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POTENTIOMETER

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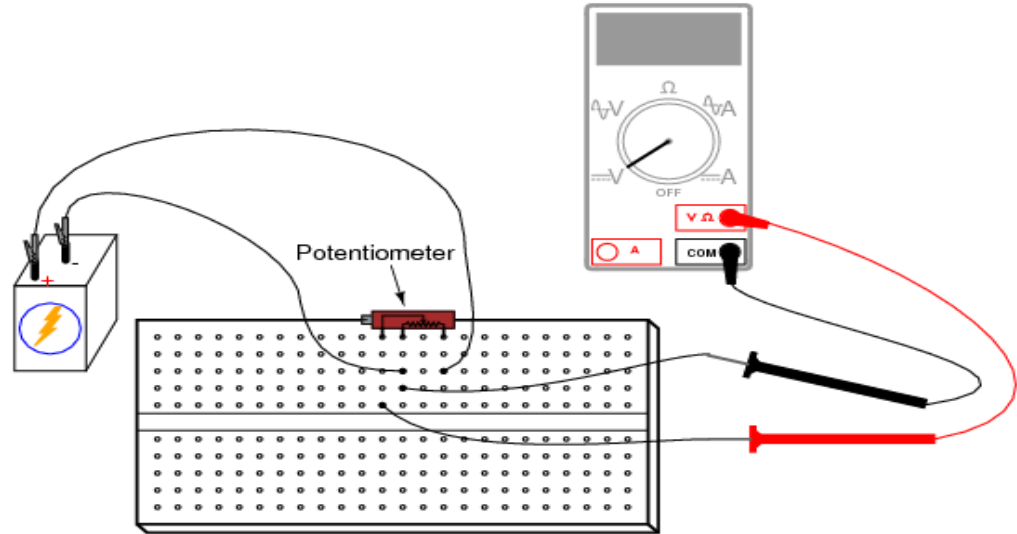


❑ What is a Potentiometer?

- ❑ A potentiometer (also known as a pot or pot meter) 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.
- ❑ Potentiometers are frequently used in electrical devices.

❑ 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.



Show the figure: potentiometer work

❑ *Potentiometer Types:*

❑ There are two main types of potentiometers:.

1.Linear potentiometer.



2.Rotary potentiometer.



❑ Potentiometer Method (Potentiometry):

used in potentiometric titration:

- ❑ For renewal, step (a) may be omitted. Platinum redox electrodes are used in redox potentiometric titrations. In excess of oxidant oxide films are formed on the platinum electrodes. The potential response of the electrode is distorted, and the film must be removed.

❑ Potentiometry principle:

❑ Potentiometric Titration principle of Potentiometry Principle. When the pair of electrodes are placed in the sample solution or analyte it shows the potential difference between two electrodes by addition of the titrant or by the change in the concentration of ions.

□ Type potentiometry:

□ There are four types of titration that fall under the category of potentiometric titration, namely acid-base titration, redox titration, complexometric titration, and precipitation titration.

□ Reference

- <https://www.electrical4u.com/potentiometer/>
- <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.circuitstoday.com/>.
- <https://www.chemicool.com/definition/potentiometry.html>

Thank you

