

MSET - CALIBRATION

Purpose

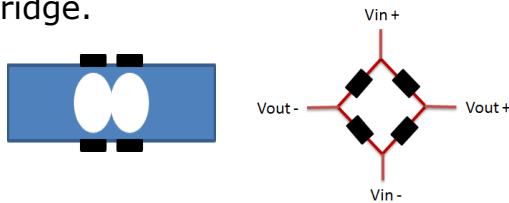
Introduce sensors and transducers to quantify physical inputs such as force, and rotational speeds. Develop a basic skill set used to determine conversion coefficients.

Sensors

Sensors are electro-mechanical devices commonly attached to materials and placed in an environment to be measured. The sensor produces an electrical output of voltage, current, and or resistance as the input changes

Theory

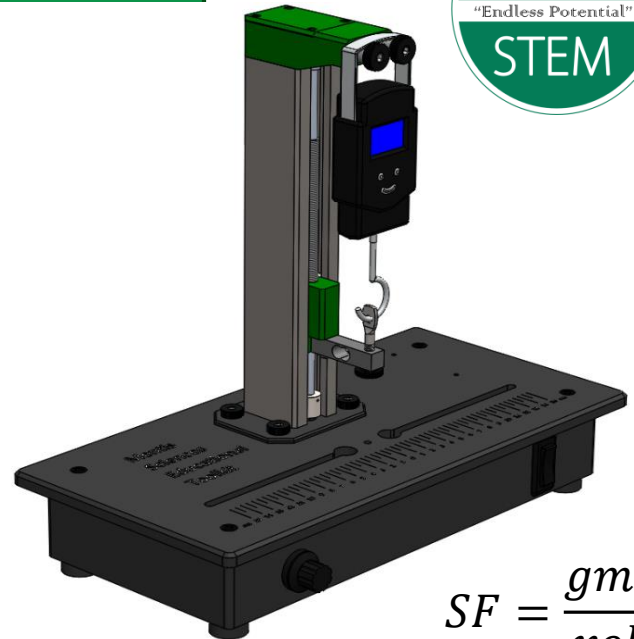
Load cells convert force to a signal with strain gages and a wheat stone bridge. Resistance of the gages changes and is converted to a voltage by the bridge.



Encoders are used to measure rotational and linear movement using a light source (LED) and optical sensor. The sensor generates electric pulses that are counted when the light source passes a slots in a disk that is attached to a shaft



Setup



$$SF = \frac{\text{gms.}}{\text{volt}}$$

Results

Load Cell Calibration

