

* APPENDIX A *

Ammeter Transducer Construction

The ammeter transducer itself is functionally complete. You need to assemble a small PC board that acts as a strain relief for the attached wire cable and then attach the assembly to the transducer. Two capacitors are added to the PC board for noise reduction.

The current sensor of the transducer is the small white ceramic wafer with the three terminals. It works by measuring the strength of a magnetic field. The metal toroid acts as a magnetic flux concentrator for the sensor. A current carrying wire passing through the hole of the transducer produces the magnetic field.

1. Attach the PC board to the transducer housing using the two #4-40 screws and nuts provided. The side of the PC board with solder pads and markings will be on the same side as the heads of the screws. Be sure the arrow on the board is positioned as shown in the figure. Double check the orientation.

2. Locate and install two .1 μ FD capacitors - marked 104 in positions shown. Solder the four capacitor leads and the three transducer leads. Clip excess leads.

3. Strip the outside insulation off a three wire shielded cable (20 to 24 gauge) as shown in the figure and then strip approximately .1 inch from the three wires.

4. Install the three wires and solder. Clip the excess.

5. Install the cable tie around the cable and through the two slots in the PC board as shown in the figure, tighten and clip. This serves as a strain relief for the cable.

6. Mark the wires accordingly (+, -, and o) for your installation. It is a good idea to note the color and polarity in your installation manual for later.

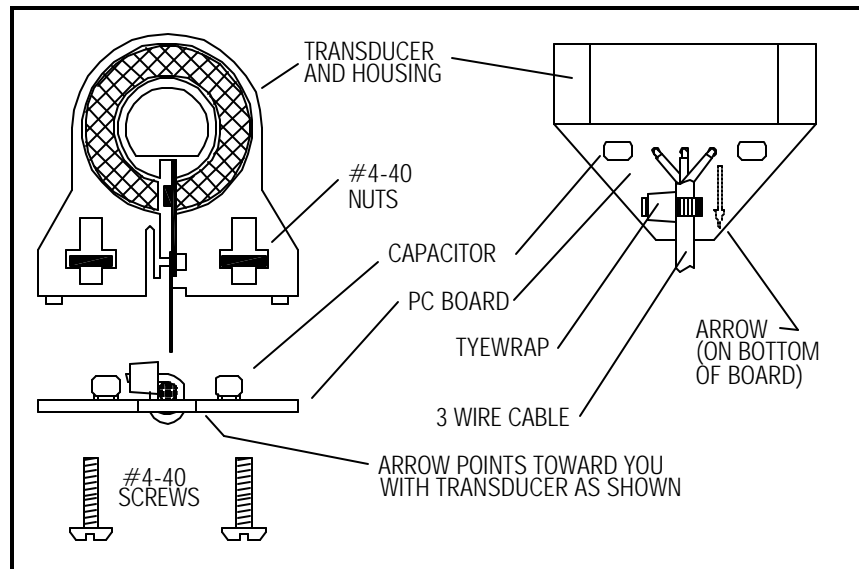


Figure 29 Ammeter transducer assembly detail. Note that the arrow shown in the figure is really on the opposite side of the PC board.