



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF MECHATRONICS

19MCB303 – SENSORS AND SIGNAL PROCESSING

UNIT 2 – ELECTROMECHANICAL SENSOR

Potentiometer

Mrs. P.KALAISELVI M.E.,(Ph.D.,)

ASSISTANT PROFESSOR,

DEPARTMENT OF MECHATRONICS,

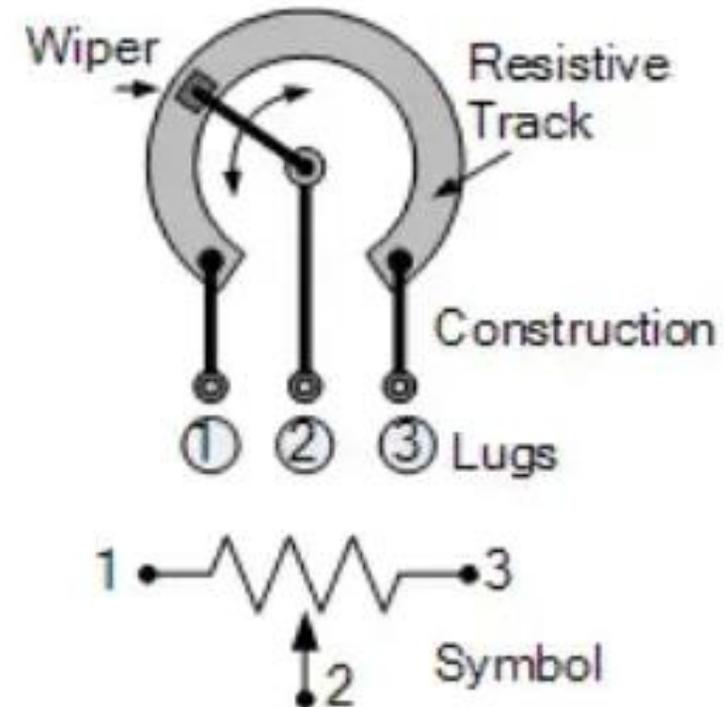
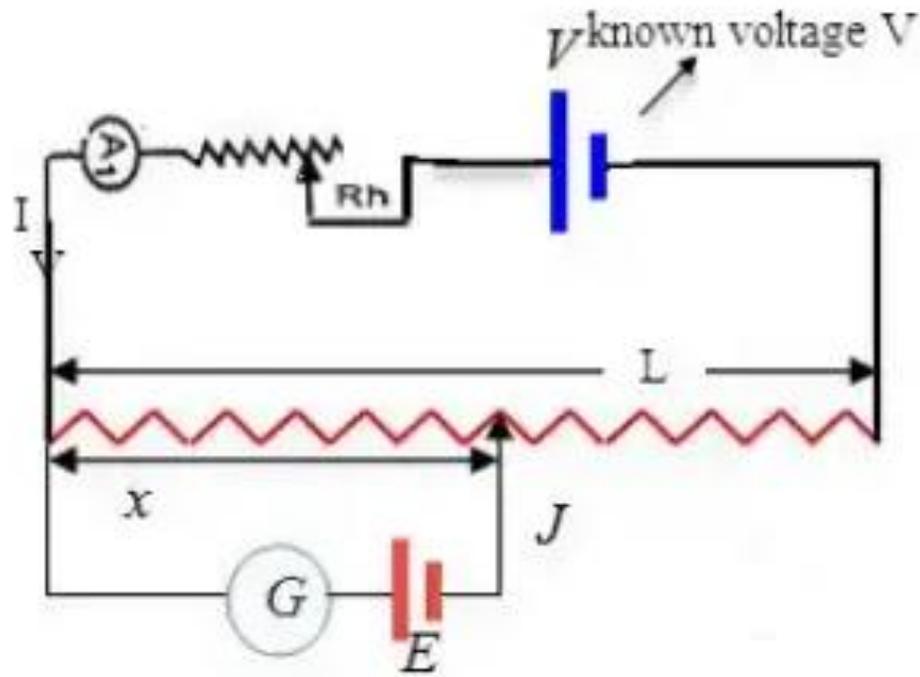
SNSCT, Coimbatore.





Potentiometer

A potentiometer (also known as a pot or potmeter) is defined as a 3 terminal variable resistor in which the resistance is manually varied to control the flow of electric current. A potentiometer acts as an adjustable voltage divider.

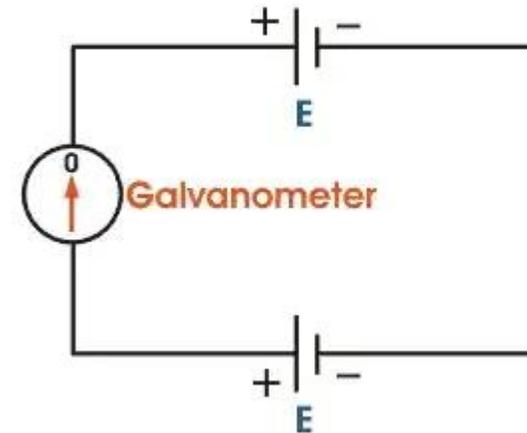
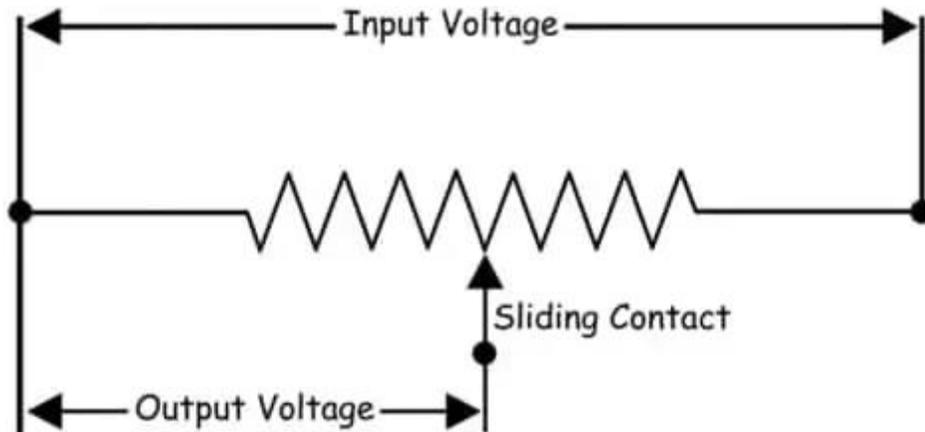




How Does a Potentiometer Work?



A potentiometer is a passive electronic component. Potentiometers work by varying the position of a sliding contact across a uniform resistance. In a potentiometer, the entire input voltage is applied across the whole length of the resistor, and the output voltage is the voltage drop between the fixed and sliding contact as shown below.



A potentiometer has the two terminals of the input source fixed to the end of the resistor. To adjust the output voltage the sliding contact gets moved along the resistor on the output side.

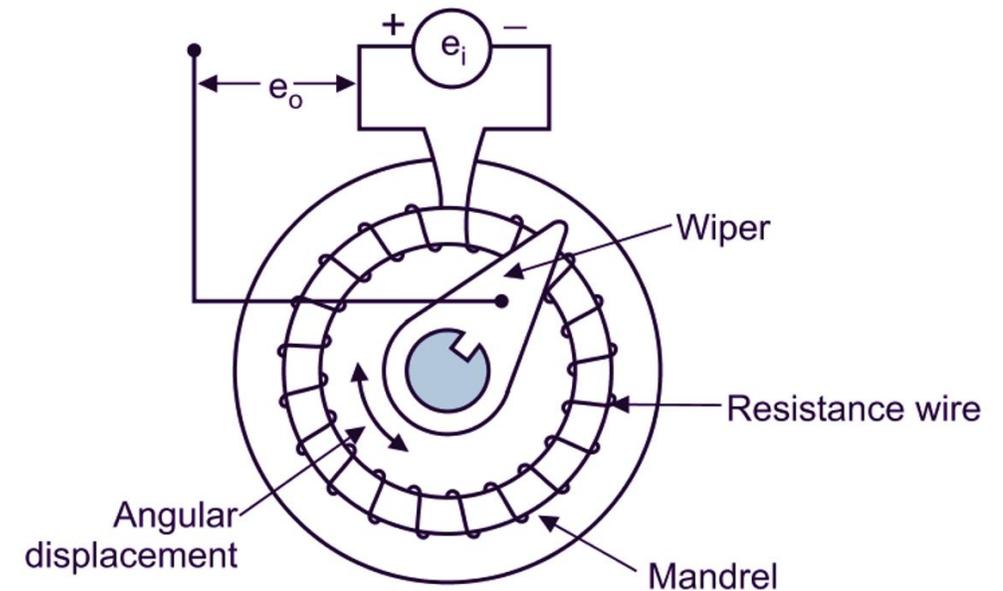
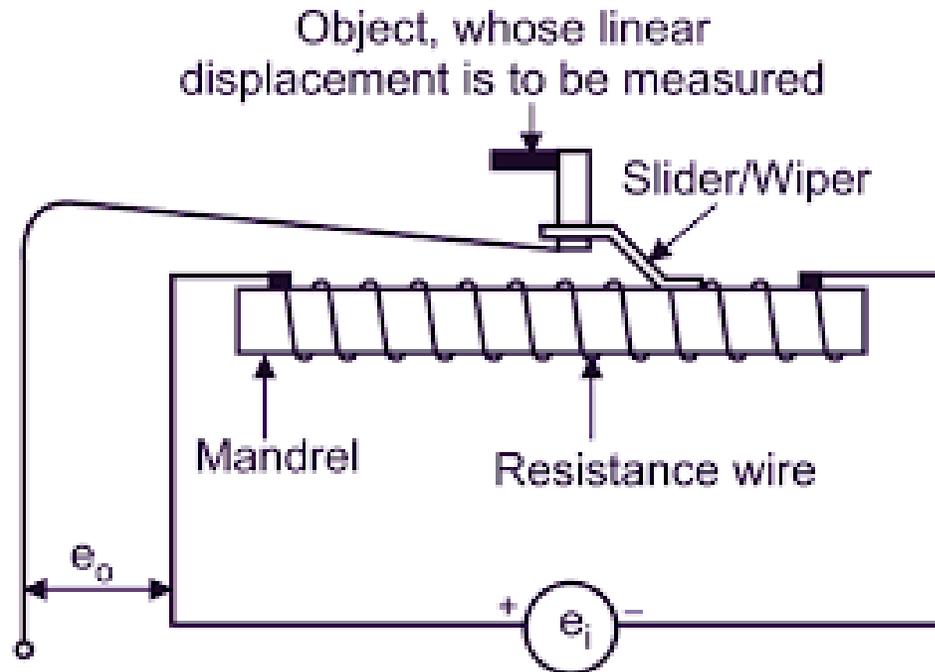


Potentiometer Types



There are two main types of potentiometers:

- Rotary potentiometer
- Linear potentiometer





Potentiometer



Advantages of Potentiometric Transducer:

They are economical

1. Easy to operate
2. Ability to large amplitudes of displacement
3. High efficiency
4. Large Output

Disadvantages:

1. Sufficient force is required to slide the wiper
2. Noise will be produced due to wear out



Thank You