Bussmann SC-30

Bussmann SC-30 Time-Delay Class G Fuse Instruction Manual

Model: SC-30 | Brand: Bussmann

1. Introduction

This instruction manual provides essential information for the safe handling, installation, and replacement of the Bussmann SC-30 Time-Delay Class G Fuse. This fuse is designed for basic protection in various non-demanding, general-purpose electrical applications. Please read this manual thoroughly before use.

2. Safety Information

WARNING: Risk of electric shock or fire. Always disconnect power before installing or replacing fuses. Fuses must be installed by qualified personnel in accordance with all applicable electrical codes and standards.

- Ensure the replacement fuse matches the original fuse's voltage, amperage, and interrupting rating.
- Do not use a fuse with a higher amperage rating than specified for the circuit.
- Never bypass a fuse or use a substitute material.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.

3. Product Overview and Features

The Bussmann SC-30 is a 30 Ampere, Time-Delay, Class G fuse. It is designed to provide basic protection for circuits up to 480VAC and 300VDC. Its time-delay characteristic allows for temporary overcurrents, such as motor starting, without nuisance tripping, while still providing protection against sustained overloads and short circuits. The fuse features a size-rejecting design to prevent overfusing in compatible fuse holders.

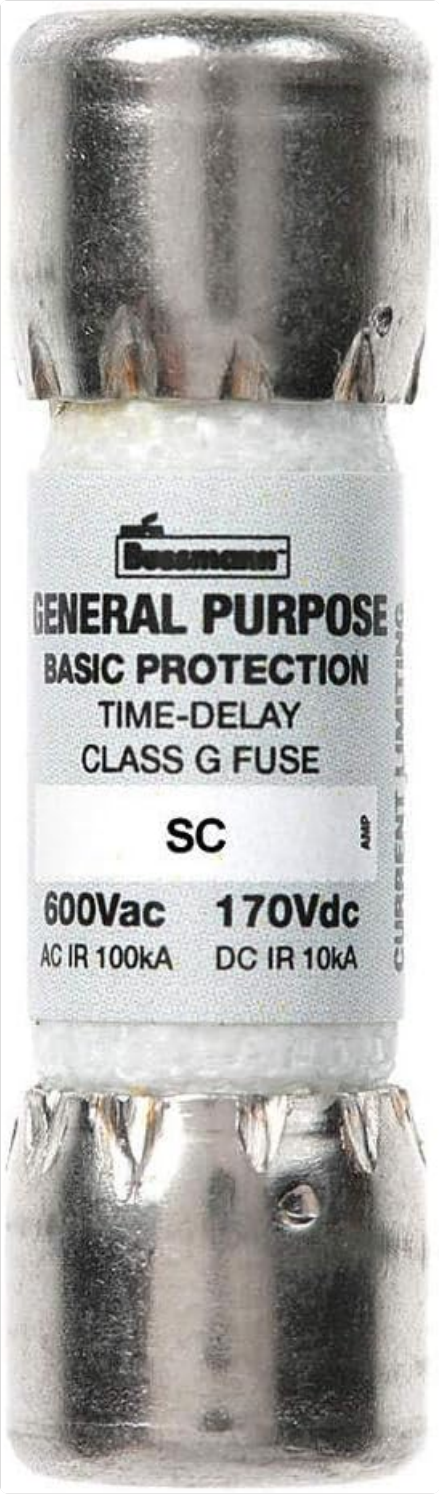

Figure 1: Bussmann SC-30 Time-Delay Class G Fuse. This image displays the cylindrical fuse with metallic end caps and a white body labeled with "Bussmann", "GENERAL PURPOSE", "BASIC PROTECTION", "TIME-DELAY", "CLASS G FUSE", "SC", "600Vac", "170Vdc", "AC IR 100kA", and "DC IR 10kA".

4. Specifications

Attribute	Value
Brand	Bussmann
Model Number	SC-30 (LEPUSPTLSHI2145)
Amperage	30A
Voltage Rating	480VAC / 300VDC
Fuse Class	Class G
Type	Time-Delay, Current Limiting, Size-Rejecting
Material	Melamine Tube
Item Weight	1 Pound
Date First Available	December 19, 2016

5. Installation and Setup

1. **Power Disconnection:** Before beginning any installation, ensure that the main power supply to the circuit is completely disconnected and locked out according to safety procedures. Verify with a voltage tester.
2. **Identify Fuse Holder:** Locate the appropriate fuse holder for the Class G fuse. Ensure it is compatible with the SC-30's physical dimensions and electrical ratings.
3. **Verify Ratings:** Confirm that the new Bussmann SC-30 fuse matches the required amperage and voltage ratings for the circuit. Using an incorrect fuse can lead to equipment damage or fire.
4. **Insert Fuse:** Carefully insert the SC-30 fuse into the fuse holder. Ensure it is seated firmly and correctly.
5. **Restore Power:** Once the fuse is securely installed and all covers are replaced, restore power to the circuit.

Note: If you are unsure about any step, consult a qualified electrician.

6. Operation

The Bussmann SC-30 fuse operates as a protective device. Under normal operating conditions, current flows through the fuse without interruption. If an overcurrent condition (either an overload or a short circuit) occurs that exceeds the fuse's rating for a specific duration, the internal element of the fuse will melt, opening the circuit and preventing damage to electrical components or wiring. The time-delay characteristic allows for temporary inrush currents without blowing, which is beneficial for circuits with inductive loads like motors.
When a fuse blows, it indicates a fault in the circuit. The circuit will lose power. The fuse itself is a single-use device and must be replaced after it has operated.

7. Maintenance

Fuses generally require no maintenance under normal operating conditions. The primary maintenance task involves replacing a blown fuse.

Fuse Replacement Procedure:

1. **Disconnect Power:** Always disconnect and lock out the power supply to the circuit before attempting to replace a fuse.
2. **Identify Blown Fuse:** Visually inspect the fuse, if possible, or use a multimeter to test for continuity. A blown fuse will show an open circuit.

3. **Remove Old Fuse:** Carefully remove the blown SC-30 fuse from its holder.
4. **Install New Fuse:** Insert a new Bussmann SC-30 fuse with identical ratings (amperage, voltage, class) into the fuse holder. Ensure it is properly seated.
5. **Restore Power:** Re-energize the circuit after confirming the new fuse is correctly installed and all safety precautions are observed.

8. Troubleshooting

If a circuit continues to lose power after replacing a fuse, or if a new fuse blows immediately, it indicates an underlying electrical issue that needs to be addressed.

- **Repeated Fuse Blowing:** This is a strong indicator of an overload or a short circuit within the electrical system or connected equipment. Do not continue to replace fuses without investigating the cause.
- **No Power After Replacement:** Ensure the new fuse is correctly installed and that power has been fully restored to the circuit. Check for loose connections.
- **Consult a Professional:** For persistent issues or if you are unable to identify the cause of a blown fuse, it is highly recommended to contact a qualified electrician for diagnosis and repair.

9. Warranty Information

Bussmann products are manufactured to high-quality standards. This product is covered by the manufacturer's standard warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the official Bussmann website or contact their customer support. Keep your purchase receipt as proof of purchase.

10. Customer Support

For technical assistance, product inquiries, or support, please visit the official Bussmann website or contact their customer service department. Contact information can typically be found on the manufacturer's packaging or website.
Online Resources: Eaton (Bussmann) Official Website