

Mesleki Yabancı Dil 1 Dersi

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Hafta 3

ELECTRIC CIRCUITS

- The simplest electric circuit contains only three parts, i.e. one load, one voltage source, and one control device.
- Most complete electric circuits contain six parts:
 1. an energy source to provide the voltage needed to force current
 2. conductors through which the current can travel
 3. insulators to confine the current to the desired paths
 4. a load to control the amount of current
 5. a control device, often a switch, to start and stop the flow of current
 6. a protection device to interrupt the circuit in case of a circuit malfunction.
- Examples of energy sources are dry cells, accumulators, or generators.
- Conductors are wires, cables, or other bodies or medium suitable for carrying electric current.
- An insulator is a device that has high electric resistance, for supporting or separating conductors to prevent undesired flow of current from the conductors to other objects.

- A load is a device that consumes electric power, e.g. lamps, motors, household appliances etc.
- A control device, often a switch, is used to start or stop the flow of current.
- A protective device, i.e. a fuse, which is inserted in series with the circuit being protected, opens the circuit automatically during a serious overload.
- Basic types of circuits differed by the type of the connection are a series circuit, a parallel circuit, and a complex circuit (e.g. series parallel circuit).
- The series circuit offers a single, continuous, path for current flow from the negative side of the electromotive force source to the positive one.
- In a parallel circuit, two or more resistors are placed parallel to each other so that the current has more than one path through which it can flow.