

## **Circuit Breakers used in our Homes.**

Circuit breakers are an electric switch automatically operated and designed to guard an electrical circuit from damage. Harm will occur to an circuit or circuit breaker when there is an overload of electricity or short-circuit.

The essential function of commercial circuit breakers or circuit current sensor is to sense a fault condition. If there is one fault, the breakers discontinue the electrical flow. Made of varying sizes, industrial breakers will be reset manually or automatically to resume normal operation.

Breakers can be a small device to guard one household appliance or big switchgear fashioned to shield high voltage circuits that supply a complete city. There are three varieties of circuit breakers based mostly on their voltage.

A low-voltage breaker is made for circuits at 1000 volts or lower. The molded circuit breaker is one of the foremost commonly used low-voltage air circuit current sensor. This is the breaker used typically in houses, certain industrial uses and small businesses.

Types of low-voltage circuit breakers include the Miniature Circuit Breaker or MCB, and Molded Case Circuit Breaker or MCCB. The MCBs are for applications with electrical power rate not exceeding 100A. They'll be used as thermal or thermal-magnetic operations.

Low-voltage breakers are mounted into draw-out enclosures to permit removal and interchange without dismantling switchgear. The big low-voltage molded case and power breakers have electric motor operators to open and shut them using remote control.

Medium-voltage circuit breakers are for uses requiring voltage of higher than 1,000 however no more than 2000. They can be used indoor or outdoor. For indoor function, a circuit breaker is employed along with enclosed switchgear lineup. For outside application, a circuit breaker is employed as an individual component installed in substation.

There are 3 kinds of medium-voltage breakers. These are vacuum circuit breaker, air circuit breaker and SF6 circuit breaker. A vacuum circuit current sensor is used for electrical volts of 3000 A. it's used to interrupt the electric flow by creating and

extinguishing the arc in a vacuum container.

Air circuit breaker is for uses of 10,000 A. It's often used for major power distribution in massive industrial plants to have straightforward and convenient maintenance. SF6 circuit breakers quench the arc in a container stuffed with sulfur hexafluoride gases.

Medium-voltage breakers will be connected into a circuit by bolted connections to bus bars or cables, in particular in switchyards found in most outdoors. These breakers, which are lined-up in switchgear, are made with draw-out construction. This construction is useful in removing the breaker while not interrupting the power circuit connections.

High-voltage circuit breakers are used if the electric voltage is 72,500 or higher as set by the International Electro-technical Commission. The basic characteristic in the majority of the 3 types of circuit breakers is their solenoid function.

High-voltage circuit current sensors are used to protect and control electrical power transmission networks. They are built with current sensing protecting relays maneuvered through electrical transformers. They're categorized in line with the tool used to extinguish the arc, that consists of the air blast, minimum oil, bulk oil, vacuum and SF6.

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