

ABB S201-C16

User Manual: ABB S201-C16 Miniature Circuit Breaker

Model: S201-C16 | Brand: ABB

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the ABB S201-C16 Miniature Circuit Breaker. This device is designed for reliable protection against overcurrent faults in various electrical applications, including commercial appliances and control circuits. Please read this manual thoroughly before installation and use.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel. Failure to follow these instructions can result in serious injury or death.

- Always disconnect power before installing, servicing, or removing the circuit breaker.
- Ensure all wiring complies with local and national electrical codes.
- Do not operate the circuit breaker if it appears damaged.
- Use appropriate personal protective equipment (PPE) when working with electrical systems.
- The device must be installed in an enclosure providing IP20 protection or higher.

3. PRODUCT DESCRIPTION AND FEATURES

The ABB S201-C16 is a 1-pole miniature circuit breaker from the S200-C series, designed for low voltage applications. It provides thermal/magnetic trip protection against overloads and short circuits.

Key Features:

- Voltage Rating:** 480Y/277 VAC
- Amperage Rating:** 16 A
- Interrupt Rating:** 6 kA
- Number of Poles:** 1
- Trip Type:** Thermal/Magnetic
- Mounting:** DIN-Rail

- **Terminal Type:** Screw terminals
- **Enclosure Protection:** IP20



Figure 3.1: Front view of the ABB S201-C16 Miniature Circuit Breaker. This image shows the main body of the circuit breaker, including the toggle switch, ABB branding, model number S201-C16, voltage rating 230/400V, and interrupt capacity 6000. A barcode with the number 4016779464406 is visible on the side.

4. SETUP AND INSTALLATION

The S201-C16 circuit breaker is designed for DIN-rail mounting. Ensure proper tools and safety procedures are followed during installation.

1. **Power Disconnection:** Before beginning any installation, ensure that the main power supply to the circuit is completely disconnected and locked out. Verify with a voltage tester.
2. **Mounting:** Snap the circuit breaker onto a standard 35mm DIN-rail. Ensure it is securely seated.
3. **Wiring:**
 - Connect the incoming phase conductor to the upper terminal and the outgoing phase conductor to the lower terminal.
 - The circuit breaker accepts wire sizes from 18 - 4 AWG for conductors and 18 - 8 AWG for busbars.
 - Use appropriate screw terminals to secure the wires. Ensure all connections are tight to prevent loose contacts and overheating.
4. **Verification:** After wiring, double-check all connections for correctness and tightness.
5. **Power Restoration:** Once installation is complete and verified, restore power to the circuit.



Figure 4.1: Side view of the ABB S201-C16 Miniature Circuit Breaker, showing the DIN-rail mounting mechanism and terminal points. This view highlights the compact design and the screw terminals for wire connections.

5. OPERATING INSTRUCTIONS

The ABB S201-C16 Miniature Circuit Breaker operates with a simple toggle mechanism.

- **ON Position:** Push the toggle switch upwards to the 'I' (ON) position to close the circuit and allow current flow.
- **OFF Position:** Push the toggle switch downwards to the 'O' (OFF) position to open the circuit and stop current flow.
- **Tripped Position:** If an overload or short circuit occurs, the circuit breaker will automatically trip, moving the toggle switch to an intermediate or fully down position (depending on the fault type and specific model behavior). This indicates a fault and protects the circuit.
- **Resetting a Tripped Breaker:** To reset a tripped breaker, first identify and rectify the cause of the trip (e.g., remove overloaded devices or fix a short circuit). Then, push the toggle switch fully to the 'OFF' position before pushing it back to the 'ON' position. If the breaker trips immediately again, do not attempt to reset it repeatedly; consult a qualified electrician.

6. MAINTENANCE

The ABB S201-C16 Miniature Circuit Breaker is designed for minimal maintenance. However, periodic inspection is recommended to ensure optimal performance and safety.

- **Visual Inspection:** Periodically inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections. Ensure the toggle switch moves freely.
- **Cleaning:** If necessary, gently clean the exterior of the circuit breaker with a dry, lint-free cloth. Do not use abrasive cleaners or solvents. Ensure power is disconnected before cleaning.
- **Connection Check:** Annually, or as required by local regulations, verify the tightness of all terminal connections. Loose connections can lead to overheating and potential hazards.
- **Testing:** Do not attempt to test the tripping mechanism by intentionally creating a short circuit. Functional testing

should only be performed by qualified personnel using appropriate test equipment.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overload on the circuit, short circuit, or faulty appliance.	Reduce the load on the circuit. Disconnect appliances one by one to identify the faulty one. Check for short circuits in wiring or appliances. If the problem persists, consult an electrician.
Circuit breaker does not reset.	Persistent overload or short circuit, internal damage to the breaker.	Ensure the cause of the trip has been resolved. If it still doesn't reset, the breaker may be damaged and needs replacement. Do not force the switch.
Circuit breaker feels hot.	Overload, loose connections, or improper wire size.	Check for overload. Verify all wire connections are tight. Ensure wire size is appropriate for the current. Disconnect power and consult an electrician immediately.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Brand	ABB
Model Number	S201-C16
Type	Low Voltage Miniature Circuit Breaker
Series	S200-C
Voltage Rating	480Y/277 VAC
Amperage Rating	16 A
Frequency Rating	50/60 Hz
Interrupt Rating	6 kA
Trip Type	Thermal/Magnetic
Trip Range	3 - 5 A Magnetic and 1.13 - 1.45 A Thermal
Number of Poles	1
Actuator Type	Toggle
Wire Size	18 - 4 AWG Conductor, 18 - 8 AWG Busbar
Terminal Type	Screw
Enclosure Type	IP20

Parameter	Value
Mounting Type	DIN-Rail
Temperature Rating	-25 to 55 deg C
Dimensions (H x W x D)	88 mm x 17.5 mm x 69 mm
Material	Insulation Group II, RAL 7035
Standards/Approvals	IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA 22.2
Application	Equipment Protection in Commercial Appliances, Protection of Control Circuits Against Overcurrent Faults, Computer Equipment and Other Computer Peripheral Devices
UPC	662019168746

9. WARRANTY AND SUPPORT

For information regarding product warranty, please refer to the official ABB website or contact your authorized ABB distributor. Technical support can be obtained through ABB's customer service channels.


ABB Contact Information:

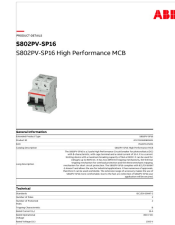




- **Website:** www.abb.com
- Refer to the website for regional contact details and support resources.

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Related Documents - S201-C16

	<p>ABB Emax Low Voltage Air Circuit Breakers Technical Catalog</p> <p>Explore the technical catalog for ABB's Emax series of low voltage air circuit breakers. This document details features, models, installation, protection relays, accessories, applications, dimensions, circuit diagrams, and ordering codes for the Emax line, emphasizing innovation, performance, and reliability.</p>
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 <p>ABB S802PV-SP16 S802PV-SP16 High Performance MCB</p>	<p>ABB S802PV-SP16 High Performance MCB - Technical Specifications</p> <p>Detailed technical specifications, product information, dimensions, and ordering details for the ABB S802PV-SP16 High Performance Miniature Circuit Breaker (MCB) designed for photovoltaic DC applications.</p>
 <p>ABB VM1 Vacuum circuit breaker</p>	<p>ABB VM1 Vacuum Circuit Breaker Instruction Manual</p> <p>Comprehensive instruction manual for the ABB VM1 vacuum circuit breaker, detailing its structure, function, installation, operation, maintenance, and technical specifications for medium voltage electrical systems.</p>
 <p>ABB VM1 Vacuum circuit breaker Instruction Manual BA 504/02 E</p>	<p>ABB VM1 Vacuum Circuit-Breaker Instruction Manual BA 504/02 E</p> <p>Comprehensive instruction manual for the ABB VM1 series of vacuum circuit-breakers. Covers installation, operation, maintenance, technical specifications, safety guidelines, and diagrams for reliable electrical system protection.</p>
 <p>ABB TEYF3100 3-Pole 100A Circuit Breaker</p>	<p>ABB TEYF3100 3-Pole 100A Circuit Breaker Data Sheet</p> <p>Technical specifications and details for the ABB TEYF3100, a 3-pole, 100 Amp molded case circuit breaker designed for lighting panel applications. Features include bolt-on mounting, quick-make/quick-break mechanisms, and standard trip functions.</p>
 <p>ABB VD4 Vacuum circuit breaker Installation and service instructions 24...28 kV - 630...1000 A - 50...60 Hz</p>	<p>ABB VD4 Circuit Breaker Installation and Service Instructions</p> <p>Comprehensive guide for the installation and service of ABB VD4 vacuum circuit breakers, covering safety, handling, operation, and technical specifications.</p>