GENERAL

Model 380E Excitation Supply Modules provide a regulated voltage for excitation of load cells, strain gages, pressure transducers and other similar type loads. Up to 10 of these modules can be mounted in a Series 380 enclosure resulting in substantial space savings as well as providing flexibility of interconnection with other modules.

The excitation module provides adjustable output of 0-10V dc and is capable of driving a 120 Ohm or greater bridge over the entire range. In addition to utilizing the excitation supply for load cell type applications, the supply may also be used to excite external potentiometers employed as set points for other modules.

Effects of lead resistance are eliminated by utilizing remote sensing of the bridge voltage. This technique provides an accurate and stable voltage across the bridge. The excitation module also features short circuit protection and current limiting circuitry.

SPECIFICATIONS

Output:
0-10V dc, continuously adjustable, capable of driving 120 Ohm or greater load cells. Voltage can be set to within 10mV of the desired value.

Max. Output Current:
84mA for rated performance

Output Current Limiting: 100mA nominal

Remote Sensing:
Compensates for lead resistance effects in the voltage applied to the bridge. Up to 5 Ohms of lead resistance, in each of four leads, can be handled without affecting the bridge voltage.

Lead Resistance Effect:
Less than 0.05% when lead resistance is varied from 0-5 Ohms in each line.

Output Ripple: Less than 5mV RMS (120 Hz) at 10V across 120 Ohm bridge.

MOORE PRODUCTS CO., Spring House, Pa. 19477
INSTALLATION

Using the card cage enclosure instructions as a reference (Service Instructions, SD3801) set the keys as follows:

Right Key: V (vertical)
Left Key: V (vertical)

If the module is factory calibrated, insert the module into the proper slot in the card cage enclosure. If the module is not factory calibrated, refer to the CALIBRATION section of this instruction.

CALIBRATION

1. Connect the excitation supply to the load as shown in the connection diagram.

2. Attach a voltmeter (20K/V or greater input impedance) to the test points TP(+) and TP(-) located on the front of the card.

3. Adjust the 22-turn Voltage Adjust potentiometer to the desired load voltage. Resolution of the pot will limit the setting to within approximately 10mV (0.1% of 10V).

MAINTENANCE

These instruments are solid state and require no maintenance on a regular basis, except for annual cleaning, blowing out dirt, and verifying calibration. If the module is not operating properly, remove it and give it a full bench check-out. Most problems are in the field wiring or peripheral circuitry. If the problem is traced to the unit itself, conventional electronic troubleshooting methods suffice.

Terminal Strip on Series 380
Rack Enclosures

CONNECT DIAGRAM

120 Ohm Load (Typical)