SCCR Values for DIN rail terminal blocks

selos/fasis

wieland

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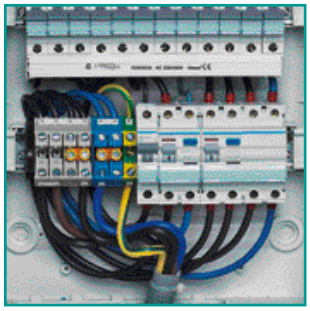
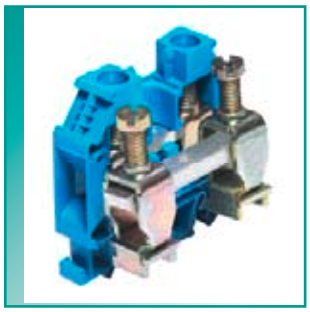
As a result of changes to the 2005 NEC, both the operator and manufacturer of electrical equipment must comply with increased requirements related to resistance to short-circuiting of equipment. In accordance with both the NEC 2005 Article 409.110 and UL 508A, the short circuit resistance of the complete installation must now be considered. The installation's Short Circuit Current Rating must be indicated on the equipment or control panel's legend plate.

Wieland has tested and determined individual SCCR values for their terminal blocks in connection with the widest variety of fuses. These ratings are far greater than the default values contained in UL 508A. As a result, when qualifying your installation, you have increased flexibility and accuracy when using Wieland terminal blocks.



What does SCCR marking mean?

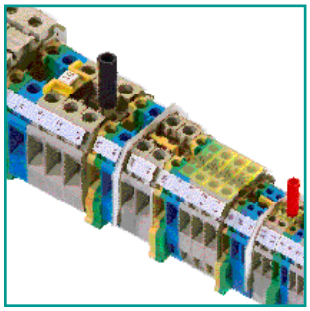
The Short Circuit Current Rating (SCCR) of a component represents the maximum short circuit current level a device can safely withstand without compromising safety for installations and personnel. Article 409 on industrial control panels was added to the NEC in the 2005 edition. This article calls for all industrial control panels to be marked with a Short Circuit Current Rating. The Short Circuit Current Rating (SCCR) requirements for UL 508A came into force in April 2006.



How is the SCCR marking determined?

The NEC Article 409 refers to the UL 508A Supplement SB as an approved method for determining the SCCR of an industrial control panel. This specific method is outlined in Section SB4.

1. Determination of the SCCR values of individual components, for example DIN rail terminal blocks
2. Modification of the SCCR values through the use of current limiting devices per UL 508 SB 4.3
3. Selection of the lowest SCCR value from all the components



SCCR for DIN rail terminal blocks in general

The SCCR of a terminal block can be determined according to UL 508A using one of the following methods:

1. Use the tested SCCR value
2. Use the default SCCR value as specified in table 4.1 of UL 508

If the DIN rail terminal blocks do not have a tested SCCR, then the UL default value of 10kA must be used. This relatively low value would limit the SCCR of the entire system to max. 10kA.

SCCR for Wieland DIN rail terminal blocks

Wieland determined SCCR values for its DIN rail terminal blocks used in conjunction with fuses and circuit breakers.
The resulting SCCR values are much higher than the values specified for DIN rail terminal blocks in table SB 4.1 of UL 508A.
You will find the tested SCCR values for our ***selos*** and ***fasis*** product series on the back side of this data sheet.
The SCCR values are also published on the UL website (http://www.ul.com) under file number E60678.

CUSTOMER INFORMATION

0119.3 E 07/08

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Industrial technology

Solutions for the control cabinet

- DIN rail terminal blocks
  - Screw, spring clamp or IDC connection technology
  - Wire cross sections up to 240 mm²
  - Numerous special functions
  - Software solutions interfacing to CAE systems
- Safety
  - Safety sensors
  - Safety relays
  - Modular safety systems with fieldbus link
- PLC and fieldbus components
  - Standard applications in IP20
  - Increased environmental conditions with railroad and ship approvals
- Interface
  - Coupling relays, semiconductor switches
  - Measuring and monitoring relays
  - Timer and switching relays
  - Analog modules
  - Passive interfaces
  - Power supply units
  - Overvoltage protection

Solutions for field applications

- Remote automation technology
  - Power distribution
  - Fieldbus interfaces and motor starters
- Connectors for industrial applications
  - Square and round connectors
  - Aluminum or plastic housings
  - Degree of protection up to IP68
  - Current-carrying capacity up to 100 A
  - Connectors for hazardous areas
  - Modular, application specific technology

PC board terminals and connectors

- Screw or spring clamp connection technology
- Spacings: 3.5 mm to 10.16 mm
- Reflow or wave soldering process

Building and installation technology

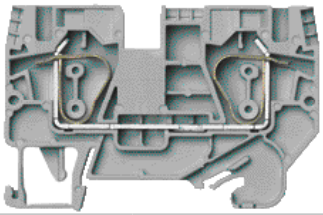
- Building installation systems
  - Main power supply connectors IP20/IP65 ... IP68
  - Bus connectors
  - Combined connectors
  - Low-voltage connectors
  - Power distribution system with flat cables
  - Distribution systems
  - Bus systems in KNX, LON and radio technology
  - DIN rail terminal blocks for electrical installations
  - Overvoltage protection

selos – DIN rail terminal blocks with screw connection

Part Number	Type	Connectable conductors [AWG/kcmil]	Fuse [A]						SCCR value [kA]
			J	T	RK1	RK5	G	CC	
57.503.0055.0	WK 2,5 / U / V0	14 – 12	100	100	60	30	60	30	100
57.504.0055.0	WK 4 / U / V0	14 – 10	200	200	200	100	60	30	100
57.504.5055.0	WK 4 D1 / 2 / U / V0	14 – 10	200	200	200	100	60	30	100
57.504.5155.0	WK 4 D2 / 2 / U / V0	14 – 10	200	200	200	100	60	30	100
57.506.0055.0	WK 6 / U /V0	14 – 8	200	200	200	100	60	30	100
57.510.0155.0	WKN 10/U /V0	14 – 6	200	200	200	100	60	30	100
57.516.0155.0	WKN 16 / U /V0	12 – 4	200	200	200	100	60	30	100
57.535.0155.0	WKN 35 / U /V0	10 – 2	400	400	400	200	60	30	100
57.570.0155.0	WKN 70 / U /V0	6 – 2/0	400	400	400	200	60	30	100
57.597.0155.0	WKN 150 / U /V0	2/0 – 350	400	400	400	200	60	30	100

Rated voltage UL: 600 V

fasis – DIN rail terminal blocks with spring clamp connection



Part Number	Type	Connectable conductors [AWG/kcmil]	Fuse [A]						SCCR value [kA]
			J	T	RK1	RK5	G	CC	
56.703.0055.0	WKFN 2,5 /35	14 – 12	100	100	60	30	60	30	100
56.703.5055.0	WKFN 2,5 D1/2 /35	14 – 12	100	100	60	30	60	30	100
56.703.5155.0	WKFN 2,5 D2 / 2 / 35	14 – 12	100	100	60	30	60	30	100
56.704.0055.0	WKFN 4 /35	14 – 10	200	200	200	100	60	30	100
56.704.5055.0	WKFN 4 D1/2 /35	14 – 10	200	200	200	100	60	30	100
56.704.5155.0	WKFN 4 D2/2 /35	14 – 10	200	200	200	100	60	30	100
56.704.8453.0	WKF 4 3D/SL	14 – 10	200	200	200	100	60	30	100
56.706.0055.0	WKFN 6 /35	14 – 8	200	200	200	100	60	30	100
56.706.5055.0	WKFN 6 D1/2 /35	14 – 8	200	200	200	100	60	30	100
56.710.0055.0	WKFN 10 /35	14 – 6	200	200	200	100	60	30	100
56.710.5055.0	WKFN 10 D1/2 /35	14 – 6	200	200	200	100	60	30	100
56.716.0055.0	WKFN 16 /35	14 – 4	200	200	200	100	60	30	100
56.716.5055.0	WKFN 16 D1/2 /35	14 – 4	200	200	200	100	60	30	100

Rated voltage UL: 600 V