

# WHAT ARE CIRCUIT BREAKERS

Circuit Breakers are devices that stop the electrical current of a circuit in the event of excess or very high voltage. Circuit breakers are handy, not only because they can protect against electrical fires but also because they can be reset. When a fuse blows out, it must be replaced each time, whereas circuit breakers are easily reset when tripped. Each appliance in your home receives electrical currents by way of electrical circuit breakers.

Circuit breakers are considered to be either main or individual. The main circuit breaker controls power to the entire house while individual circuit breakers transmit power to individual appliances. Electrical circuit breakers are probably the most important safety feature in a building.

A circuit breaker measures the amount of heat produced by the current or by the magnetic field created by the small coil inside the breaker. When the current becomes too high, the breaker will cut off the circuit to stop it. Fuses serve the same function but can only be used once. Anyone who has blown a fuse can tell you it is much easier to have circuit breakers. Electrical circuit breakers are also useful for shutting down power to the entire house.

If you need to do some electrical maintenance, either for the entire structure or individual electrical wires, shutting down the main breaker can be a safety tool. Although electrical waves are invisible, we all know they have great potential danger. You should label each individual electrical circuit breaker so it is easily accessible for future use. Direct current, or DC circuit breakers, are commonly used in automobiles. DC circuit breakers, unlike alternate current (AC) breakers, only deliver currents in one direction. These types of circuit breakers are a renewable energy delivery source, and special precautions should be taken when using them. Since all batteries have the capability of producing enormous amounts of energy when short-circuited, care should be taken to properly install the breaker, fuse and disconnects in a vehicle.

Autos should have additional protection against over current for the battery and each of the branch circuits. Vehicle fires sometimes result when the owner does not take proper precautions. DC circuit breakers often have plastic beads inside of the fuse. When the current becomes too heavy, these plastic beads can melt and fill the void inside the fuse and prevent an arc from forming.

If the current is very heavy this can cause electrical fires. While DC circuit breakers are effective in preventing damage from an overload of current,

they are only effective to a certain degree. Any power source using DC technology should have a backup master fuse to protect the vehicle against total short-circuit.

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