

Thank you for purchasing a ControlAir P290M pneumatic-to-current P/I transducer. Due to its over-engineered design, 100% burn-in and demanding QC test protocols you can expect years of unerring performance. As with any quality instrument, proper attention to the installation, wiring and calibration procedures is critical to the performance and longevity of the unit.

CAUTION

1. This unit is only to be used with dry instrument air filtered to 40 microns. Excessive moisture or chemical contaminants can damage internal components.
2. The ControlAir P290M can withstand over-pressurization of three (3) times the rated full scale without recalibration and four (4) times the full scale without damage to the transducer.
Do not apply more than four (4) times the full scale rated pressure.
3. This unit can tolerate a maximum of 100 vdc at the input terminals indefinitely, although operation within published specifications is only guaranteed with power supplies between 10 and 42 vdc.
4. **Field repair is not advised.** Please contact ControlAir for any warranty requirements.
5. **Do not** subject this transducer to a temperature above 180 F. or below -40 F.

WIRING

The P290M is a “floating” transducer and consequently may tolerate a single ground anywhere in the 2-wire loop, with the single load placed anywhere as well. In most instances the loads should be placed in the negative leg, although it isn’t necessary. An earth ground can be placed on either end of the load, but you may prefer to have the negative terminal of the supply earthed as well. Care must be taken to insure that the polarity of the input connections is correct regardless of where the loads or ground is placed. An inadvertent reversing of polarity will not damage the P290M, but it will not function until the wiring is corrected. In all instances, current flow enters at the positive terminal and exits the negative terminal. Refer to **Figure 1**.

CALIBRATION

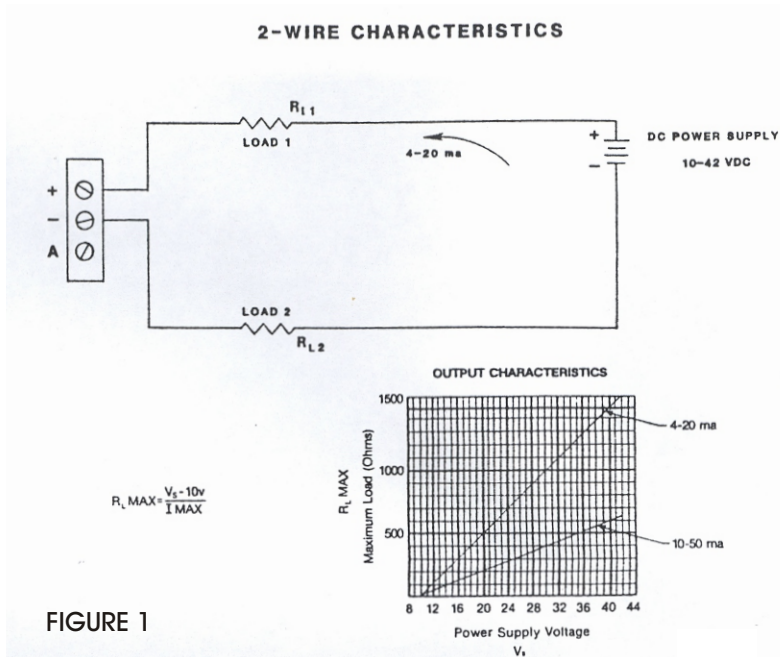
All ControlAir P290M transducers are fully calibrated at the factory to the output as ordered. It may be advisable to confirm that calibration was maintained during shipment for maximum accuracy. Easily accessible Span and Zero screws are located on the front panel. They are multi-turn potentiometers with slip clutches at the ends of travel that can provide +/- 20% of span adjustability. **Clockwise movement increases output** on both potentiometers.

Calibrate after the wiring has been completed and air pressure is connected. Place an amp meter across the test terminals located on the front plate or a volt meter across the load and monitor the load current against changes in signal pressure.

1. Apply minimum signal pressure and adjust the Zero screw until the output reads 4 mA.
2. Apply maximum signal pressure and adjust the Span screw until the output reads 20 mA.
3. Repeat steps 1 and 2 if necessary to stabilize output.

TROUBLE SHOOTING

Should there be a problem with the ControlAir P290M transducer we recommend bench testing the unit a way from the application. Connect a regulated air pressure and separate power supply to the unit and measure output with a meter to confirm that it is actually the transmitter at fault. If the problem can be duplicated, please contact the factory for repairs to be done under the terms of the warranty. **There are no user serviceable parts inside and opening the P290M may void the warranty.**



WARRANTY

ControlAir, Inc. products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir, Inc. recommended usages. ControlAir, Inc.'s liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir, Inc.'s sole option, of any products proved defective. ControlAir, Inc. reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice.