

Supply Air Pressure Measurement

A pressure transducer is used to provide a nominal .25 VDC to 4.0 VDC signal for 0 to 5" WC which allows the UCM to control system static pressure. To check the transducer for proper operation, you first must check for proper installation of the static pickup probe and connecting tubing. If tubing and pickup probe are installed and connected properly, follow the procedure below.

- A. Attach a DC volt meter to 1U1, A4J4 terminals 1 and 3. Voltage on these terminals should be 4.85 to 5.15 VDC. This is a check of the power supply applied to the transducer.
- B. With the unit fan stopped and no air pressure signal on the transducer, check the DC voltage between 1U1, A4J4 terminals 2 and 3. Voltage on these terminals should read approximately .25 VDC. This is a check of the 0 flow signal being sent to the UCM.
- C. Start fan and again check the voltage between 1U1, A4J4 terminals 2 and 3. The voltage should be .25 to 4.0 VDC. This indicates that as system static pressure increases the VDC signal being sent to the UCM also increases.

To determine the actual voltage signal per inch of static pressure, use the following formula.

$$\text{VDC} = (\text{Inches static pressure} \times .75) + .25$$

Example:

$$\begin{aligned} \text{System static pressure} &= 5'' \text{ WC} \\ (5 \times .75) + .25 &= 4 \text{ VDC signal} \end{aligned}$$

Example:

$$\begin{aligned} 0 \text{ Flow (Fan off)} \\ (0 \times .75) + .25 &= .25 \text{ VDC signal} \end{aligned}$$

