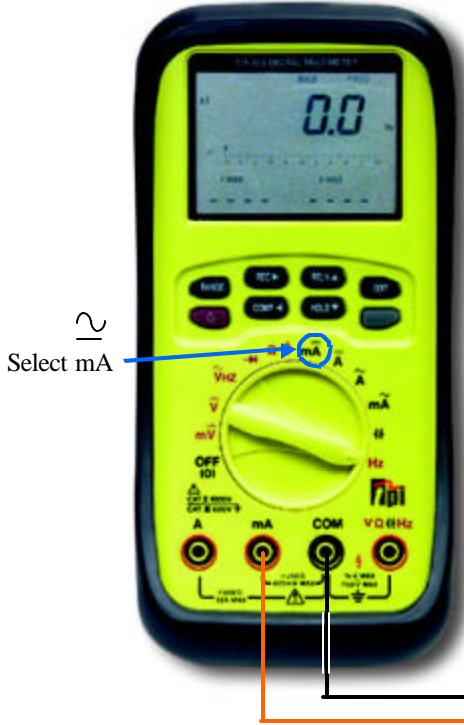
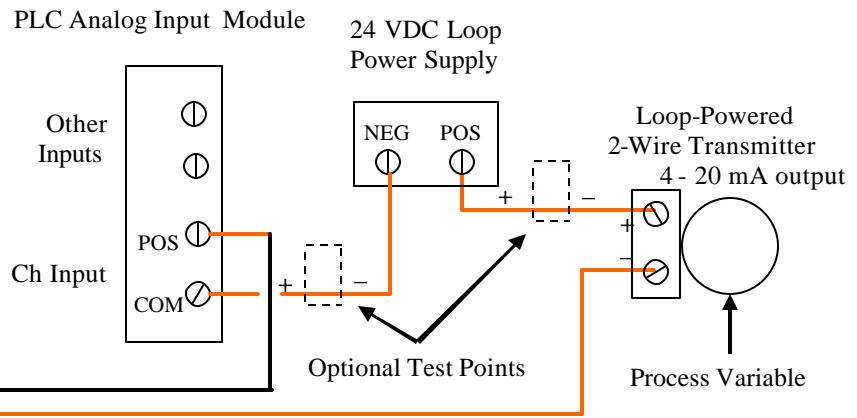


TPI 183 Multimeter



Typical 4-20 mA Control Loop



Measuring DC Milliamps

CAUTION! Do not attempt to make a current measurement with the test leads connect in parallel with the circuit to be tested. Test leads must be connected in series with the circuit.

Note: Current is always measured with the meter placed in series with the circuit. On the current range with leads plugged-in to the meter as shown the meter has a very low input impedance and the current flow through the meter is limited by the circuit elements in series with the meter.

WARNING! Do not attempt to make a current measurements if more than 600 volts is present. Instrument damage and/or personal injury may result.

CAUTION! Always check meter test leads before use to be certain they are in good condition and use test leads with an insulating rating acceptable for the system voltage.

Example: Process Control 4 -20 mA Loop Current Measurement

- Set Meter Selector Switch on **mA** (AC or DC Milliamps).
- Plug in the meter leads as shown: Black lead - **COM** (Common), Red lead - **mA** (micro or milliamps).
- Open 4 - 20 milliamp loop and connect the meter in series with the loop. Note: This loop can be opened at any one of three points. Convenience usually dictates the location. **Caution - Be sure loop can be opened safely without causing a system operating problem!**
- Connect meter red lead clip to the Transmitter Negative terminal.
- Close the loop by connecting the meter black lead clip to the conductor which was removed from the Transmitter Negative terminal. (This results in a current flow through the meter in a positive to negative direction.)