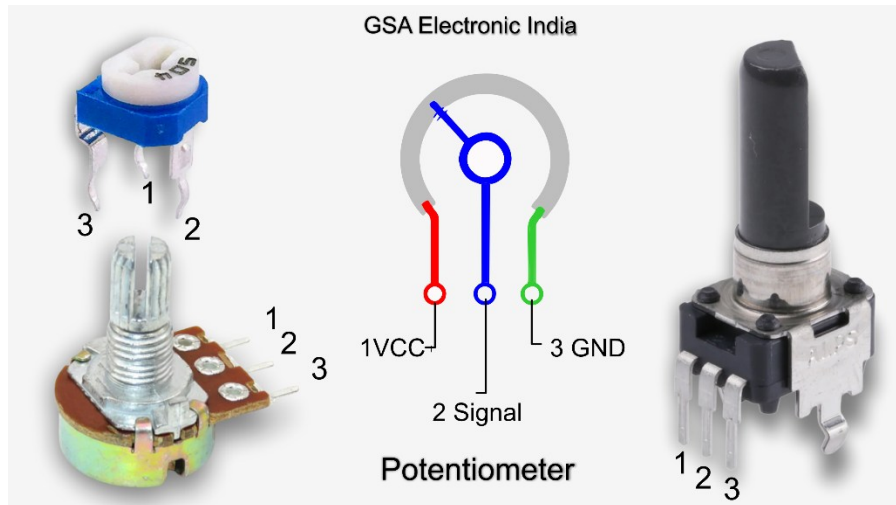


Potentiometer

A potentiometer is a variable resistor used to adjust voltage or signal levels in a circuit manually.

Working Principle:

It has three terminals: two connected to a resistive track, and one connected to a wiper that moves across the track, changing the resistance and thus the voltage output.



Types:

- Rotary Potentiometer
- Slide Potentiometer
- Trimmer Potentiometer

Applications:

- Volume control in audio devices
- Sensor calibration
- LCD brightness or contrast adjustment
- Analog input for Arduino

Advantages:

- Easy to use and adjust
- Widely available
- Simple analog control input

Disadvantages:

- Mechanical wear over time
- Not suitable for precise applications without calibration