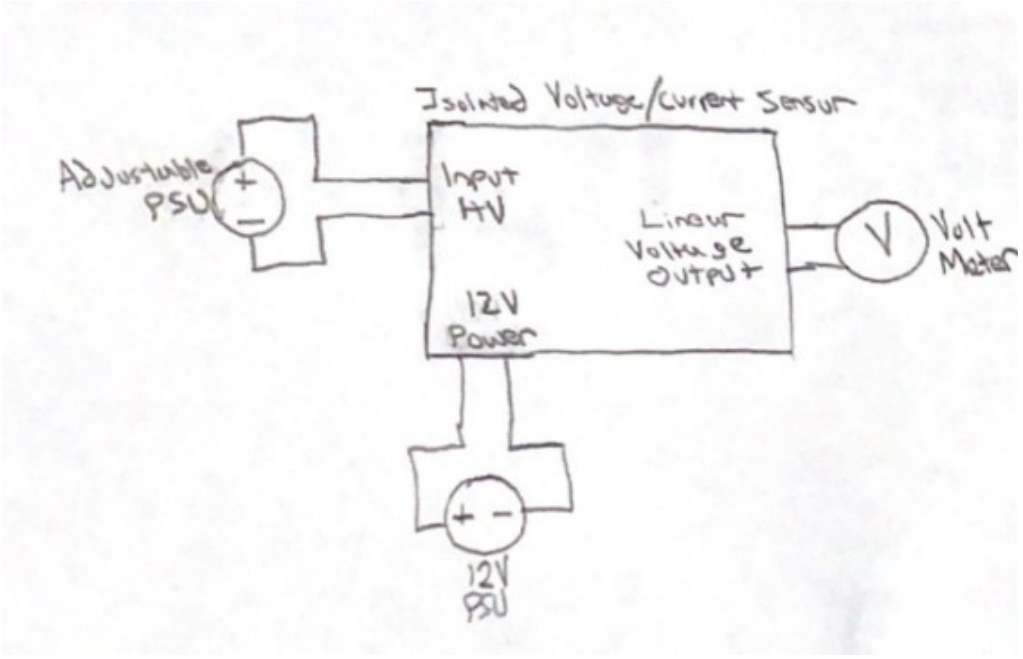
Isolated Voltage/Current Sensor Test

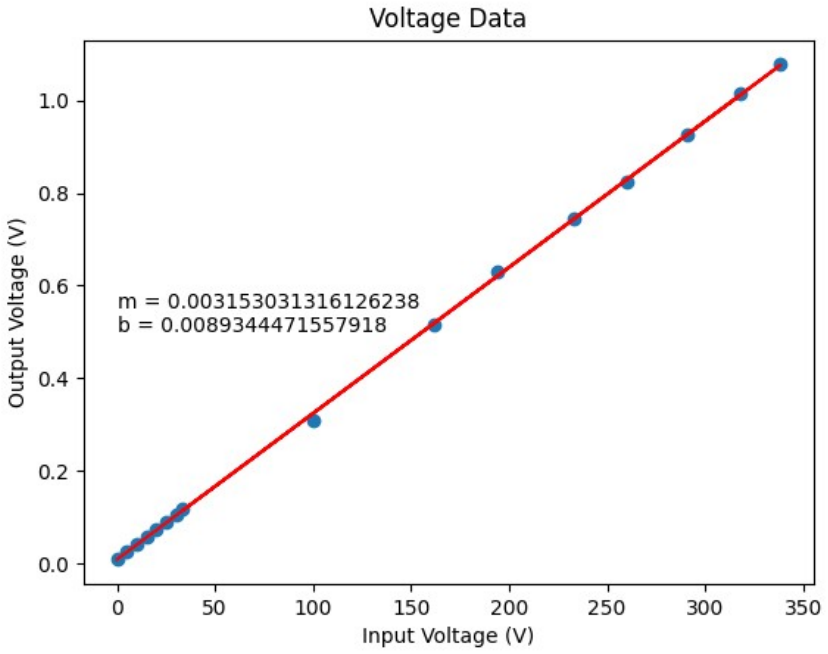
Theoretical Specs
Maximum Shunt Resistor Voltage Drop: 83mV
Maximum Voltage Divider Input Voltage:
    (374k Upper Resistor Ladder): 1500V
    (324k Upper Resistor Ladder): 1300V

The Isolated Voltage/Current Sensor should be characterized for the desired operating range with this test method. The resulting transfer function can then be used with the sensor in the application.

Creapage and Clearance should be check for high voltage inputs.

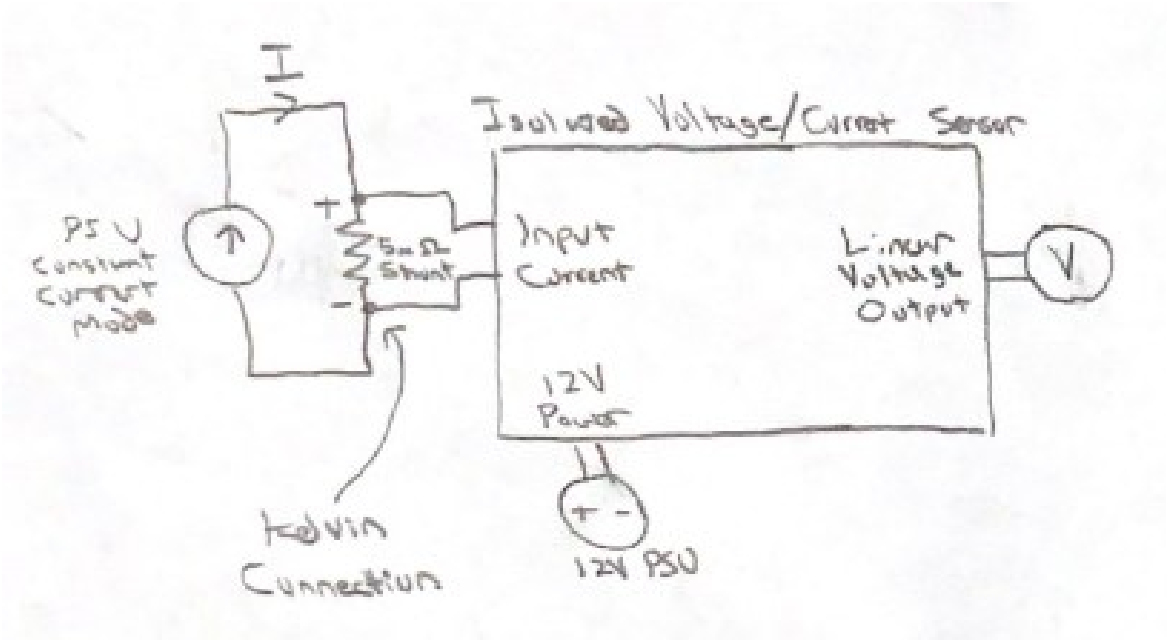
Voltage Transfer Function Test

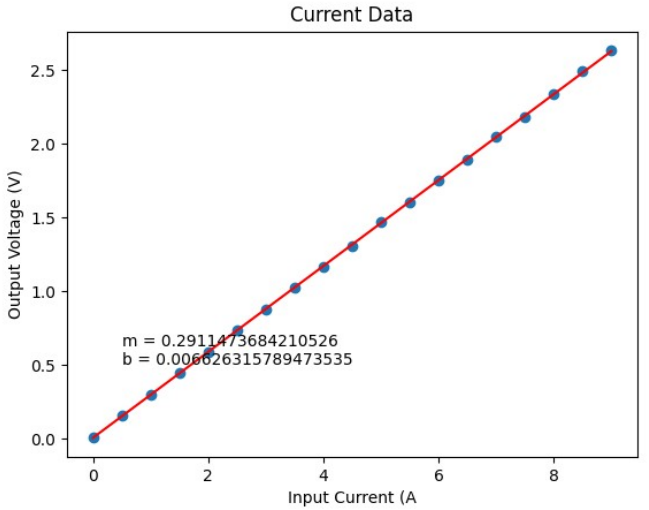




Vary the adjustable PSU through the range of possible input voltages and measure the output voltage. Plot the output voltage vs input voltage and observe the linearity.

Current Transfer Function Test





Vary the current source and measure the sensor output voltage. Plot the output voltage vs current and observe the linearity. The shunt resistor used thus far has been 5mΩ. However, a different shunt resistor value could also be used.