

ELECTRA-flo/FI For Fan Inlets & Fan Walls

INSPECTION & HANDLING

- The ELECTRA-flo/FI Probes should be carefully inspected for damage prior to installation. In the event of a damaged item, please contact the Customer Service Department (see last page).
- Almost any means of handling can be utilized, however, it is important not to drop or mishandle such that damage is done to the probes, sensors, or cables.

LOCATION OF PROBES

- The ELECTRA-flo/FI probe assembly must be located within the smallest diameter portion of the fan inlet bell. See Figure 1.
- The levels of air filtration and cleanliness associated with commercial HVAC systems are satisfactory for the ELECTRA-flo/FI. Applications containing airborne particulate or condensing moisture may impair measurement accuracy and functionality.
- Contact Air Monitor's Applications Engineering Department for guidance when the intended installation location is not accessible or is obstructed.

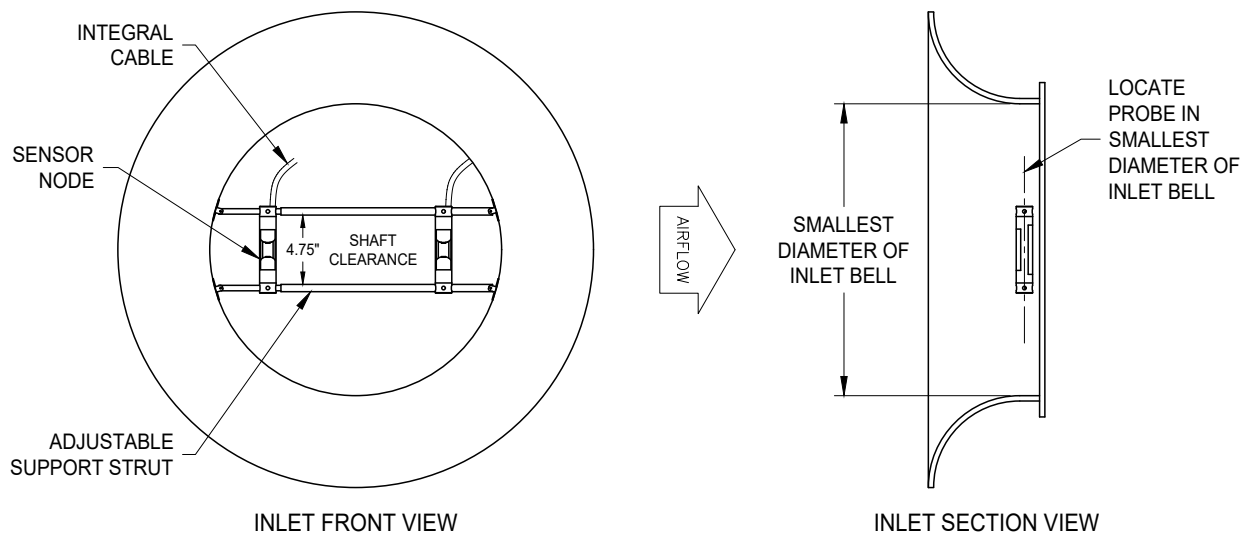


Figure 1

GENERAL INSTALLATION - PROBE ASSEMBLY.

- The sensor nodes and support struts for each Probe Assembly are loosely pre-assembled at the Factory. The Probe Assembly and Transmitter that go together for a particular fan inlet are shipped from the Factory packaged together and can be identified by means of the **ESID #** on the end of each sensor node, the transmitter package, and the Transmitter itself.

The ESID # on the Transmitter and on the Probe(s) must match.

DO NOT MIX AND MATCH

Confirm the number of Probes needed for each Transmitter by referring to the provided Factory Set-Up Sheet.

- Each sensor node has an airflow arrow to assist in correct installation relative to the direction of airflow entering the fan.
- Position the probe assembly in the smallest diameter portion of the fan inlet bell and make sure it is vertical (not leaning in or out relative to the inlet), then mark the locations of the eight (8) mounting holes corresponding to the four swivel mounting brackets. See Figure 2. Note: If the fan inlet has a shaft where the ELECTRA-flo/FI probe assembly will be mounted it will be necessary to separate the probe assembly into two sections and then re-assemble it around the shaft.
- Whenever possible use machine screws and lock nuts in lieu of sheet metal screws to secure the probe assembly. (Note: mounting hardware is not provided.)

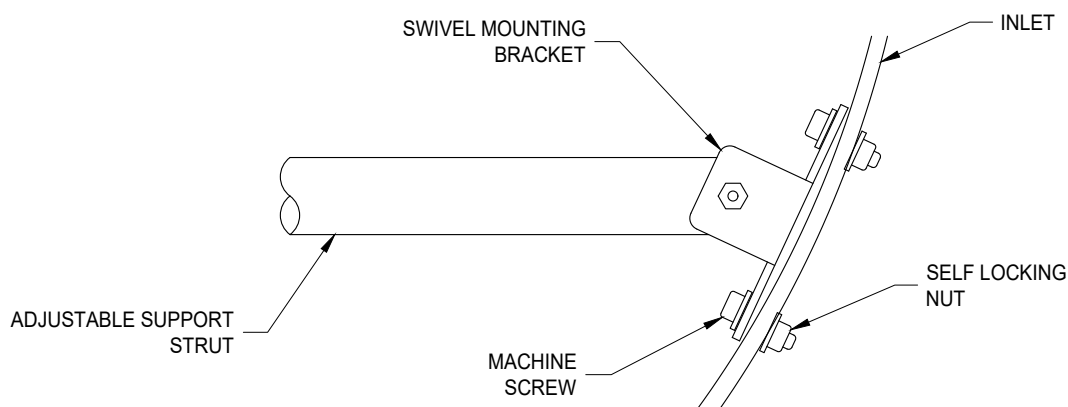


Figure 2

GENERAL INSTALLATION - PROBE ASSEMBLY, cont'd.

- Position the two sensor node assemblies and secure them in place by means of the set screw on each end. The assembly should be positioned so there is 'Y' inches between the centerline of the sensor node and the inside of the fan inlet, where:

$$Y = 20\% \text{ of the inlet diameter}$$

- If a fan has a dual inlet or for a fan wall with multiple fans, repeat the above steps for each fan inlet.

CABLE CONNECTIONS

- Each ELECTRA/FI System includes a FI Junction Box. For single or dual inlet fans mount the FI Junction Box at any convenient, accessible location. For fan walls mount the FI Junction Box at a location above the fan Inlets, with the cable access holes oriented downward to prevent any moisture intrusion. See Figure 3 for a three inlet fan wall.

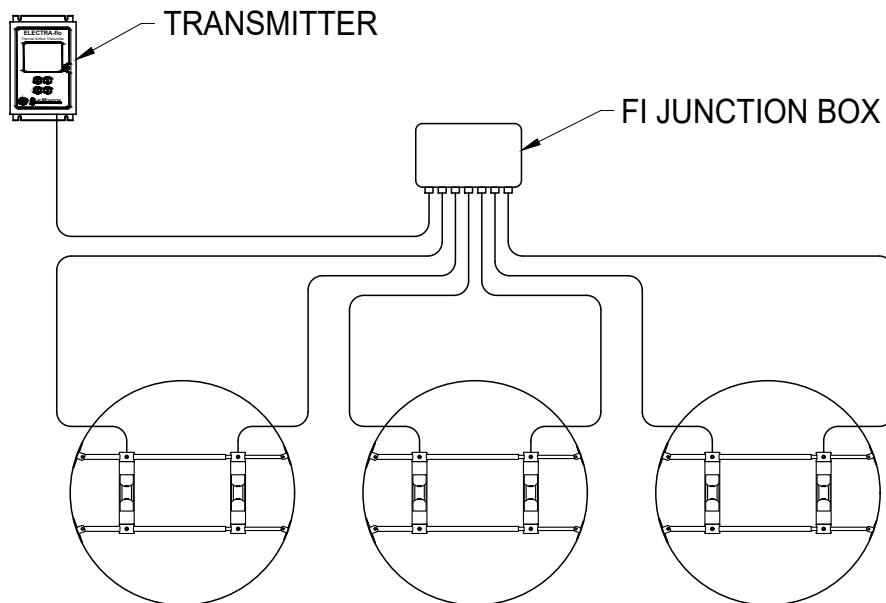


Figure 3

- Each sensor node has an integral 10' cable terminated in a positive locking mini-DIN connector. Secure the cables to the sensor support struts with wire ties and/or cable anchors attached to the surface of the bell inlet .

CABLE CONNECTIONS, cont'd.

- Open the FI Junction Box, insert each cable through the indicated access hole of the enclosure. Slide a cord-grip nut over the mini-DIN connector, then plug the connector in. Secure each cable in place by means of the cord-grip fitting already installed on the cable and the pre-installed nut. Repeat for all remaining cables. See Figure 4 for single and dual inlet installations. Refer to project specific documentation for cable connections on fan walls.

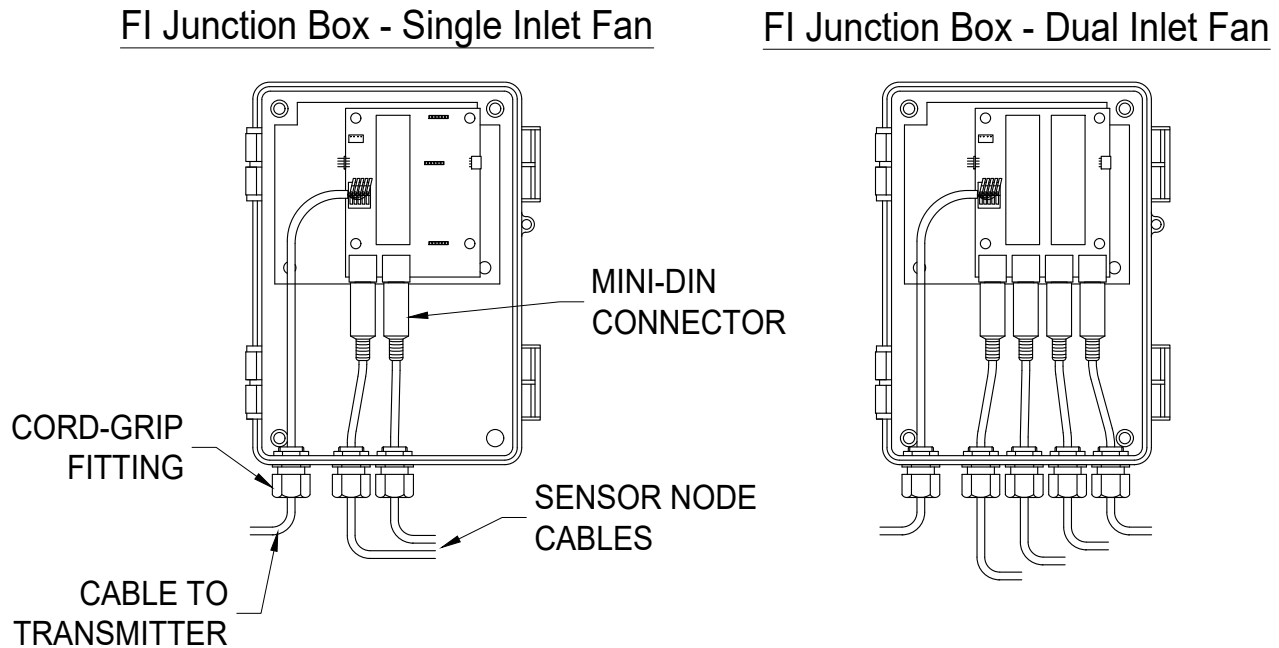


Figure 4

- The FI Junction Box includes an integral cable for connection to the remotely mounted transmitter. The standard cable length is 10'; optional 25', 50' and 100' cables may have been ordered and supplied.

INSPECTION - TRANSMITTER.

- Carefully remove the transmitter from the shipping container and inspect for any damage. In the event of a damaged item, please contact the Customer Service Department (see last page).
- Review the Factory Set-Up Information Sheet provided separately and verify the W.O # and Serial # match those on the ELECTRA-flo/FI. Verify that the configuration recorded on the Factory Set-Up Information Sheet is correct for your application. If not, contact Air Monitor's Customer Service Department at 1-800-AIRFLOW for future guidance.

LOCATION - TRANSMITTER.

- The standard ELECTRA-flo/FI transmitter has a NEMA 1 enclosure suitable for most clean indoor locations. If additional protection is required, mount the transmitter in an enclosure with adequate NEMA rating.
- The ambient temperature of the selected mounting location must be between -20°F to 140°F. Consideration should be given to units exposed to direct sunlight.
- The selected mounting location should be rigid and free of vibration.
- The Transmitter must be located so that the single cable from the FI Junction box will reach the bottom of the Transmitter. The standard cable length is 10' but the Junction Box may have been ordered with optional 25', 50' and 100' cables. If a long cable is needed contact the Factory to obtain the needed cable.

INSTALLATION - TRANSMITTER.

- The transmitter must be located so that the single cable from the probe array or station will reach the receptacle in the bottom of the transmitter. Standard cable length is 10', with optional 25', 50' and 100' cables available.
- Mount the transmitter to a vertical surface in an upright position.
- See Figure 5 for transmitter dimensions and installation clearances.

MOUNTING - TRANSMITTER.

- Tools Required: Electric drill; #25 (0.1495") bit; screwdriver or nut driver; and four #8-32 self-tapping machine screws.
- The ELECTRA-flo/FI transmitter can be mounted in any position provided it is secured using all four mounting holes.
- Reasonable consideration should be given to clearances for electrical connections.
- Once a suitable location is found, use the unit as a template to mark the centers of the four mounting holes.
- Drill four pilot holes at the marked locations. With the unit in position, install the four #8-32 screws.

MOUNTING - TRANSMITTER, cont'd.

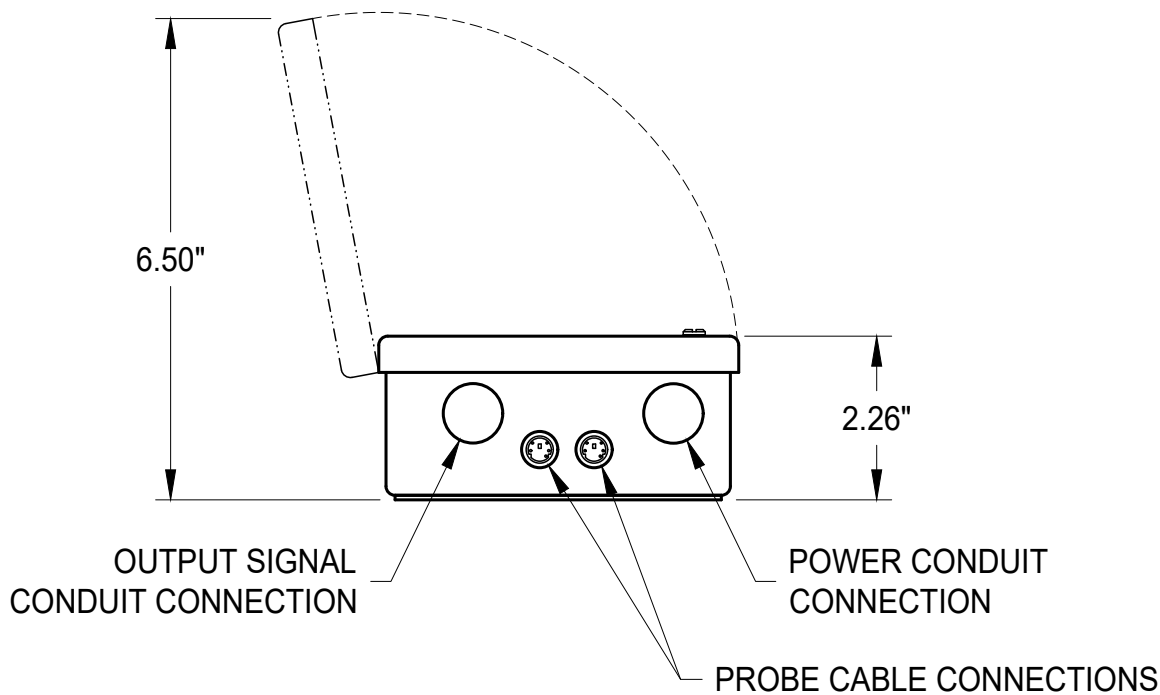
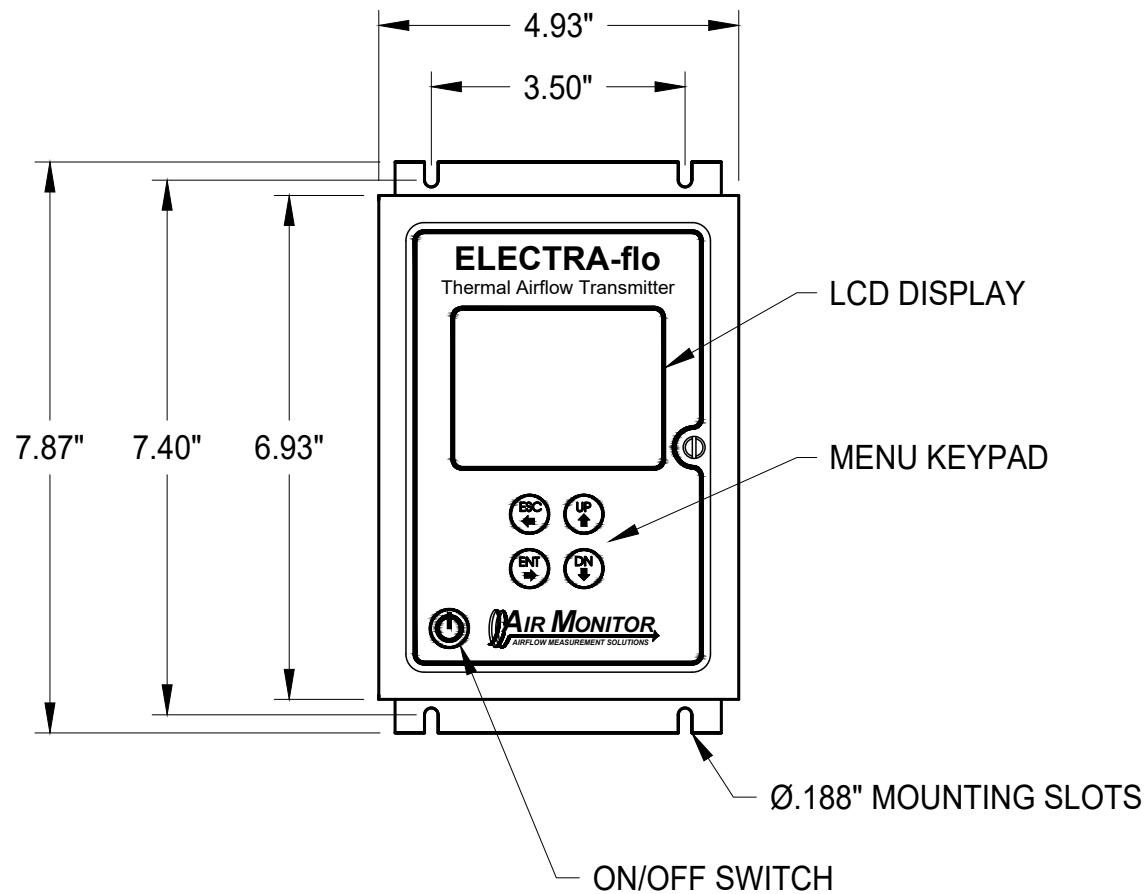


Figure 5

POWER & SIGNAL CONNECTIONS, cont'd.

- **WIRING NOTES.** Two conduit openings are provided on the bottom of the transmitter enclosure for power and signal wiring. See Figure 11. AMC recommends power wiring be 18awg to 14awg (max), and signal wiring be 22awg to 14awg (max). No more than two wires should be connected to an individual terminal. For ease in making connections, the power and signal terminals are removable by pulling the terminal strip straight up and off the circuit board. Once the wiring has been completed, replace the terminal strip by aligning with receptacle and pressing firmly. See Figure 6 for locations of field wiring terminal strips.
- **POWER 24VAC/DC,** Terminal Strip J4, terminals L, N, & G. Connect AC Line (or DC Positive) to terminal L. Connect AC Neutral (or DC Negative) to terminal N. Connect earth ground to terminal G. Power supply must be 20-28VAC or 20-40VDC.
- **ANALOG OUTPUT 1,** Terminal strip J1, terminals 1 (+) & 2 (COM).
- **ANALOG OUTPUT 2,** Terminal strip J1, terminals 3 (+) & 4 (COM).
- **NETWORK COMMUNICATION,** Terminal strip J2, terminals 5 (D+), 6 (D-), 7 (G) & 8 (SH).
- **ALARM OUTPUT,** Terminal strip J3, terminals 9 (NO), 10 (C) & 11 (NC).
- Consult the Factory Set-Up sheet and the O&M manual for details related to configurations options and start-up.

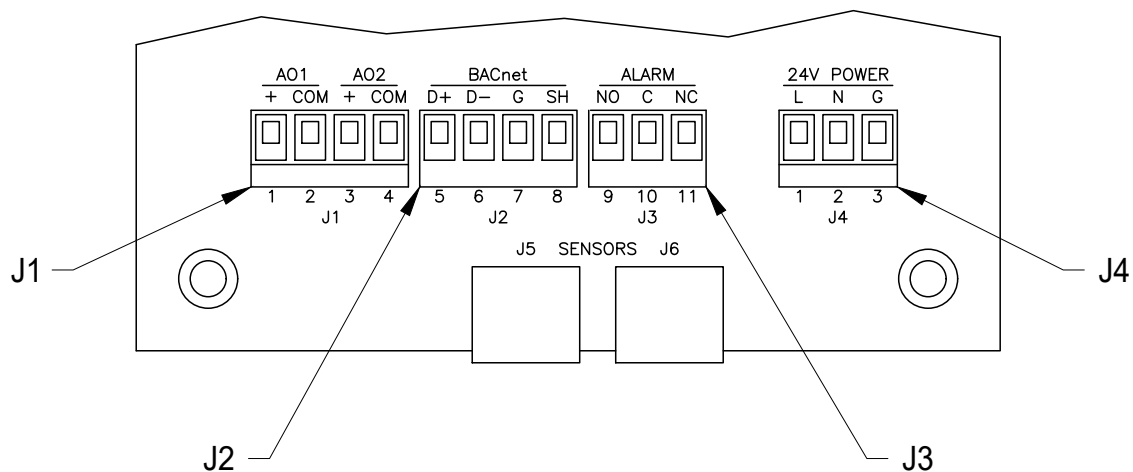


Figure 6

CUSTOMER SERVICE. Air Monitor Corporation provides in-house technical support for all our products:

Monday through Friday, 7 am to 5 pm (PST)

Phone: 707-544-2706 or 1-800-AIRFLOW / Fax: 707-526-2825

service@airmonitor.com

www.airmonitor.com

If after contacting the Customer Service Department it is determined that equipment will require return to Air Monitor Corporation for further repair, a Return Authorization number will be issued. A Confirmation of Return Authorization with shipping instructions will be sent via facsimile or email. Equipment to be returned to Air Monitor should be returned in its original shipping container if possible. If this is not possible, ensure equipment is packaged sufficiently to protect it during shipment.

Caution: All damage occurring during transit is the Customer's responsibility.

List the Return Authorization (RA) number on the packing list and clearly mark this number on the outside of each shipping container. Costs associated with the return of equipment to Air Monitor Corporation are the customer's responsibility regardless whether the repair/return is under warranty. Once the Customer Service Department determines that the equipment repair is under warranty, the item will be repaired and returned to the customer at no charge. If the equipment is not under warranty, customer will need to approve a repair quote which will be invoiced along with return shipping charges.

Thank you for choosing Air Monitor Corporation!