-U Probe Installation (Insertion Mounting)



Step 1. Select a location in the duct or plenum opening that meets or exceeds EBTRON's recommended placement guidelines.

If the location does not meet or exceed placement guidelines the installed accuracy may be compromised and field adjustment may be necessary.

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If ordered length does not permit equal area sensor node distribution, installed accuracy may be compromised and field adjustment may be necessary.

 $\angle ! \Delta$ Do not cut the probe! Cutting the probe will void warranty.

REFER TO FIGURE "1A/2A" WHEN COMPLETING STEPS 2 TO 14.

For oval duct installations, refer to the rectangular duct figure.

Step 2. Determine which side(s) of the duct or plenum opening will be the insertion side for the probe(s).

Probes provided with adjustable insertion mounting can be installed on any side that will allow sensor node to be located for equal area distribution.

Step 3. Mark the center-point for each probe provided as calculated in Table 1 at the location determined in Step 1:

TABLE 1 – PROBE PLACEMENT					
Duct Shape	Number of Probes	Insertion Side Probe Position			
Round	1	N/A	Any Location		
	2	N/A	180° Across From Each Other		
Rectangular/Oval	1	Short Side (c)	c x 0.5		
	1	Long Side (b)	b x 0.5		
	2 (1 per Side)	Short Side (c)	c x 0.5		
	2 (Same Side)	Long Side (b)	b x 0.25 (measured from opposite sides)		

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When installing two probes, both must be installed on the plane established in Step 1.

- Step 4. Drill a 7/8 inch hole that is centered at each location identified in Step 3.
- Step 5. Determine sensor node placement for each probe provided as indicated in Table 2 to allow for equal area sensor distribution:

TABLE 2 –SENSOR PLACEMENT ('a')					
Duct Shape	Number of Probes	Insertion Side	Sensor Position		
Round	1	N/A	b x 0.5		
	2	N/A	b x 0.14655		
Rectangular/Oval	1	Short Side (c)	b x 0.5		
	1	Long Side (b)	c x 0.5		
	2 (1 per Side)	Short Side (c)	b x 0.25		
	2 (Same Side)	Long Side (b)	c x 0.5		

Sensor location is measured from the insertion side of the duct referenced in Step 3 to the centerline of the sensor ('a').

Step 6. Measuring from the bottom of the mounting flange of the probe mounting bracket, position the probe so that the sensor is located in the position calculated in Step 5, with the guide score line centered on the guide score notch and secure with set screw. Repeat this step for second probe if more than one probe is provided (see figure below).





Guide Score Line

- Step 7. Remove the foam gasket [④] from the probe tube [③], and insert probe into the duct.
- Step 8. Align the mounting bracket [2] so that it is parallel to the edge of the duct, and the airflow directional arrow is pointing in the direction of the airflow.
- (i) The mounting bracket will self-align on the round duct to the direction of airflow.
- Step 9. Use the probe mounting bracket [2] as a template to mark the location for the mounting screws [1].
- Step 10. Remove the probe from the duct, and reinstall the foam gasket [④] onto the probe tube [③].
- Step 11. Drill the four appropriately sized pilot holes at the locations marked in Step 9 for the four mounting screws [①] selected (screws not provided).
- Step 12. Insert the probe tube [③] in the duct with the airflow directional arrow pointing in the direction of airflow.
- Step 13. Secure the probe to the duct with four sheet metal screws [1] in the holes drilled in Step 11.
- Step 14. If two probes are being installed, repeat Steps 7 to 13 for the second probe.
- Step 15. Probe installation is complete! Figures "1B/2B" show a completed two probe installation.