

HT1 AND ST1 DUCT AND PLENUM PROBE INSERTION MOUNT INSTALLATION

OVERVIEW

This document provides the instructions necessary to install the Small Duct/Plenum Probes (Figure 1) into ducts and plenums. The insertion mounted probes are installed externally through the sidewall of the duct/plenum. Installation consists of marking and preparing the mounting holes and then installing and securing them. For detailed probe information, refer to the Small Duct/Plenum Probe technical manual under separate cover, TM_HT1/ST1. For detailed information on transmitter set up and operation of the complete airflow measurement station, refer to the associated transmitter technical manual (under separate cover). Observe the following precautions during installation:

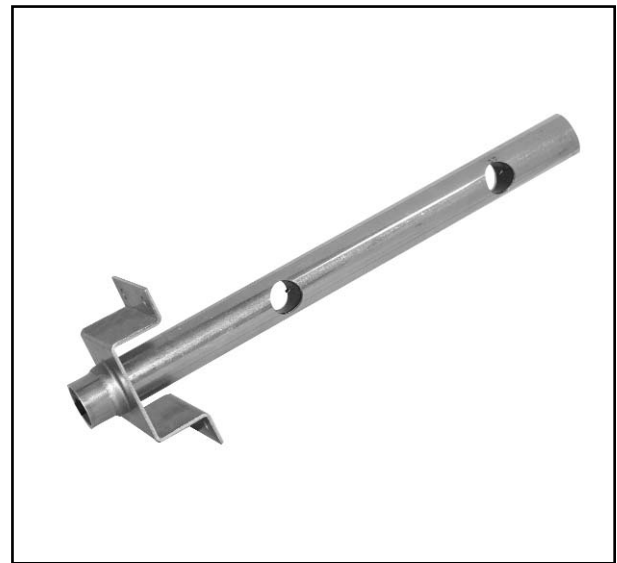


Figure 1. Small Duct and Plenum Probe

CAUTIONS/WARNINGS



Location of the probe(s) is critical for proper performance of the airflow station. Probes must be installed in accordance with the engineer's plans and **EBTRON** placement guidelines for the specified location. For probe placement detail, refer to the probe technical manual under separate cover.



Ensure that adequate installation/service clearance exists at the installation site to permit installation of the probe into the duct/plenum, and that the cable length for the probes is sufficient to reach the planned transmitter installation.. Refer to the mechanical details of Figure 2.



Insulation that may interfere with mounting should be temporarily removed prior to installation and replaced afterwards.

PROBE HOLE PREPARATION

Figure 2 details the probe installation dimensions. Install the probe as follows. Convenient check boxes are included to ensure that each step is completed.

1. Each probe package is factory labeled for the specific location and duct size for which it is designed. Determine the specific duct location for the probe(s) as indicated on the engineer's plans showing where the airflow measuring station is to be located. Refer to Figure 3 for probe location and orientation by application.
2. Carefully open the package and inspect for damage. Proceed to the specific additional installation instructions for rectangular ducts (at step 3), round ducts (at step 6), flat oval ducts (at step 9) and for VAV terminal box applications (at step 12).

For Rectangular Ducts

3. The first dimension of the probe size indicates the length of the probe. The second dimension indicates the specific duct insertion side dimension 'X'. Refer to Figure 2 and verify that the probe is the correct size for the application duct size. Mark a point at the center of the insertion side of the duct at 'X'. Draw a line on the insertion side of the duct at this point that is perpendicular to the edge of the duct. This line will be used to locate the position of the hole to be drilled for probe insertion. Probe installation location and orientation are as shown in Figure 3.
4. Using the applicable Rectangular Duct Probe Spacing detail of Figure 3, locate and mark the exact location on the insertion side of the duct (where the probes will be inserted through) on the line drawn in step 3.
5. Prepare a **0.875 inch (22.2 mm) insertion hole** on the side of the duct where the probe will be inserted. Proceed to step 14, Final Assembly.

For Round Ducts

6. Mark and draw a line around the circumference of the duct at the probes insertion point. Probe installation locations and orientation as shown in Figure 3.
7. Using the Round Duct Probe detail of Figure 3, locate and mark the probe installation location on the circumference line drawn in step 6 where the probe will be inserted.
8. Prepare a **0.875 inch (22.2 mm) insertion hole** on the side of the duct where the probe will be inserted. Proceed to step 14, Final Assembly.

For Flat Oval Ducts

9. Mark and draw a line around the circumference of the duct at the probe insertion point. For oval duct applications, orientation is as shown in the Oval Duct Probe detail application illustration of Figure 3.
10. Using the Oval Duct Probe detail application shown in Figure 3, locate and mark the probe installation location on the circumference line drawn in step 9 where the probe will be inserted.
11. Prepare a a **0.875 inch (22.2 mm) insertion hole** on the side of the duct where the probe will be inserted. Proceed to step 14, Final Assembly.

For VAV Terminal Box Applications

12. Using the VAV Terminal box detail application of Figure 3, locate and mark probe installation location.
13. Prepare a a **0.875 inch (22.2 mm) insertion hole** at the probe insertion point. Proceed to step 14, Final Assembly.

FINAL ASSEMBLY

14. Carefully insert each probe assembly through the insertion side mounting hole, making sure that the large insertion side gasket is firmly seated against the insertion side bracket. Fasten the insertion side mounting plate to the duct at four places with appropriate sheet metal screws, making sure that the printed airflow arrow on the plate is in the actual direction of duct air flow and that the plate is parallel to the edge of the duct.
15. Connect the sensor probe to the transmitter supplied for the specific location. This completes probe installation. Complete the installation, wiring and set up of the associated transmitter as detailed in the separate Transmitter Installation Guide and Installation, Operation and Maintenance Technical Manual (each provided under separate cover).

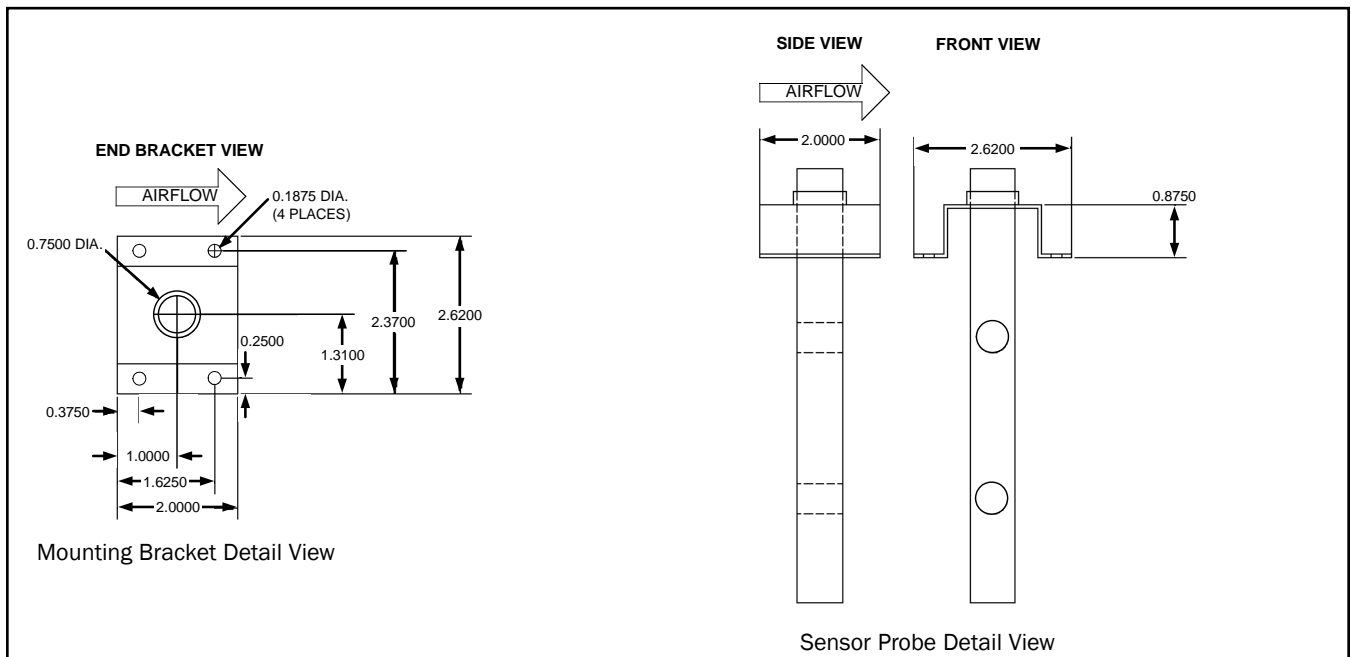
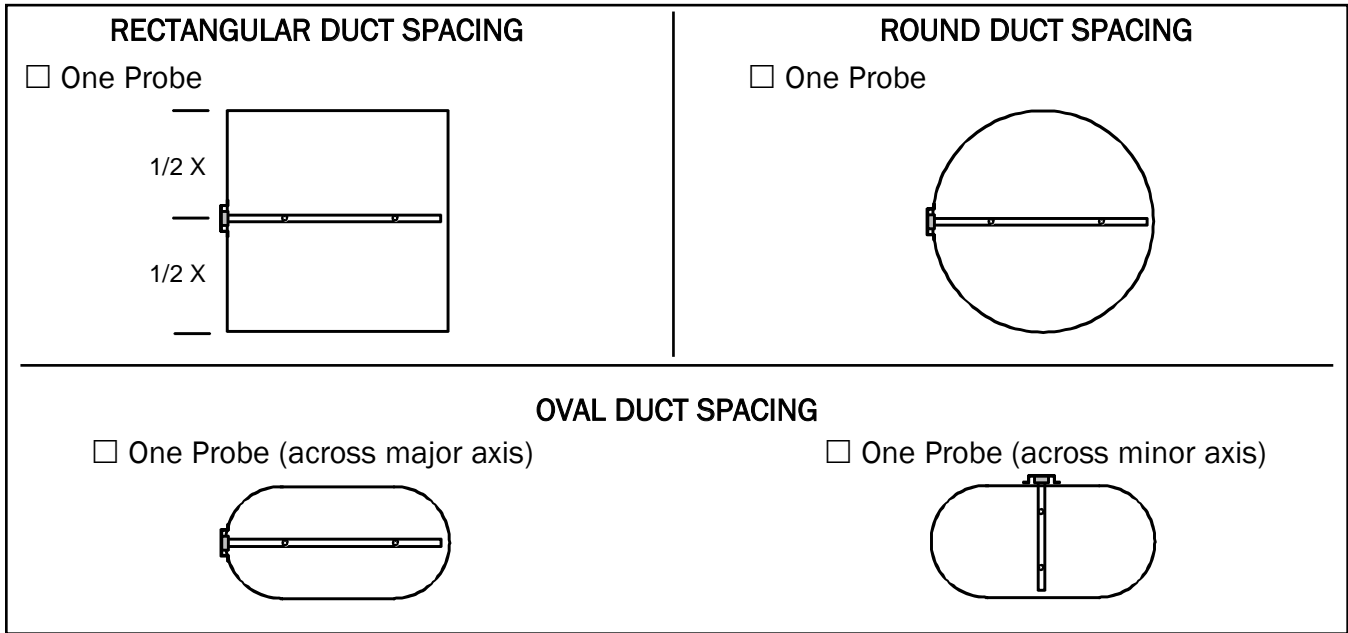


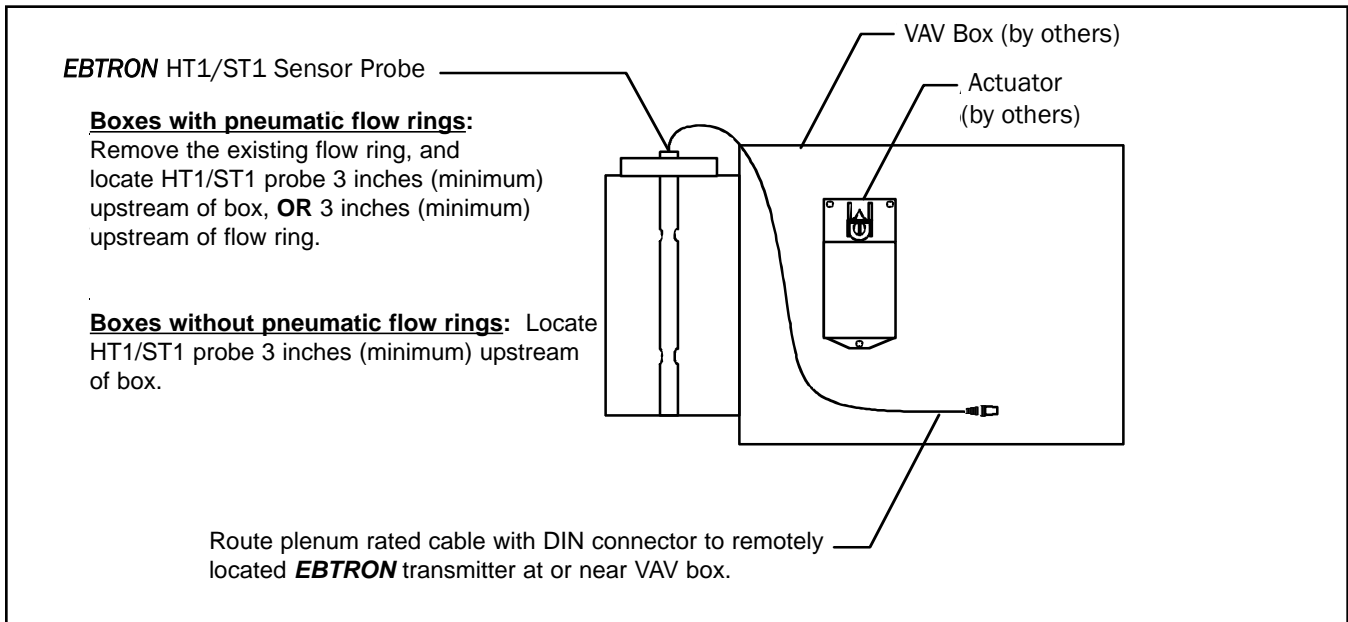
Figure 2. HT1/ST1 Probe Mechanical Dimensions

HT1/ST1 PROBE DUCT APPLICATIONS



HYBRID SERIES
INSTALLATION GUIDE

HT1/ST1 PROBE VAV TERMINAL BOX APPLICATIONS



IG-HT1-ST1_RA

Figure 3. HT1/ST1 Probe Location/Orientation Mounting Detail by Application

