

Introduction to Circuit Protection

Describe the operation of a fuse. Draw the schematic symbol for a fuse.

Identify the resistance of an intact fuse. Identify the resistance of a blown fuse.

Differentiate between fast and slow blow fuses.

Identify advantages and disadvantages of fuses.

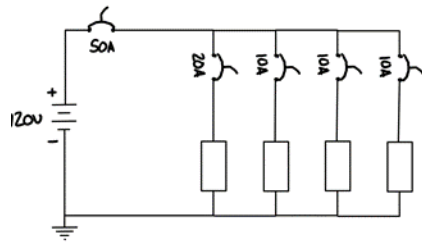
Describe the operation of a circuit breaker. Draw the schematic symbol for a circuit breaker.

Discuss why a fuse may be paired in series with a circuit breaker.

Identify advantages and disadvantages of circuit breakers.

Discuss methods circuit breakers use to extinguish arc current.

Explain the logic of arranging circuit breakers in the following fashion.



Differentiate between system and equipment grounding. Define bonding.

Describe the dangers of working on a system without equipment grounding. Describe how a circuit breaker and equipment grounding resolves this issue.

Describe how a GFCI works.

Compare and contrast high and low side switch. Identify why low side switching might be dangerous.

Describe how an overload element works. Draw the schematic symbol for an overload.

Identify the means overload elements use to detect sustained overload conditions.

Differentiate between automatic and manual reset for overloads.

Identify why an overload element may trigger early if subjected to repeat overloads.

Identify the principal differences between fuses, circuit breakers, GFCIs, and overloads.