Name _____ Date _____

Period _____

Engineering Technology Department

Overcurrent Protection

_____is any current load in excess of the safety rating of equipment or the ampacity of a _____. **Overcurrent** may result from an _____, a _____, or a _____. **Overcurrent** does not always **cause** a fire.

Over current _____is protection against _____.
It generally operates instantly. With standard breakers, between 500% and 1000% of full-load current is the point where the over current protection _____ the overload protection and opens the circuit instantly.
overload.

Overload protection is protection against _____.
It operates slower. Overload protection typically operates on an inverse time curve where the tripping time becomes less as the current increases.

A **_____** (sometimes abbreviated to **short** or s/c) is an electrical **_____**that allows a current to travel along an unintended path with no or a very low electrical impedance. Typically a short circuit in residential wiring is the direct connection between the _____ conductor to a grounded conductor.

A **_____** is an inadvertent contact between an energized conductor and **_____**or equipment frame. The return path of the **fault** current is through the grounding system and any personnel or equipment can become part of that system.

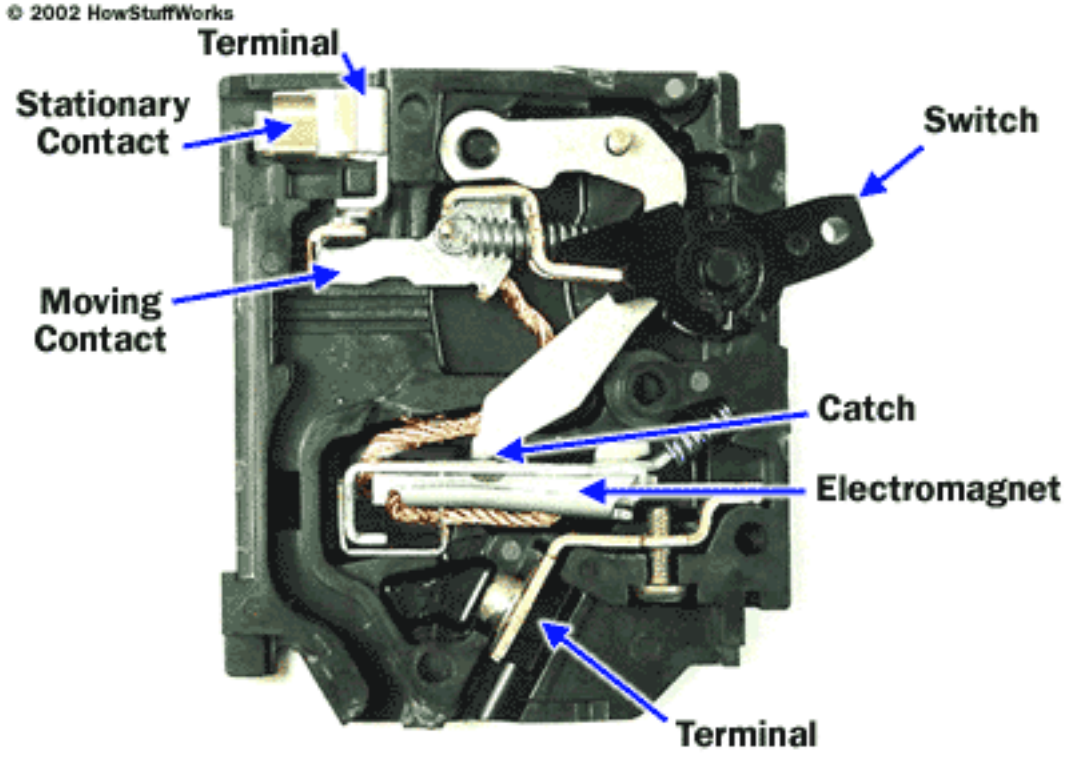
Protective Devices

Overcurrent protection devices include fuses and circuit breakers. Both are manufactured in various shapes and sizes, but all are designed to stop the flow of current should it exceed safe limits.

_____- A fuse interrupts an excessive current so that further damage by overheating or _____is prevented. Wiring regulations often define a maximum fuse current rating for particular circuits. **Fuses are typically made for single time use.**

A _____ is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by _____. Its basic function is to interrupt current flow after protective relays detect a fault. Unlike a fuse, which operates once and then must be replaced; a circuit breaker can be _____(either manually or automatically) to resume normal operation.


Circuit Breakers
240V Breaker fits on both busbars
120V Breaker fits on single busbar
120-240V Tandem Breaker fits on single busbar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