

Circuit Protection Checklist

Use Fulcrum's Circuit Protection Checklist app to ensure that your electrical circuit is protected against damages caused by overload, short-circuit, and surge events. Find the digital version of this form and more at <https://www.fulcrumapp.com/apps/circuit-protection-checklist>.

General

Address Street Address _____

City, State, Zip _____

Date _____ / _____ / _____

Time _____ : _____ AM / PM

Name of Circuit Inspector _____

Contact Number _____

Signature _____

Original Equipment Manufacturers (OEM)

- ▶ Check machines and electrical panels that use safety switches, main circuit breakers or fused disconnects to protect against short-circuits, a National Electrical Code® (NEC®) requirement.
 Yes No

Maintenance or Repair Operations (MRO)

- ▶ Check your fuse and molded case circuit breaker inventory in electrical distribution.
 Yes No
- ▶ Commission an arc flash study, electrical system review and personnel safety training for OSHA compliance.
 Yes No

Electronic Circuits and Printed Circuit Boards (PCBS)

- ▶ **Does my printed circuit board need to be protected?**
Review requirement of National Electrical Code® (NEC®) – power circuit versus control circuit.
 Yes No

- ▶ **Where should I locate fuses? Do I need to access fuses?**

- ▶ **Do I want only certified technicians to replace fuses?**
 Yes No

- ▶ **What is circuit voltage?** Choose one.
 AC DC

- ▶ **What are downstream control or printed circuit board power requirements?**

- ▶ **Am I selecting the right fuse (fast-acting or time-delay, amps, volts) for primary and secondary protection, and do they have the required agency certifications for my markets?**
 Yes No

- ▶ **How should the fuse be mounted and does it need to be replaceable?**
Choose one.
 Surface Mount PCB
 Block Fuseclips
 Holder

- ▶ Do I need surge protection – for the power and data signals?
 Yes No
 - ▶ Do I need real time clock (RTC) backup, or peak power management?
 Yes No
 - ▶ Do I need inductors and transformers with performance characteristics to meet EMI shielding, elevated operating temperature conditions, space and other design constraints?
 Yes No
-

Industrial Control Panels

- ▶ Does my industrial control panel need to be protected – main circuit breaker or fuse?
 Yes No
 - ▶ Check NEC® requirement (volts AC/DC) – power circuit versus control circuit?
 Yes No
 - ▶ What is the role of safety switches or an external main disconnect?

 - ▶ What is the UL® 508A equipment SCCR requirement for point of installation?
Use Eaton's Bussmann® series FC2 Available Fault Current calculator mobile app tool for point of installation calculations and equipment labeling.

 - ▶ What equipment SCCR do I need to comply with NEC and OSHA requirements?
Use Eaton's Bussmann® series OSCAR™ online SCCR Compliance Application.

 - ▶ Authenticate your molded case circuit breakers?
 Yes No
-

▶ Where should I locate or apply circuit breakers and/or fuses?

▶ Motor circuit protection?

Yes No

▶ Feeder circuit breakers?

Yes No

▶ Protect critical or expensive components?

Yes No

▶ Operator Interface?

Yes No

▶ Do you need to access fuses?

Yes No

▶ What is the supply voltage?

AC DC

▶ What are the downstream circuit current requirements for motors (full load amps, FLA)?

▶ Calculate the correct circuit breaker or fuse protection (amps).

▶ Which circuit breaker or fuse should I specify in my UL 508A control panel?

▶ Which fuse mounting should I choose? Choose one.

Blocks Holders

▶ Do I need finger-safe components?

Yes No

- ▶ Which disconnect or accessories should I choose?
-

- ▶ Do I need a power distribution block? Can I use a Class J power distribution fuse block to increase SCCR and reduce component count and overall cost?

Yes No

- ▶ Review communication for control panel trip?

Yes No

- ▶ Does my control panel need surge protection?

Yes No



Fulcrum is a mobile app creation platform that lets you digitize checklists like this easily — and automate related workflows! — without writing any code.

Check us out at fulcrumapp.com/checklists