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Installation Reference

Topic: Installing PN 235007 and PN 235028 to a Direct Current (DC) Shunt

Please read all instructions below carefully to familiarize yourself with the project before attempting to perform any of the work or unpacking any further.

Required Materials

- PN 235007 & 235028, Fuse, Kit, 1 A, 250 V, Shunt

Required Tools

- Crimp Tool
- Flat Blade Screwdriver

A DC Shunt is used to measure the current flowing through a cable connected to a load. The Shunt is actually a high precision resistor and the output from the Shunt is a small voltage, usually less than 100 millivolts. As the current changes, so does the voltage drop across the Shunt. The Shunt needs to be connected to a DC Ammeter that has been set up for use with the Shunt. Note: Shunts are usually rated at their maximum point, e.g. 50 amps equals 100 millivolts. The DC Ammeter required is a 50 Amp rating @ an input of 100 millivolts.

Even though the voltage drop across the Shunt is very low, the absolute voltage can be very high. In fact, it is the same as the present voltage setting of the DC rectifier.

The purpose of the fuse is to protect the equipment and employees in the event a short occurs in either of the two (2) Shunt output leads.

Methodology:

The Shunt has four (4) connections; two (2) connections for the incoming power and load; and two (2) for the Shunt signal. The Shunt signal has a high and low lead. The high Shunt signal is on the power side (of the resistor) and the low Shunt signal is on the load side (of the resistor). See Fig. 1 for illustration.

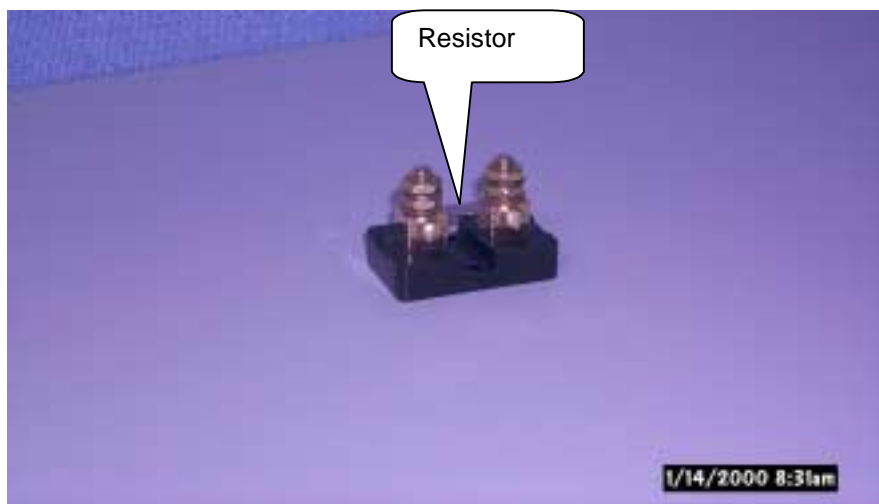


Fig. 1, Shunt

Procedure:

- Step One: Shut off power and lock out DC rectifier.
- Step Two: Remove Shunt input leads from Shunt. The fuse kit end with the round metal lug is to be attached to the side of the Shunt. The other end is to be spliced into the signal. If the signal cable gauge of the wire is less than American Wire Gauge #18, then double it over before crimping, or use a soldered connection if so desired.
- Step Three: Make sure everyone is out of the E-coat enclosure and restore power.

Troubleshooting:

- Make sure there is a fuse in each fuse holder (observe all applicable safety rules) and that the fuse is not 'blown'.
- Check for continuity between the terminal on the Shunt and the appropriate termination of the output wire and correct any 'open' conditions.
- Are the power and load connections tight?

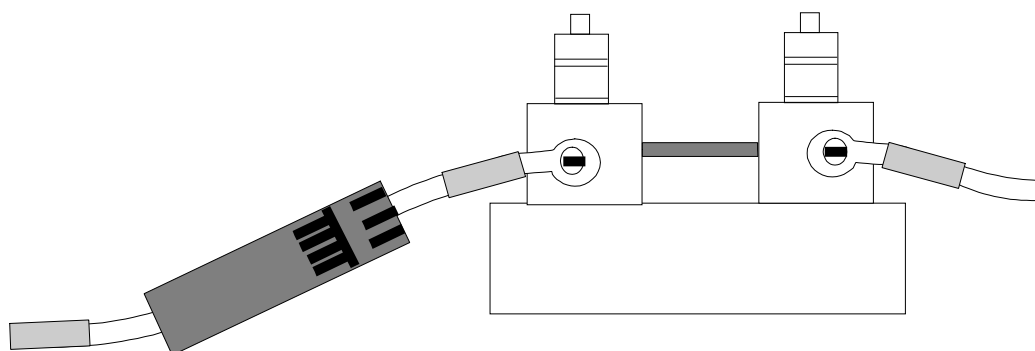


Fig. 2, Shunt w/ fuse kit leads installed