

# How to meet short-circuit current rating requirements

The 2017 National Electrical Code® (NEC) include several sections with new short-circuit protection requirements. The most significant changes will require that the available fault current<sup>1</sup> at the location where the equipment is installed is marked/documented and dated.

These changes will allow installers, inspectors and approvers to verify that the installed equipment short-circuit current rating (SCCR) is equal to or greater than the available fault current, and compliant with the other code sections dealing with equipment installations.

<sup>1</sup> The available fault current (also known as *available short-circuit current*) is the amount of current that is available during a short-circuit event and is unique to the installed equipment's location.

## Understanding the risk

Equipment with insufficient SCCR may expose personnel to risk or create a fire hazard.

Original equipment manufacturers (OEMs) often struggle with developing an equipment SCCR, an SCCR plan or solution for their panels and assisting end users with equipment SCCR specifications that will help support code compliance. Research indicates that more than half of OEMs design to a typical minimum equipment SCCR of 5 kA.

With the new code requirements to document available fault current and mark equipment with its SCCR, there is the increased chance many equipment installations will not be code compliant or approved.

Designing an equipment SCCR plan or implementing an SCCR solution can be difficult, but it doesn't have to be. Eaton provides a range of solutions that help you achieve available fault current and equipment SCCR code compliance—easily and efficiently.

## What it means for you

The anticipated 2017 NEC changes will make it easier for OEMs, industrials and inspectors to verify proper equipment SCCR protection. These changes include:

### Marking requirements

The available fault current must be marked at the location where the following equipment types will be installed:

- Machinery
- HVAC equipment
- Elevator control panels
- Generator equipment
- Transfer equipment
- Energy storage equipment
- Battery systems equipment

### Documentation requirements

The available fault current must be documented for the location where the following equipment types are located:

- Motor control centers
- Any other equipment with an industrial control panel



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Learn how to navigate these SCCR requirements at Connect & Learn Day



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## 4 steps to calculate equipment SCCR

### 1 Determine SCCR

of components incorporated in the feeder and branch circuits.

### 2 Determine the potential

of current-limiting devices in the feeder circuit to increase the SCCR of branch circuit components.

### 3 Identify interrupting ratings

of all overcurrent protective devices in the feeder and on the primary of control transformers and power supplies.

### 4 Your equipment SCCR

is the lowest value of the component SCCRs, raised component SCCRs, or interrupting ratings of the overcurrent protective devices.