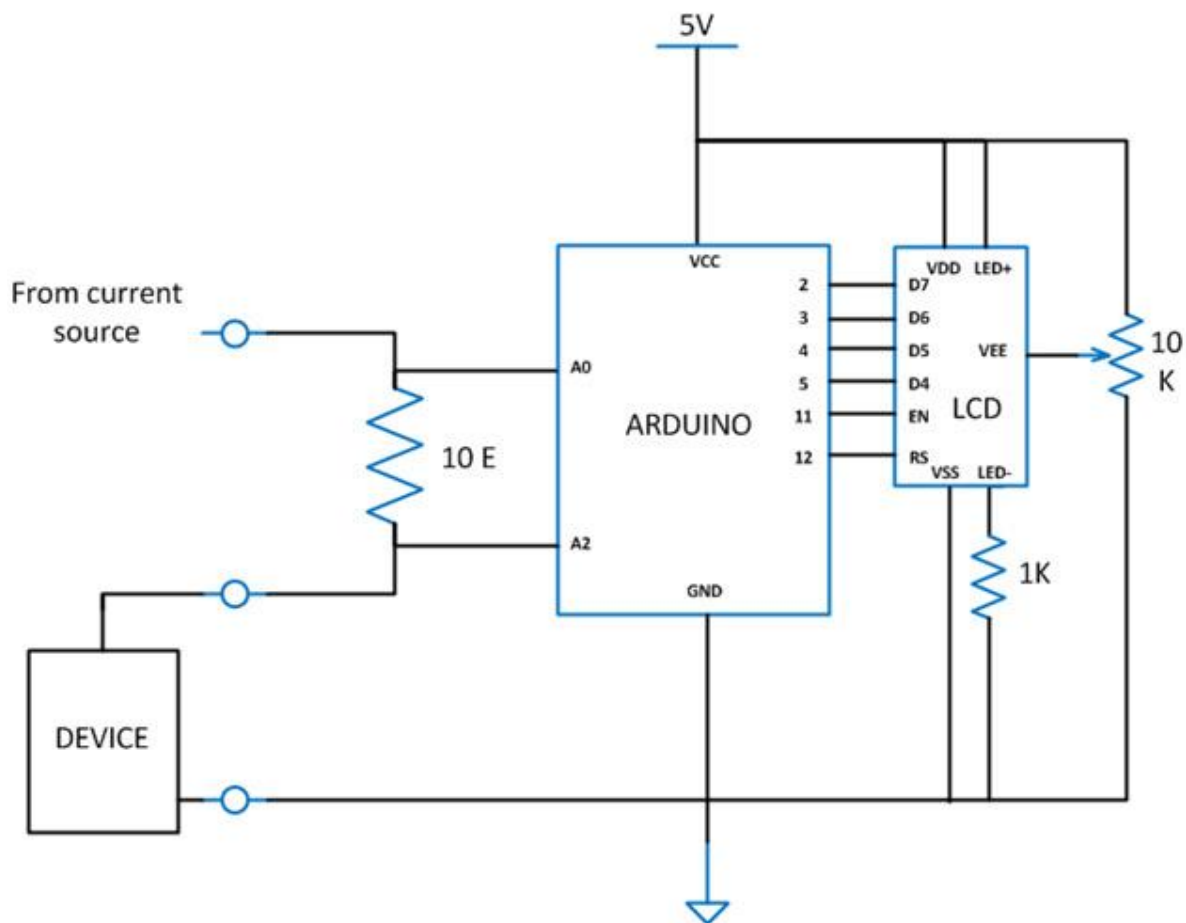# Arduino WattMeter

Introduction:

Measuring Voltage, Current and subsequently the Power is an essential task of any electronics engineer. For measuring voltage and current, you can use simple handheld multimeters as they provide both the range and accuracy for normal usage.

But in order to measure power, you have several options like simple wattmeters to complex power analyzers and power meters.

Block Diagram:

Hardware Components:

- Arduino Uno
- LCD 16 X 2
- LM 358 Op-Amp
- 7805 Volage regulator
- Potentiometer 10k ohm
- Resistor 10k ohm
- Resistor, 20 kohm
- Resistor 2.21k ohm
- Resistor, 0.22 ohm
- Test load
- Connecting wires

Conclusion:

A simple Arduino Wattmeter is designed in this project with the aim of measuring power consumed by small loads (up to 12W). In a future implementation, as an extension to this project, a new circuit based on Voltage and Current Sensors for more accurate results.