

ELECTRICAL MEASUREMENT & MEASURING INSTRUMENTS

UNIT 4 Part (i)

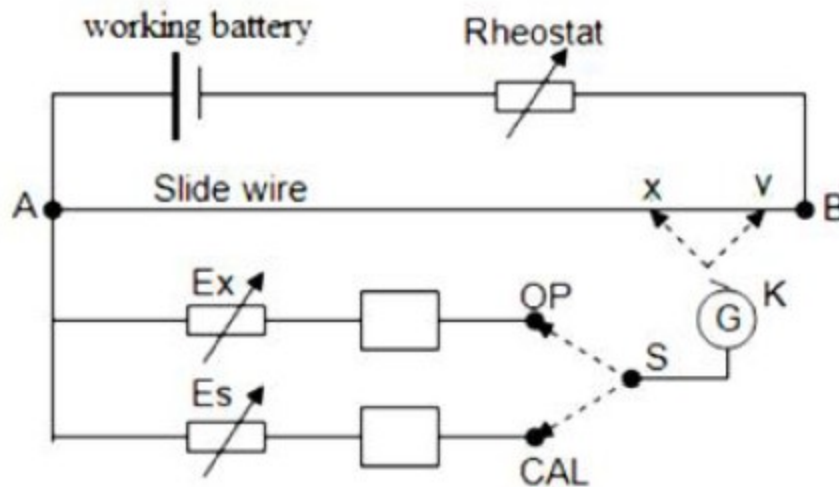
AC Potentiometers

Polar type & Co-ordinate type AC potentiometers

- Potentiometers is an instrument used to measure voltage by using differentiates method with one of standard value.
- The measurement has made with adjusting of contactor until the zero reading has been recorded.
- This condition we called as balance condition due to depletion voltage is same as standard voltage that provided on slide wire.

SLIDE WIRE POTENTIOMETER

- It uses the depletion voltage concept on conductor wire which is proportional directly with long of conductor wire that used.
- The maximum depletion voltage on entire of conductor wire is equal to supply voltage that used.



PRINCIPLE

- It must be calibrated with one of standard value.
- In the calibration process, when the switch is closed circuit, the working current will flow through a slide wire potentiometer (namely as conductor wire) and rheostat.
- The value of this current can be modifying by adjusting the rheostat.

ADVANTAGES OF POTENTIOMETER

- To measure the voltages by differentiate with standard value.
- To measure resistance by differentiate with standard resistor.
- To measure the current by measuring voltage to the unknown resistor value.
- To calibrate volt meter.
- To calibrate ampere meter.