

Mymensingh Polytechnic institute
Subject : Electrical Engineering drawing(26722)
Technology : Electrical
Semester : Second

Presented by

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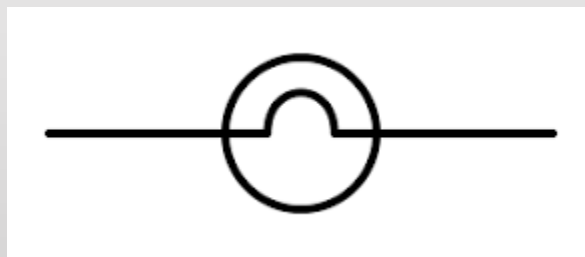


Welcome to my presentation

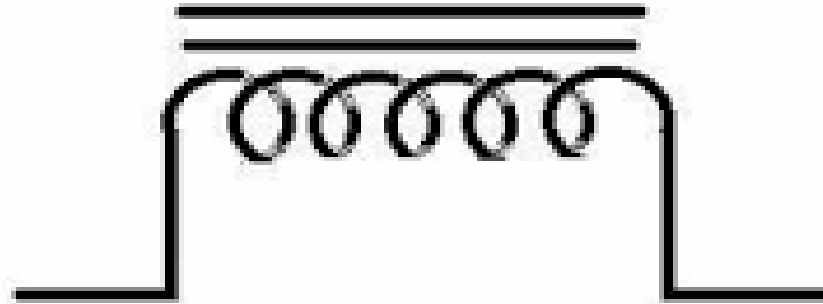
Electrical Symbols

- **Define Electrical Symbol:** An electronic symbol is a pictogram used to represent various electrical and electronic devices or functions, such as wires, batteries, resistors, ...
- Common electronic symbols · Traces · Resistors · Diodes
- **Explain the necessities of electrical symbol:** These symbols are necessary to do the circuit designing which are represented by electronic drawings to convey the information regarding wiring, layouts, equipment location, and its details so that arrangement of components can be done easily.

Incandescent, Fluorescent



Choke Coil



Starter for tube light



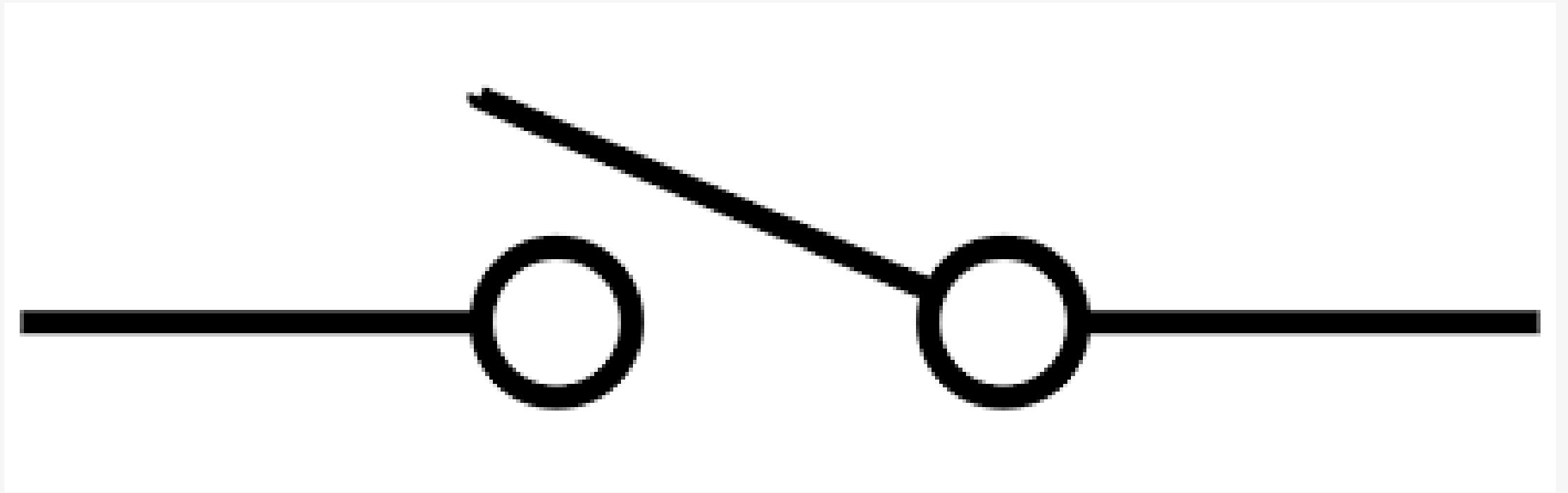
Ceiling Rose



Calling bell

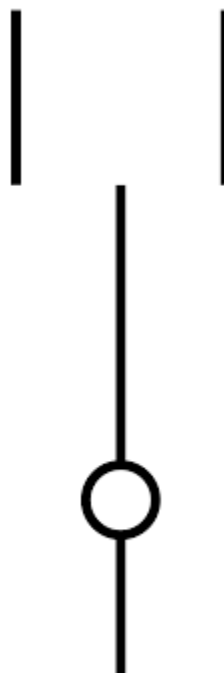
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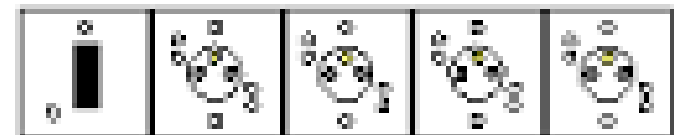
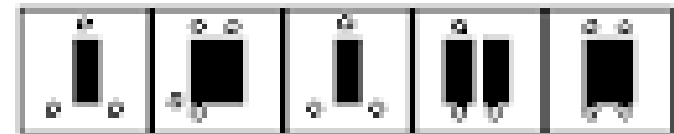
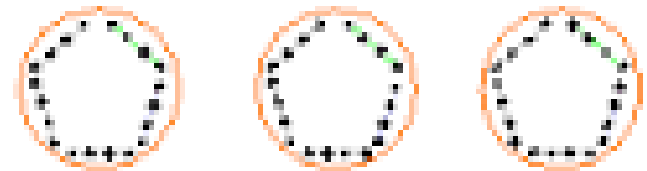
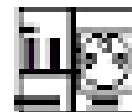
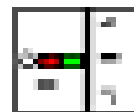
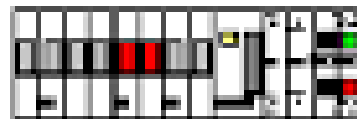
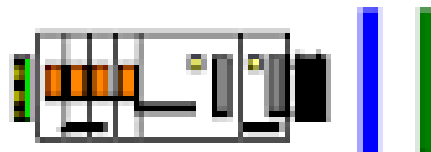


Single way switch

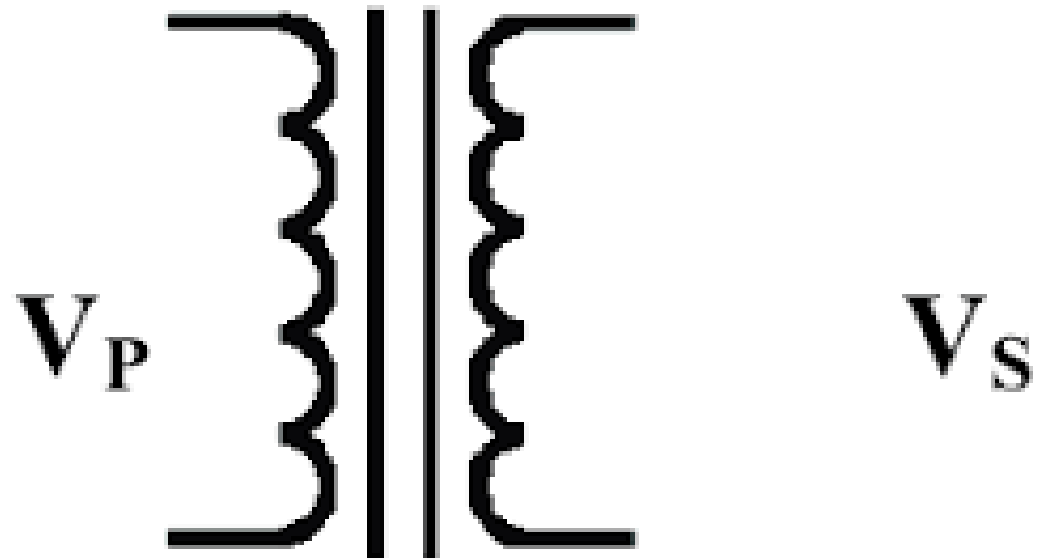
Two way switch

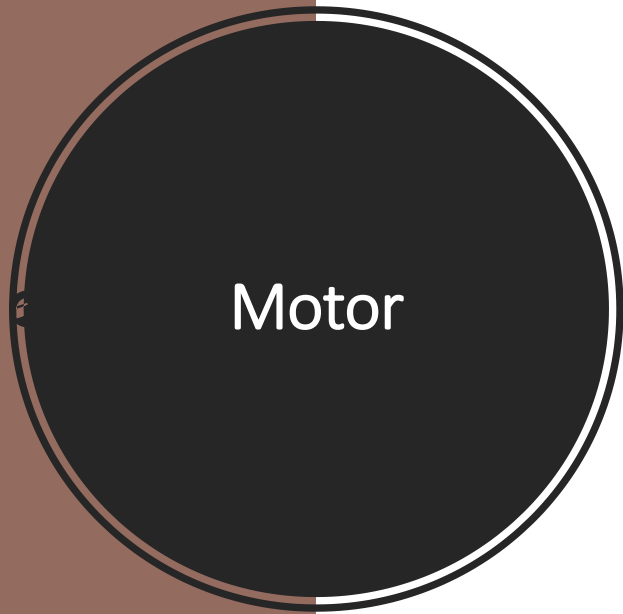


Distribution Board



Transformer



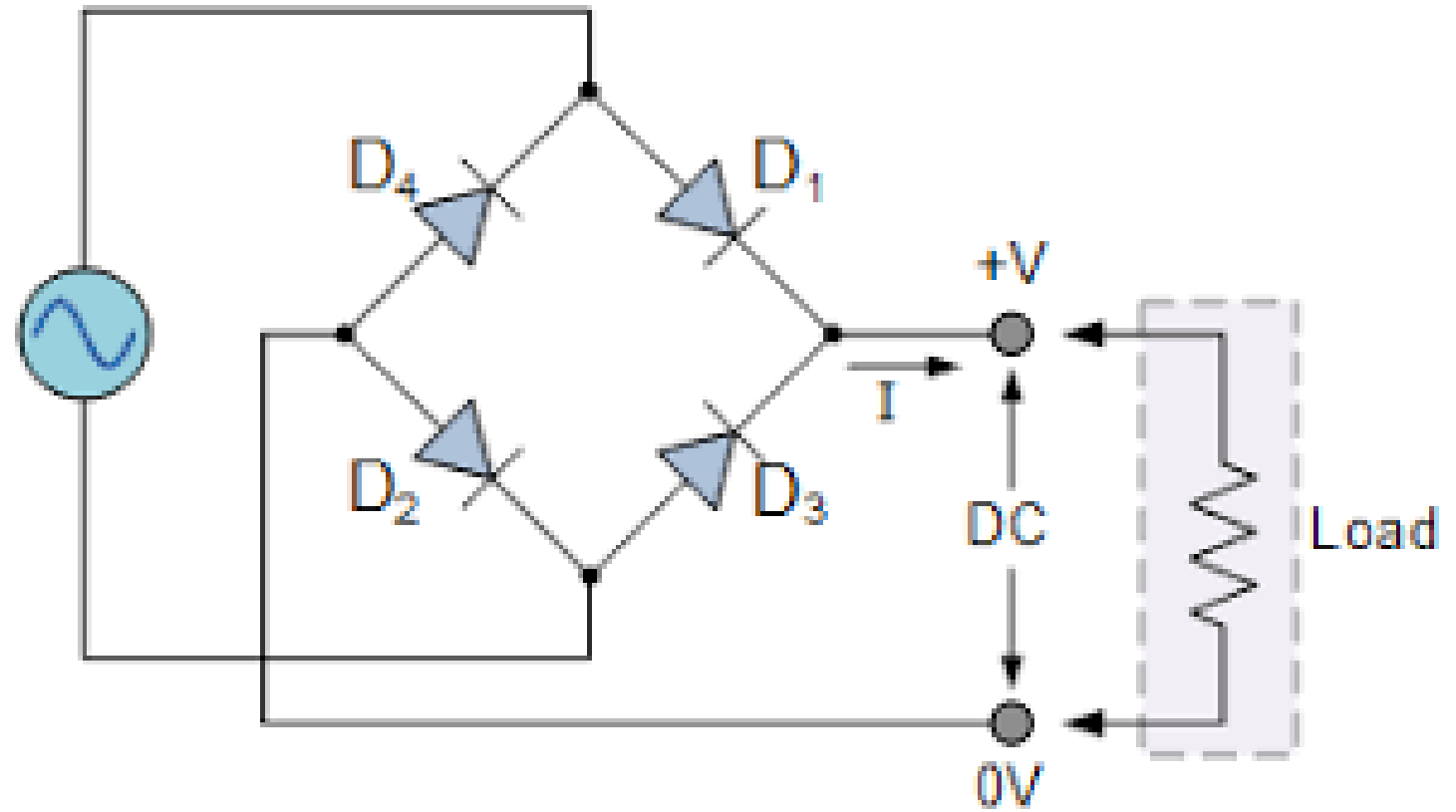


DC Motor

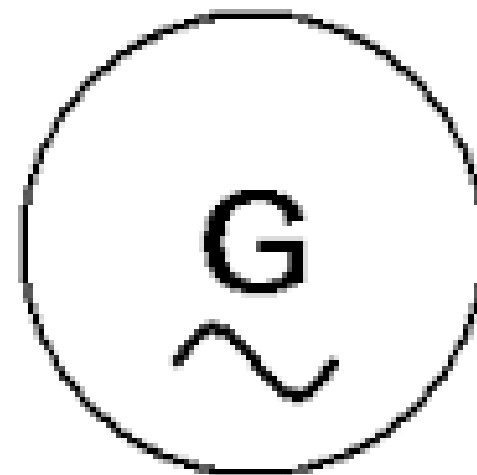


AC Motor

Rectifier Unit



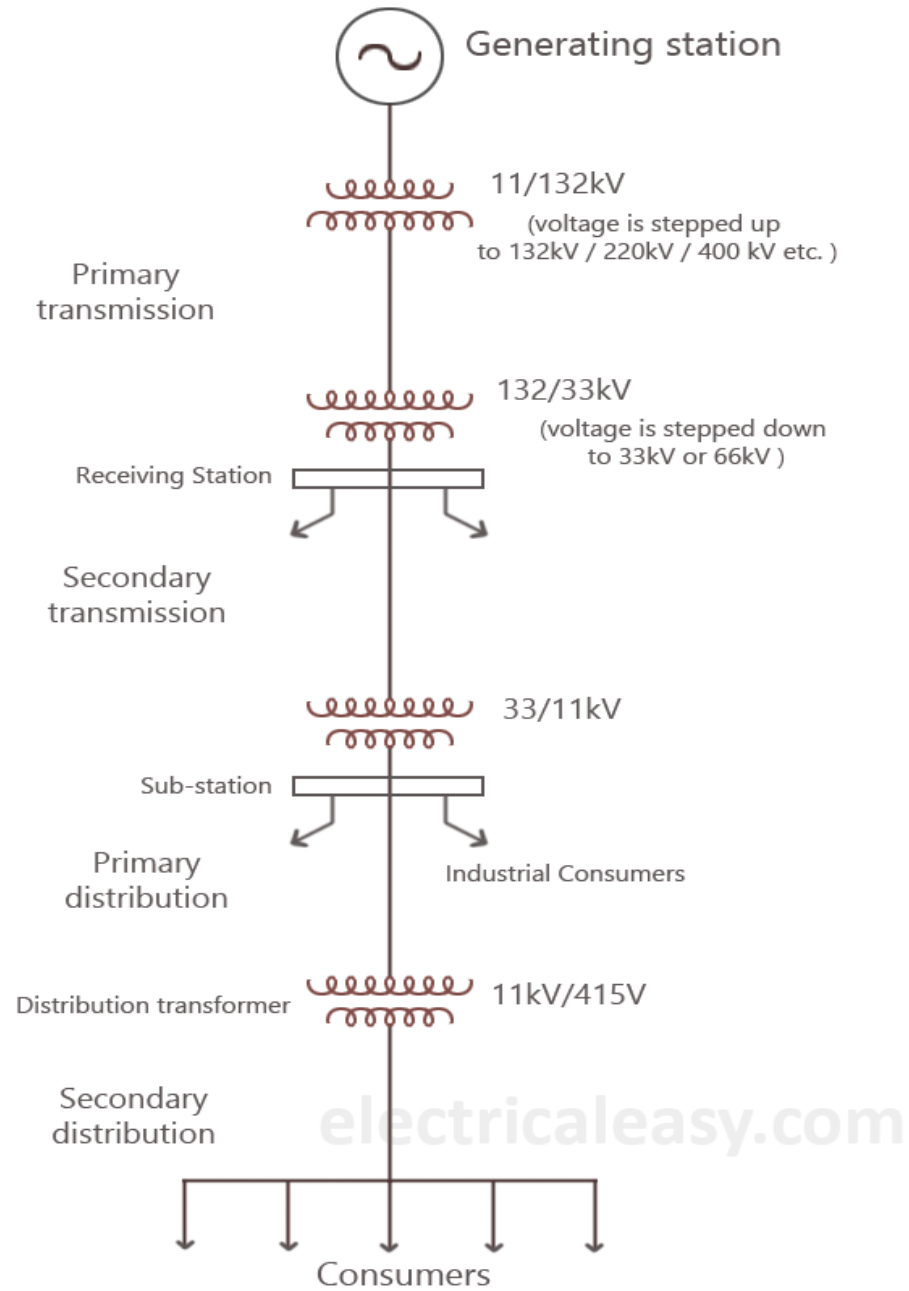
Generator



Transmission and Distribution system

- Define transmission System: Electric power transmission is the bulk transfer of electrical energy from generating power plants to electrical substations. Electricity is transported over long distances at high voltages, which minimizes the loss of electricity.
- Transmission line: A transmission line is a system of conductors that transfers electrical signals from one place to another. The rising and falling of the waves moves the buoy-like structure creating mechanical energy which is converted into electricity and transmitted to shore over a submerged transmission line.

Single line diagram:



Distribution line

- A distribution line is a line or system for distributing power from a transmission system to a consumer that operates at less than 69,000 volts. When a voltage greater than 1 kilovolt and less than 40 kilovolt is used for a particular power line, the power line is typically referred to as a distribution line.

Electrical substation

- A substation is a high-voltage electric system facility. It is used to switch generators, equipment, and circuits or lines in and out of a system. It also is used to change AC voltages from one level to another, and/or change alternating current to direct current or direct current to alternating current.

List the equipment, Meters and switch gear used in substation

- 1. Busbar
- 2. Lightning Arrester
- 3. Isolator
- 4. Oil Circuit breaker
- 5. Instrument transformer
- 6. Transformer
- 7. Insulator
- 8. Earthing switch

Function and uses of different cad commands

- **Below, you'll find an abbreviated list of commands that can be used in AutoCAD.**
- Toggle General Features. Ctrl+d. Toggle coordinate display. Ctrl+g. ...
- Toggle Drawing Modes. F1. Display Help. F2. ...
- Manage Screen. Ctrl+0 (Zero) Clean Screen. Ctrl+1. ...
- Manage Workflow. Ctrl+c. Copy object. Ctrl+x. ...
- Manage Drawings. Ctrl+n. New Drawing. Ctrl+s.

Define cad

- Computer-aided design (CAD) is a way to digitally create 2D drawings and 3D models of real-world products before they're ever manufactured. With 3D CAD, you can share, review, simulate, and modify designs easily, opening doors to innovative and differentiated products that get to market fast.

Editing Commands

- Erase Edit. Erases the selected object from the drawing. ...
- Copy Edit. Copies the selected object from one point on the drawing to one or more locations. ...
- Mirror Edit. Creates a mirror image of the selected object. ...
- Offset Edit. ...
- Array Edit. ...
- Move Edit. ...
- Rotate Edit. ...
- Scale Edit.

Function of Enquiry , Plot and dimension commands

- Using the dimensioning features in AutoCAD allows you to illustrate the dimensions of each element in your drawing. Instead of needing to measure and label each line, circle, or arc individually, these features assign dimensions automatically to the selected element.

Plot setup and preview

- From the Ribbon Output tab > Plot panel, click the Plot button.
Command line: To start the Plot tool from the command line, type “PLOT” and press [Enter]. From the Page Setup list, select your newly created page setup and click OK to plot using the selected settings.

- A preview window opens, and the cursor changes to the real-time zoom cursor. Right-click to display a shortcut menu with the following options: Plot, Pan, Zoom, Zoom Window, or Zoom Original (to zoom to the original preview magnification). Press ESC to exit the preview and return to the Plot dialog box.

Dimension comamand

- Dimensioning is the process of measuring either the area or the volume that an object occupies. It is the method of calculating capacity for the storage, handling, transporting and invoicing of goods.
- **The available dimension types are:**
 - vertical linear.
 - horizontal linear.
 - aligned linear.
 - angular.
 - radius.
 - diameter.

Function of geometric ,adc and layer commands

- Create basic geometric objects such as lines, circles, and hatched areas. You can create a lot of different types of geometric objects in AutoCAD, but you only need to know a few of them for most 2D drawings.

Thank you

