ) and  $\pm 2.5\%$  (20 to 80% Relative Humidity)
- ✓ New Models with Built-In Digital Display to Indicate Temperature and Relative Humidity
- ✓ Duct Mount Kit Included with Duct Mount and Remote Probe Models
- ✓ Field Replaceable Temperature/Relative Humidity Probe (Except for Duct Mount Model)

The HX93B and HX93BD Series transmitters provide remote and on-site monitoring of temperature and relative humidity. Both series output a linearized current or voltage signal proportional to the temperature and relative humidity. Relative humidity output is temperature compensated. Current output models enable placing of the transmitter at a remote location virtually any distance away from the measuring device. The HX93BD models feature a built-in digital display that indicates both temperature and relative humidity simultaneously. All models use an accurate digital sensor. A stainless steel mesh type filter, easily removable for cleaning, protects the sensor. Mounting screws are easily accessible inside the rugged, polycarbonate enclosure which protects the electronics to NEMA 13 (IP54) specifications.

### Relative Humidity Control System

The HX93B and HX93BD Series interface directly with OMEGA's iSeries meters and controllers to create a complete relative humidity control system. iSeries meters and controllers feature totally programmable color displays and embedded internet connectivity.

HX93BD wall mount.



DPI32 1/2 DIN temperature/process meter, shown actual size.

### Specifications

#### Input Voltage Range:

30 Vdc maximum

**HX93B Series:** 9 to 30 Vdc

**HX93BV2 Series:** 12 to 30 Vdc

#### Measuring Range

##### Temperature:

**Standard:**  $-30$  to  $75^{\circ}\text{C}$

( $-22$  to  $167^{\circ}\text{F}$ )

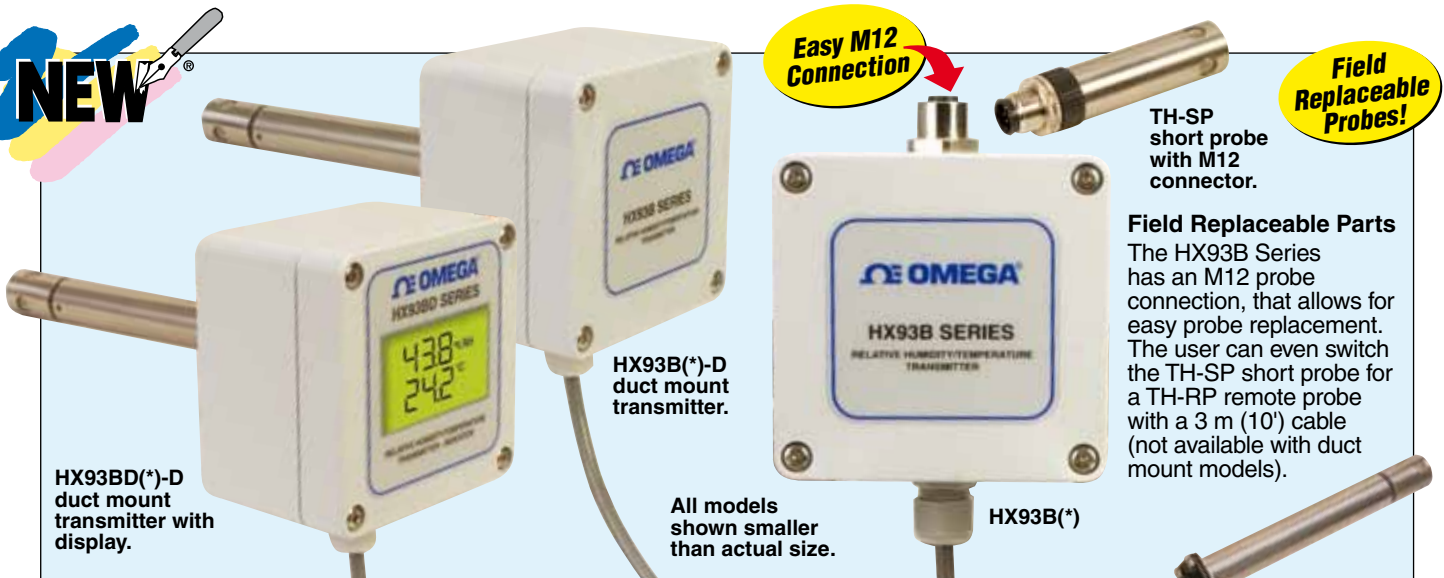
**Special:**  $-20$  to  $75^{\circ}\text{C}$  ( $-4$  to  $167^{\circ}\text{F}$ )

**Relative Humidity:** 0 to 100%

#### Accuracy

**Temperature:**  $\pm 0.6^{\circ}\text{C}$  from 0 to  $50^{\circ}\text{C}$  ( $32$  to  $122^{\circ}\text{F}$ );  $\pm 1.25^{\circ}\text{C}$  from  $-30$  to  $0^{\circ}\text{C}$  ( $-22$  to  $32^{\circ}\text{F}$ ) and  $50$  to  $75^{\circ}\text{C}$  ( $122$  to  $167^{\circ}\text{F}$ )

**Relative Humidity:**  $\pm 2.5\%$  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



**Output**

**HX93BC or HX93BDC:**

4 to 20 mA for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

**HX93BV0:** 0 to 1 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

**HX93BV1:** 0 to 5 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

**HX93BV2:** 0 to 10 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

**Relative Humidity Temperature Compensation:** -30 to 75°C (-22 to 167°F)

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

**Relative Humidity Response Time:** 8 second typical

**Repeatability:** ±0.1% RH, ±0.2°C (0.4°F)

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

**Housing:** Gray polycarbonate, NEMA rated up to 13 (IP54)

**Connections:** Liquid-tight nylon with neoprene gland, for 2.50 to 8.00 mm (0.09 to 0.315") diameter cable; internal 6 position terminal block accepts 14 to 22 gauge wire

**Dimensions:**

**HX93B(\*) (without Probe):** 80.01 L x 82.30 W x 55.63 D mm (3.15 x 3.24 x 2.19")

**HX93B(\*)-D (with Probe):** 80.01 L x 82.30 W x 183.13 D mm (3.15 x 3.24 x 7.21")

**TP-SP (Short Probe):** ø16 x 71.88 L mm (ø0.63 x 2.83")

**Weight:**

**HX93B(\*):** 251 g (8.9 oz)

**HX93B(\*)-D:** 256 g (9.0 oz)

**HX93B(\*)-RP1:** 352 g (12.4 oz)

**Display (HX93BD Series Only)**

**Indicators:** Two 4 digit backlit LCD

**Display Rate:** 1 reading per second

**Display Resolution:**

**Relative Humidity:** 0.1% RH

**Temperature:** 0.1°C (0.1°F)



TH-RP remote probe with 3 m (10') cable and M12 connector.

**To Order**

Model No.	Description
HX93B(*)	Wall mount temperature and relative humidity transmitter
HX93B(*)-D	Duct mount temperature and relative humidity transmitter
HX93B(*)-RP1	Remote probe temperature and relative humidity transmitter
HX93BD(*)	Wall mount, digital display temperature and relative humidity transmitter/indicator
HX93BD(*)-D	Duct mount, digital display temperature and relative humidity transmitter/indicator
HX93BD(*)-RP1	Remote probe, digital display temperature and relative humidity transmitter/indicator

**Accessories**

Model No.	Description
TH-RP	Field replaceable remote probe with 3 m (10') cable and M12 connector
TH-SP	Field replaceable 71.88 L mm (2.83") short probe with M12 connector
HX92-CAL	Calibration kit, 11 and 75% relative humidity standards
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals 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
TX4-100	4-conductor shielded transmitter cable 30 m (100')
CAL-3-HU	NIST traceable calibration
IND-KIT	Spare duct mount kit for HX93B(*)-D, HX93B(*)-RP1, HX93BD(*)-D, HX93BD(*)-RP1

Comes complete with quickstart manual.

\* For 4 to 20 mA output specify "C", for 0 to 1 Vdc output specify "V0", for 0 to 5 Vdc output specify "V1", and for 0 to 10 Vdc output specify "V2".