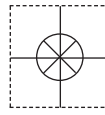


1 YEAR
WARRANTY



Ω OMEGA™

User's Guide



HX93BD WALL MOUNT



HX93BD(*)-D DUCT MOUNT

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**EASY M12
CONNECTION**



HX93B(*)



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

HX93B SERIES Temperature/Relative Humidity Transmitters



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

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

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Section 1 - General Description

The OMEGA® HX93B and HX93BD Series Temperature/Relative Humidity Transmitters provides a linearized and temperature compensated output signal of 4 to 20mA, 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 -30°C to 75°C for temperature and 0 to 100% for relative humidity. The digital temperature and relative humidity sensor is protected by a stainless steel filter that is easily removed for cleaning. The NEMA rated polycarbonate enclosure and cable entry connection provides weathertight protection. Screws are provided for mounting via internal holes inside the enclosure.

The HX93BD Series has a dual display with backlit to display both Temperature and Relative Humidity readings. An on-board slide switch allows the user to change the temperature reading from $^{\circ}\text{C}$ to $^{\circ}\text{F}$ as shown in figure 1-1 below.

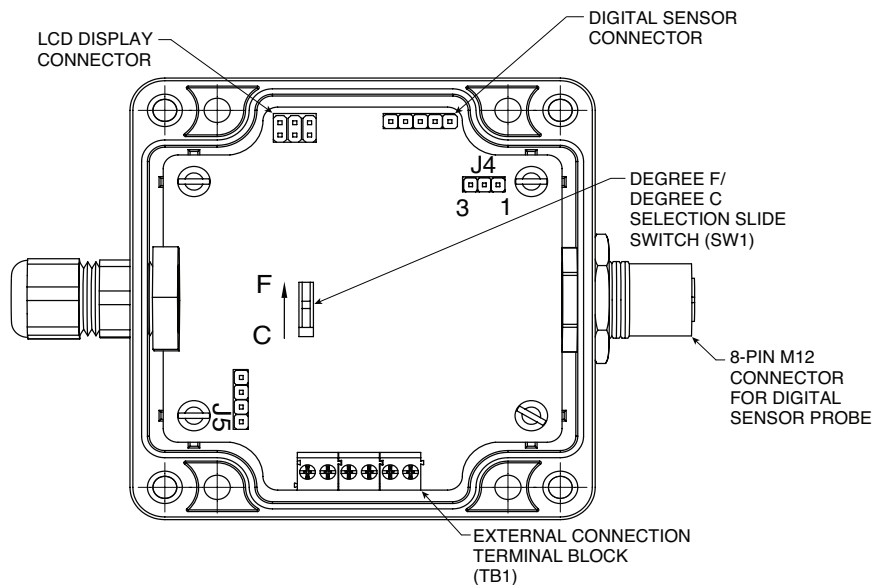


Figure 1-1. Transmitter Internal Diagram

Most of the models come with a replaceable sensor probe; the process of replacing the sensor probe is very simple using an M12 connector. See the "Maintenance" section for details.

The models with a replaceable Sensor Probe are:

HX93BDC, HX93BDV0, HX93BDV1, HX93BDV2, HX93BDC-RP1, HX93BDV0-RP1, HX93BDV1-RP1, HX93BDV2-RP1, HX93BC, HX93BV0, HX93BV1, HX93BV2, HX93BC-RP1, HX93BV0-RP1, HX93BV1-RP1, HX93BV2-RP1.

The models without a replaceable sensor probe are:

HX93BDC-D, HX93BDV0-D, HX93BDV1-D, HX93BDV2-D, HX93BC-D, HX93BV0-D, HX93BV1-D, HX93BV2-D.

Section - 2 Unpacking

Remove the packing list and verify that you have received all your equipment. If you have any questions about the shipment, please call our Customer Service Department at

1-800-622-2378 or 203-359-1660. On the web you can find us at:

www.omega.com e-mail: cservice@omega.com

When you receive the shipment, inspect the container and equipment for any signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

NOTE:

The carrier will not honor any damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

The following items are supplied in the box with your HX93B Series transmitter.

- HX93B Series Quick Start Manual, MQS5340 (1 ea.)
- #6 Wall Anchor and #6 Mounting Screw (2 ea.)
- Dew point Card (1 ea.)

2.1 HX93B available models and functional description

Model number	Description
HX93BDC	Digital Display Wall Mount Temperature/Relative Humidity Transmitter, 4 to 20mA.
HX93BDV0	Digital Display Wall Mount Temperature/Relative Humidity Transmitter, 0 to 1 volt.
HX93BDV1	Digital Display Wall Mount Temperature/Relative Humidity Transmitter, 0 to 5 volt.
HX93BDV2	Digital Display Wall Mount Temperature/Relative Humidity Transmitter, 0 to 10 volt.
HX93BDC-D	Digital Display Duct Mount Temperature/Relative Humidity Transmitter, 4 to 20mA.
HX93BDV0-D	Digital Display Duct Mount Temperature/Relative Humidity Transmitter, 0 to 1 volt.
HX93BDV1-D	Digital Display Duct Mount Temperature/Relative Humidity Transmitter, 0 to 5 volt.
HX93BDV2-D	Digital Display Duct Mount Temperature/Relative Humidity Transmitter, 0 to 10 volt.
HX93BDC-RP1	Digital Display Remote Probe Temperature/Relative Humidity Transmitter, 4 to 20mA Output with 3 m (10') cable.
HX93BDV0-RP1	Digital Display Remote Probe Temperature/Relative Humidity Transmitter, 0 to 1 volt output with 3 m (10') cable.
HX93BDV1-RP1	Digital Display Remote Probe Temperature/Relative Humidity Transmitter, 0 to 5 volt out put with 3 m (10') cable.
HX93BDV2-RP1	Digital Display Remote Probe Temperature/Relative Humidity Transmitter, 0 to 10 volt output with 3 m (10') cable.
HX93BC	Wall Mount Temperature/Relative Humidity Transmitter, 4 to 20mA.
HX93BV0	Wall Mount Temperature/Relative Humidity Transmitter, 0 to 1 volt.
HX93BV1	Wall Mount Temperature/Relative Humidity Transmitter, 0 to 5 volt.
HX93BV2	Wall Mount Temperature/Relative Humidity Transmitter, 0 to 10 volt.
HX93BC-D	Duct Mount Temperature/Relative Humidity Transmitter, 4 to 20mA.
HX93BV0-D	Duct Mount Temperature/Relative Humidity Transmitter, 0 to 1 volt.
HX93BV1-D	Duct Mount Temperature/Relative Humidity Transmitter, 0 to 5 volt.
HX93BV2-D	Duct Mount Temperature/Relative Humidity Transmitter, 0 to 10 volt.
HX93BC-RP1	Remote Probe Temperature/Relative Humidity Transmitter, 4 to 20mA output with 3m (10') cable.
HX93BV0-RP1	Remote Probe Temperature/Relative Humidity Transmitter, 4 to 20mA output with 3m (10') cable.
HX93BV1-RP1	Remote Probe Temperature/Relative Humidity Transmitter, 4 to 20mA output with 3m (10') cable.
HX93BV2-RP1	Remote Probe Temperature/Relative Humidity Transmitter, 4 to 20mA output with 3m (10') cable.
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 and 75% relative humidity standards.
IND-KIT	Spare duct mount kit for HX93B(*)-D,HX93B(*)-RP1, HX93BD(*)-D, HX93BD(*)-RP1

Section 3 – Electrical Connection and Temperature Measuring Range Selection

NOTE:

All electrical connections and wiring should be performed by a suitably trained professional only.

3.1 Electrical Connection

Follow the electrical connection diagram shown in figure 3-1 below to set up your Temperature/Relative Humidity Transmitter.

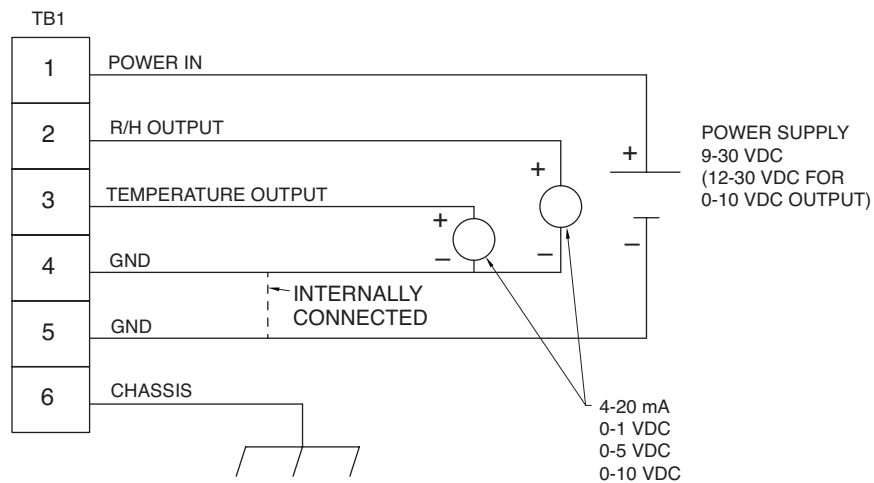


Figure 3-1 Electrical Connection Diagram

3.2 Temperature Measuring Range Selection:

The temperature measuring range of the HX93B can be modified by making a minor change to a connector J4. The standard temperature measuring range is -30 to 75°C (-22 to 167°F) without adding any jumper on connector J4. If you would like to change the range to -20 to 75°C (-4 to 167°F), add a jumper on connector J4 pin 1 to pin 2. See the diagram below for the location of the connector and its pins.

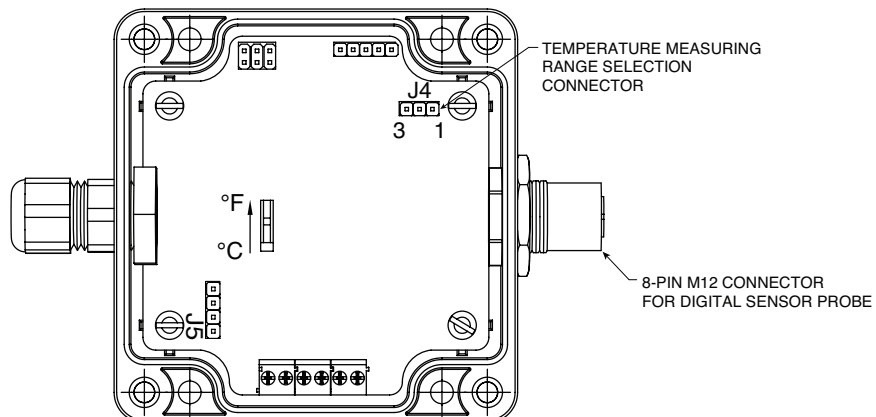


Figure 3-2 Temperature Measuring Range Selection Diagram

Section 4 - Mounting

The HX93B and HX93BD series transmitters are designed for wall, duct or remote probe mounting depending upon the model. Plastic wall anchors and mounting screws are included for wall mounting and remote probe models. A duct mounting kit is included with duct mount models.

See figure 4-1, figure 4-2 and figure 4-3 for the wall mount, duct mount and remote probe model dimension for your mounting reference.

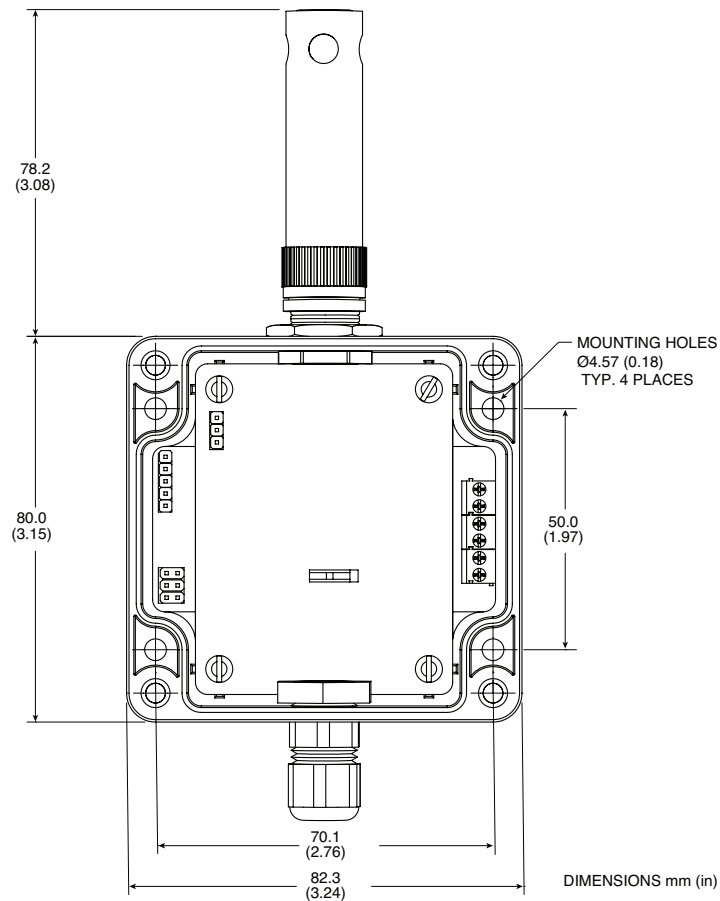


Figure 4-1 Wall Mount Model Dimensions

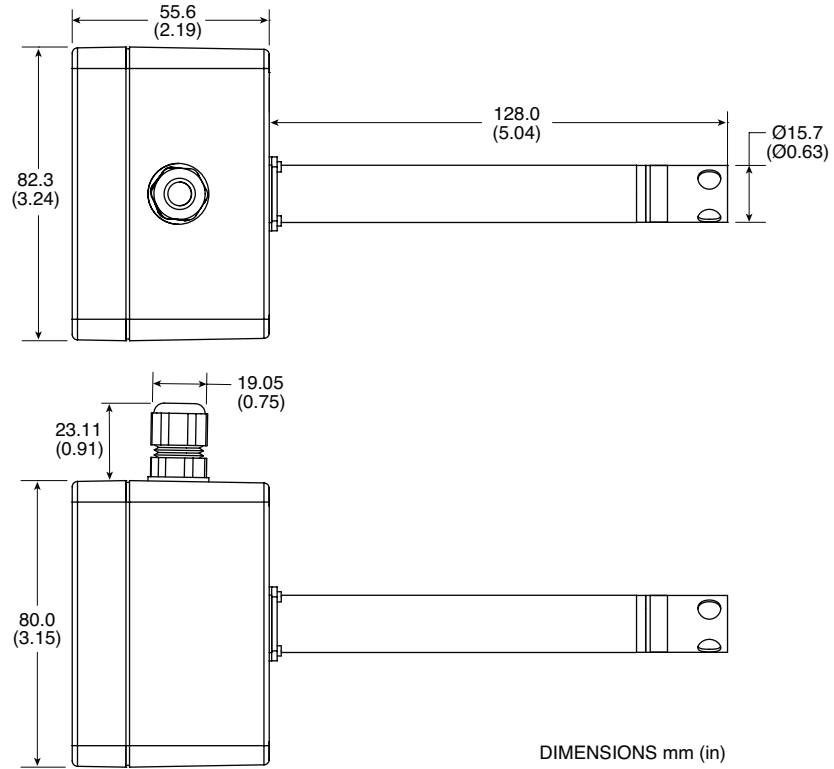


Figure 4-2 Duct Mount Model Dimensions

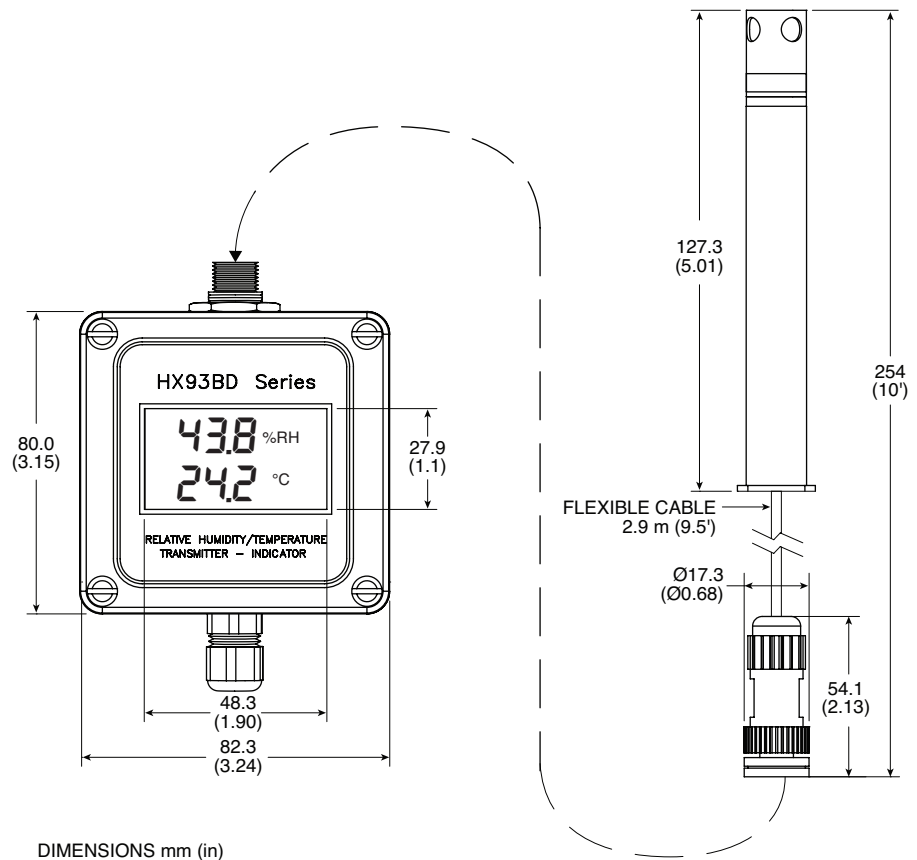


Figure 4-3 Remote Probe Model Dimensions