the Eliminator ™ Installation Instructions

1. PHYSICAL INSTALLATION

1.1 ALL FAN INLETS

1.11 - Each package is labeled for serial number, size and location. Carefully open packages and inspect for damage. Make sure that the protective foam padding remains on the sensor assembly until after the entire unit is installed. Although the sensors are rugged after installation, they are vulnerable to rough handling during the installation process. The protective foam padding will insure that no damage results from the installation.

1.12 - Fan inlet sensors are designed to be mounted in the throat of centrifugal fans or the housing of a vane axial fan upstream of the impeller. Adjustable mounting brackets allow for precise sizing at the job site. Make sure that no moving parts can interfere with the sensor assemblies, mounting hardware, or wiring.

1.13 - Measure the diameter, “D”, of the fan at the location that you intend to mount the flow station.

1.14 - Look up the dimension for “L” from table 1.1(next page) based on the inlet diameter “D” that you measured.

1.15 - Set each rod length, based on table 1.1 measurements. The length given in the table is the distance between the center set screws of the sensor housing and roll pin in the sensor mounting foot. Set the length of each rod and securely tighten the sensor housing set screws. Be certain that the mounting feet orientation is correct with respect to the sensor housing (see figure 1.1).

1.16 - Mount one pair of fan inlet sensors in each fan inlet as illustrated in figures 1.2 and 1.3 with hardware suitable for inlet conditions and that will not interfere with the fan during operation. Place the assemblies marked “red” and “blue” in one inlet and the ones marked “yellow” and “green” (dual inlet systems only) in the other inlet. The length set from section 1.15 will insure that the sensor is located properly. After installing the first sensor assembly in an inlet, position the second sensor assembly, as close as parallel to the first sensor assembly as possible, on the opposite side of the inlet.

1.17 - Secure the cable to the sensor assembly rods with tie wraps and secure to the inlet housing with cable clamps.

Figure 1.1 - Sensor Assembly

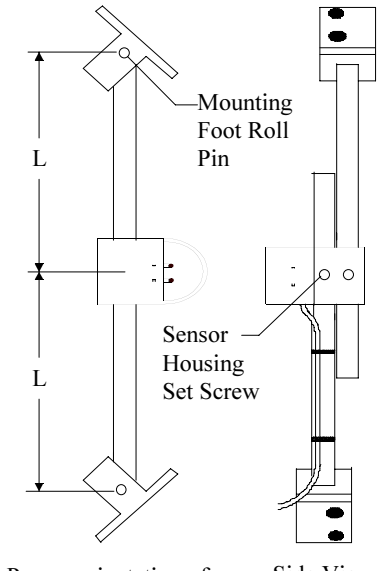


Figure 1.2 - Single Inlet Fan

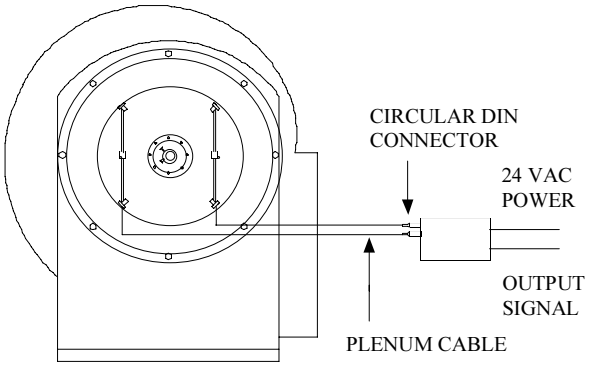
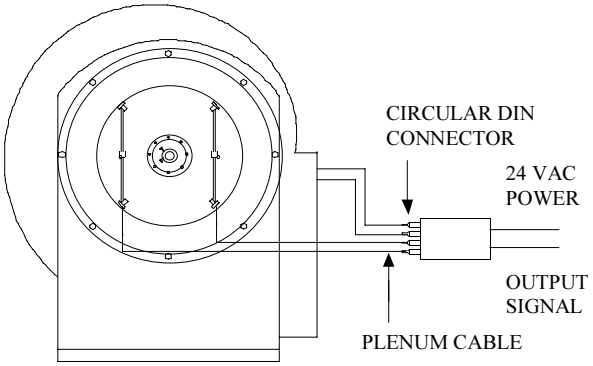


Figure 1.3 - Dual Inlet Fan



2. FIELD WIRING

2.1 ALL SYSTEMS

2.11 - USE ONLY 24V AC POWER. EACH SYSTEM SHOULD HAVE A DEDICATED CLASS 2 TRANSFORMER OR MUST OTHERWISE BE ISOLATED FROM OTHER DEVICES POWERED FROM THE SAME SOURCE.

2.12 - USE CAUTION AND MAKE SURE THAT POWER IS NOT APPLIED TO THE SIGNAL WIRING. DOING SO WILL DAMAGE THE ELECTRONICS.

2.13 - ALL POWER CONNECTIONS MUST BE MADE IN PHASE BETWEEN THE EBTRON EQUIPMENT.

2.14 - GROUNDING POWER TO EARTH WILL RESULT IN DAMAGE TO THE PRINTED CIRCUIT BOARD, OTHER ELECTRONIC COMPONENTS OR THE HOST SYSTEM.

Table 1.1 - Determination of length "L" for Mounting Bracket Adjustment

Inlet Diameter "D"	L	Inlet Diameter "D"	L	Inlet Diameter "D"	L	Inlet Diameter "D"	L
11	3 11/16	31	12 2/16	51	20 8/16	71	28 15/16
12	4 2/16	32	12 9/16	52	20 15/16	72	29 6/16
13	4 9/16	33	12 15/16	53	21 6/16	73	29 13/16
14	4 15/16	34	13 6/16	54	21 13/16	74	30 3/16
15	5 6/16	35	13 13/16	55	22 3/16	75	30 10/16
16	5 13/16	36	14 3/16	56	22 10/16	76	31 1/16
17	6 4/16	37	14 10/16	57	23 1/16	77	31 8/16
18	6 10/16	38	15 1/16	58	23 8/16	78	31 14/16
19	7 1/16	39	15 8/16	59	23 14/16	79	32 5/16
20	7 8/16	40	15 14/16	60	24 5/16	80	32 12/16
21	7 14/16	41	16 5/16	61	24 12/16	81	33 2/16
22	8 5/16	42	16 12/16	62	25 3/16	82	33 9/16
23	8 12/16	43	17 3/16	63	25 9/16	83	34
24	9 3/16	44	17 9/16	64	26	84	34 7/16
25	9 9/16	45	18	65	26 7/16	85	34 13/16
26	10	46	18 7/16	66	26 13/16	86	35 4/16
27	10 7/16	47	18 14/16	67	27 4/16	87	35 11/16
28	10 14/16	48	19 4/16	68	27 11/16	88	36 2/16
29	11 4/16	49	19 11/16	69	28 2/16	89	36 8/16
30	11 11/16	50	20 2/16	70	28 8/16	90	36 15/16

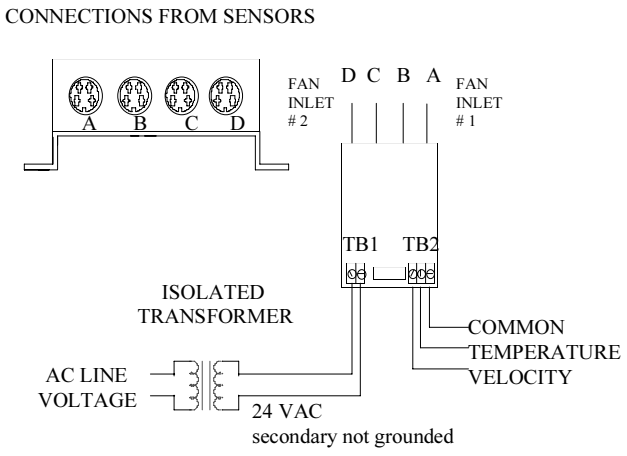
2.15 - All single fan inlet systems provide both airflow and temperature output as indicated on the serial number tag. The default output is 0-5 VDC. Optionally, the output can be ordered as 4-20 mA. Unless specified when ordered, fan inlet systems with 4-20 mA air flow output signals will be supplied with the default 0-5 VDC temperature output.

2.16 - Connect the color coded cables to the same color connector on the processor/transmitter as illustrated in figure 2.1.

Single Fan Inlet Systems
Position A RED
Position B BLUE

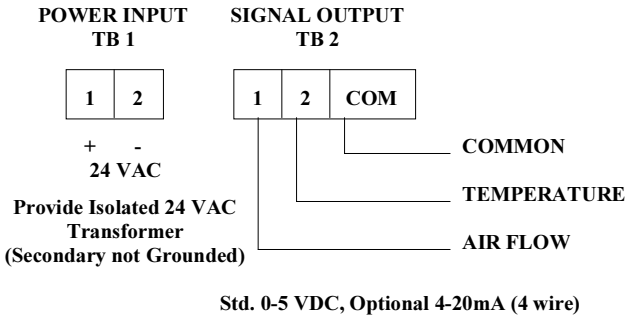
Dual Fan Inlet Systems
Position A RED
Position B BLUE
Position C YELLOW
Position D GREEN

Figure 2.1 - Processor/Transmitter Connections



2.17 - Connect field wiring to the fan inlet terminal blocks as indicated in figure 2.2.

Figure 2.2 - Fan Inlet Terminal Connections



3. FIELD ADJUSTMENTS

3.1 OUTPUT OFFSET/GAIN ADJUSTMENTS

3.11- As a result of considerable variations in fan inlet design, entry conditions, and speed control, it may be necessary to fine tune your Model 4000 fan inlet sensor. This model allows for adjustment of offset and gain potentiometers to make desired output changes. Consult your Model 4000 Operations and Maintenance Manual for detailed information on adjustments.

For More Information: Review the Model 4000 Operations and Maintenance Manual or contact Ebtron Customer Service at 1-800-232-8766

EBTRON, INC., 1663 Hwy. 701 S., Loris, SC 29569
Phone: 1-800-2EBTRON (1-800-232-8766) 1-843-756-1828 FAX: 1-843-756-1838