

Aexit DZ47-63-C40

Aexit DZ47-63-C40 Miniature Circuit Breaker User Manual

Model: DZ47-63-C40

1. PRODUCT OVERVIEW

The Aexit DZ47-63 series Miniature Circuit Breaker (MCB) is designed for use in lighting distribution systems or motor distribution systems. Its primary function is to provide protection against overload and short-circuit conditions within the electrical system. This MCB features a high breaking capacity and is engineered for quick tripping to ensure safety. It is primarily used in AC 50Hz circuits and can also be utilized for infrequent on-and-off switching of electrical equipment and lighting circuits under normal operating conditions.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power at the main supply before installing, servicing, or removing the circuit breaker.
- Ensure all wiring connections are secure and comply with local electrical codes and standards.
- Do not operate the circuit breaker if it appears damaged or has been exposed to moisture.
- Verify the voltage and current ratings of the circuit breaker match the requirements of your electrical system.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.

3. PRODUCT FEATURES

- **Overload Protection:** Automatically disconnects the circuit when current exceeds the rated value for a prolonged period.
- **Short-Circuit Protection:** Rapidly disconnects the circuit in the event of a short-circuit fault.
- **High Breaking Capacity:** Capable of safely interrupting high fault currents.
- **Quick Tripping Mechanism:** Ensures fast response to fault conditions.

- **DIN Rail Mounting:** Designed for easy installation on standard 35mm DIN rails.
- **Durable Construction:** Made from plastic and electric components for reliable performance.

4. SPECIFICATIONS

Parameter	Value
Model	DZ47-63 C40
Rated Current	40A
Rated Voltage	AC 230-400V
Poles	1 Pole
Rated Circuit Breaking Capacity	6000A
Rail Mounting	35mm DIN Rail
Overall Size (Approx)	7.8 x 6.6 x 1.7cm / 3.1" x 2.6" x 0.7" (L*W*T)
Material	Plastic, Electric Components
Net Weight	88g
Country of Manufacture	CHINA

5. SETUP AND INSTALLATION

Installation of the Aexit DZ47-63-C40 Miniature Circuit Breaker should be performed by a qualified electrician in accordance with all applicable national and local electrical codes.

5.1 Mounting

1. Ensure the main power supply to the distribution board is OFF.
2. Locate an available slot on a standard 35mm DIN rail within your electrical panel.
3. Position the circuit breaker onto the DIN rail. The spring-loaded clip on the bottom of the breaker should engage with the rail. Press down firmly until it clicks into place.



Figure 1: Side view of the circuit breaker, illustrating the DIN rail mounting mechanism and terminal connections. The blue lever on the top is the operating handle, and the metal clip at the bottom is for securing it to a DIN rail.

5.2 Wiring Connections

1. Identify the input (line) and output (load) terminals on the circuit breaker. Refer to the markings on the device.
2. Strip approximately 10-12mm of insulation from the ends of the appropriate electrical wires.
3. Insert the line wire into the input terminal and the load wire into the output terminal.
4. Tighten the terminal screws securely to ensure a good electrical connection. Do not overtighten.
5. Double-check all connections for tightness and correct polarity.



Figure 2: Front and side view of the circuit breaker, displaying the ON/OFF toggle switch and product identification labels. The blue toggle switch is visible at the top, indicating the breaker's operational state.

6. OPERATING INSTRUCTIONS

6.1 Switching ON/OFF

- To switch the circuit breaker ON, push the blue toggle handle upwards to the 'ON' position.
- To switch the circuit breaker OFF, push the blue toggle handle downwards to the 'OFF' position.

6.2 Tripping Mechanism

In the event of an overload or short-circuit, the circuit breaker will automatically trip, moving the toggle handle to an intermediate or 'TRIPPED' position (often between ON and OFF). This indicates a fault has occurred and the circuit has been safely disconnected.

To reset a tripped circuit breaker:

1. First, switch the handle fully to the 'OFF' position.
2. Investigate and resolve the cause of the trip (e.g., remove overloaded devices, fix short-circuit).
3. Once the fault is cleared, push the handle upwards to the 'ON' position to restore power.

If the circuit breaker trips immediately after resetting, do not attempt to reset it again. This indicates a persistent fault that requires immediate professional attention.

7. MAINTENANCE

The Aexit DZ47-63-C40 Miniature Circuit Breaker is designed for minimal maintenance. However, periodic checks are recommended to ensure continued safe operation:

- **Visual Inspection:** Periodically inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleanliness:** Ensure the area around the circuit breaker is free from dust and debris, which can impede proper operation or heat dissipation.
- **Connection Tightness:** With power disconnected, occasionally check the tightness of the terminal screws.

Do not attempt to open or repair the circuit breaker. If it is faulty, it should be replaced by a qualified professional.

8. TROUBLESHOOTING

8.1 Circuit Breaker Trips Frequently

- **Overload:** Too many devices are connected to the circuit, drawing more current than the breaker's rating. Disconnect some devices.
- **Short-Circuit:** A direct connection between live and neutral/ground wires. This requires immediate investigation by a qualified electrician.
- **Faulty Appliance:** A connected appliance may have an internal fault causing the trip. Unplug appliances one by one to identify the faulty one.
- **Loose Connections:** Loose wiring can cause arcing and heat, leading to nuisance tripping. Have connections checked by a professional.
- **Faulty Breaker:** In rare cases, the circuit breaker itself may be defective. If all other causes are ruled out, the breaker may need replacement.

8.2 Circuit Breaker Does Not Reset

- **Persistent Fault:** A short-circuit or severe overload is still present in the circuit. The breaker is functioning correctly by refusing to reset. Do not force it.
- **Internal Damage:** The breaker may be internally damaged, especially if it has tripped multiple times under severe fault conditions. It requires replacement.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Aexit DZ47-63-C40 Miniature Circuit Breaker, please contact your point of purchase or the manufacturer directly. Keep your purchase receipt as proof of purchase.