


UL® and NEC® Requirements for Electric Panel Assemblies Marked with Fault Current or SCCR

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Download here (<http://media/documents/white-papers/artcode-ulnec-requirement0322.ashx?la=en&hash=E127FDB025C9FBE3C04524FBA8D15218CBECD939>)

Short-Circuit Current Rating - SCCR
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Effective April 2006 through UL® 508A, the National Electric Code® (NEC®) requires that electrical panel assemblies be marked with the available fault current or Short-Circuit Current Rating (SCCR). See Article 409.110 of the 2008 edition of NEC®. The SCCR rating must be marked on all industrial electrical panels and will be rated at the level of the lowest SCCR component.

What Is Short-Circuit Current Rating (SCCR)?

SCCR is a safety consideration that gives a rating ensuring a circuit or piece of equipment will survive without producing a dangerous arc flash. An arc flash results in an explosion caused by an insulation failure or air ionization from an over-voltage event. An arc flash with 1,000 amperes or more can cause substantial damage, fire or injury. The massive energy released in the fault rapidly vaporizes the metal conductors involved, blasting molten metal and expanding plasma outward with extreme force. The reason behind the code change is to prevent fire, injury or death.

The SCCR rating represents the maximum level of short-circuit current that the component or assembly can withstand and is used for determining compliance with NEC® Article 110.10. Although this rating can be marked on individual components or assemblies the assembly listing takes into account all components contained within the equipment. Do not make the mistake to assume that the interrupting rating of the over current protective device protecting the circuit represents the SCCR for the entire circuit. Interrupting ratings apply solely to the over current protective device and are used for compliance with NEC® Article 110.5.

All industrial electrical systems have a known "Fault Current," which is available from the utility that serves the building. If the incoming power and the bus power are rated at 65,000 amps, then any new control panel installed in that area must have a SCCR rating of at least 65,000 amps.