

Walfront DZ47-125 2P

Walfront DZ47-125 2P Miniature Circuit Breaker Instruction Manual

Model: DZ47-125 2P

1. INTRODUCTION

This manual provides essential information for the safe installation, operation, and maintenance of the Walfront DZ47-125 2P Miniature Circuit Breaker. This device is designed to protect electrical circuits from damage caused by overcurrent, which can result from an overload or short circuit, and also provides leakage protection. Adherence to these instructions is crucial for safe and effective use.

2. SAFETY INFORMATION

WARNING: Electrical work can be hazardous. Improper installation or use can lead to serious injury or death. Always follow local electrical codes and safety regulations.

- Installation must be performed by a qualified and licensed electrician.
- Always disconnect the main power supply before attempting any installation, wiring, or maintenance on the circuit breaker.
- Do not operate the device if it appears damaged or if any components are missing.
- Ensure proper grounding according to electrical standards.
- Never touch live electrical parts.
- This device is for indoor use in appropriate electrical enclosures only.

3. PRODUCT OVERVIEW AND FEATURES

The Walfront DZ47-125 2P Miniature Circuit Breaker is engineered for reliable circuit protection. Its robust design and advanced features ensure safety and stability in electrical systems.

- **Stable Performance:** Composed of high-quality electronic components for consistent and reliable operation.
- **Rapid Response:** Features a fast response speed with a leakage action time of only 0.1 second.
- **Flame Retardant Casing:** The outer casing is constructed from flame-retardant material for enhanced safety.

- **Multiple Protection Modes:** Supports leakage, overload, and short circuit protection.
- **Integrated Functionality:** An essential electrical equipment in low-voltage distribution networks and power systems, integrating control and protection functions.



Figure 3.1: Front view of the Walfront DZ47-125 2P Miniature Circuit Breaker. This image displays the model number DZ47-125, voltage rating 400V, current rating C100, and the ON/OFF switch lever.

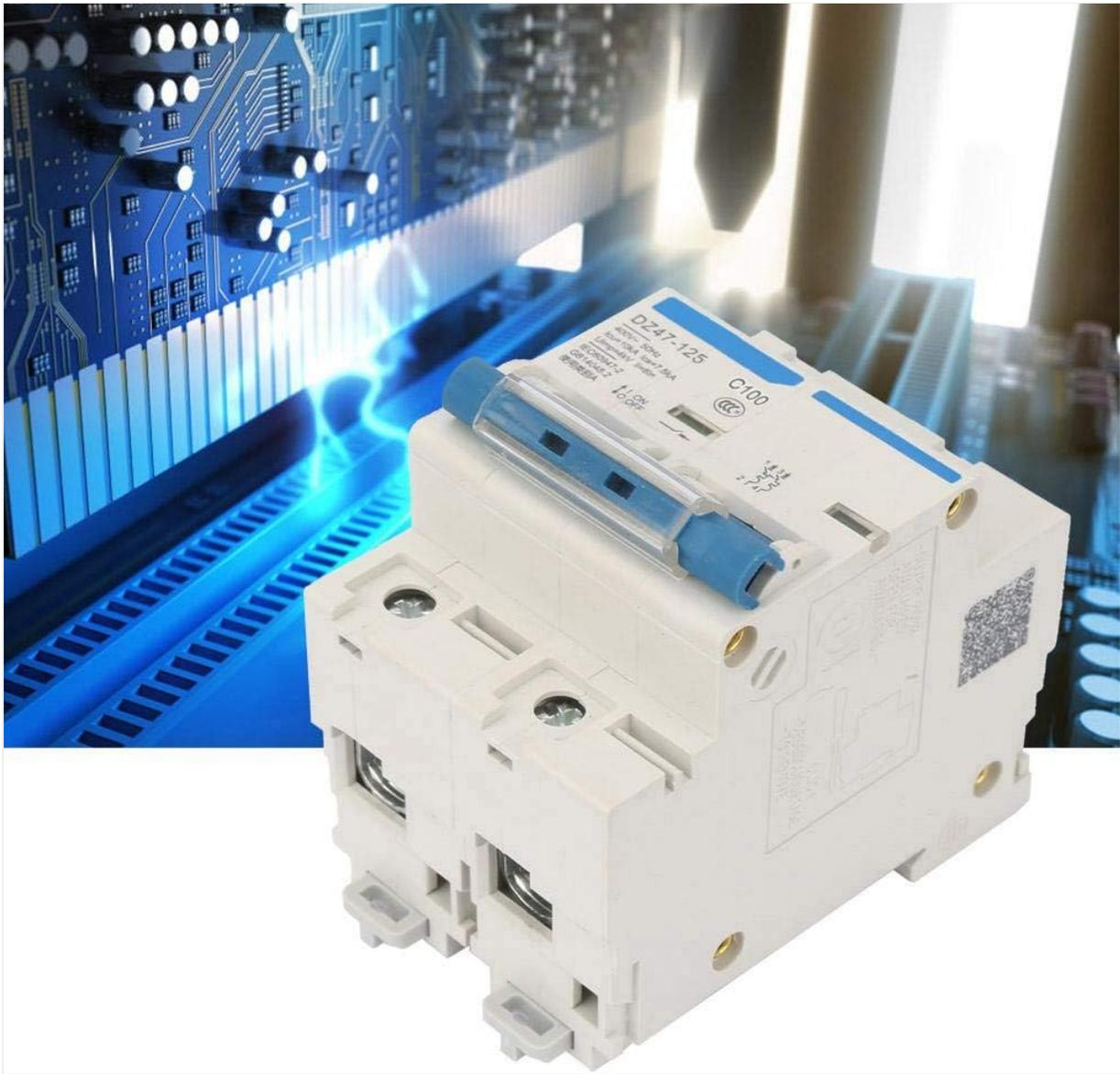


Figure 3.2: Angled view of the circuit breaker, showcasing its compact design and terminal access points.

4. SPECIFICATIONS

Detailed technical specifications for the Walfront DZ47-125 2P Miniature Circuit Breaker:

Model	DZ47-125 2P
Breaking Capacity	7.5KA
Number of Poles	2P
Trip Unit Rated Current	80A; 100A; 125A (Optional)
Rated Voltage	400V
Leakage Current	30mA
Contact Material	Copper-based alloy
Leakage Action Time	≤ 0.1S
Current Shell Frame	125 (A)

Tripping Method	Overcurrent release
Protection Type	Leakage, overload, short circuit protection
Application Scenario	Terminal power distribution
Wiring Method	Front wiring
3C Rated Voltage Range	AC rated voltage 1500V and below
Structure Type	Plastic case circuit breaker
Arc Extinguishing Medium	Air type
Product Dimensions	3.15 x 2.76 x 2.36 inches
Item Weight	10.8 ounces

5. SETUP AND INSTALLATION

Installation of this circuit breaker should only be performed by a qualified electrician to ensure safety and compliance with all electrical codes.

5.1. Mounting

The DZ47-125 2P circuit breaker is designed for panel mounting, typically on a DIN rail within an electrical distribution box.

1. Ensure the main power supply to the installation area is completely disconnected.
2. Locate an appropriate space on the DIN rail within the electrical panel.
3. Align the circuit breaker's mounting clips with the DIN rail and press firmly until it clicks into place.
4. Verify that the breaker is securely fastened and does not wobble.



Figure 5.1: Rear view of the circuit breaker, illustrating the mechanism for mounting it onto a DIN rail.

5.2. Wiring

The circuit breaker uses front wiring. Ensure correct polarity and secure connections.

1. With the power still off, connect the incoming live and neutral wires to the upper terminals of the circuit breaker.
2. Connect the outgoing live and neutral wires to the lower terminals of the circuit breaker, leading to the protected circuit.
3. Ensure all wire connections are tight and secure to prevent loose contacts, which can cause overheating or arcing.
4. Double-check all wiring against the electrical diagram for your installation.



Figure 5.2: Bottom view of the circuit breaker, highlighting the two main wiring terminals where electrical connections are made.

6. OPERATION

The Walfront DZ47-125 2P Miniature Circuit Breaker operates both manually and automatically.

6.1. Manual Operation (ON/OFF)

- To turn the circuit ON, push the blue lever upwards to the 'ON' position.
- To turn the circuit OFF, pull the blue lever downwards to the 'OFF' position.



Figure 6.1: The front of the circuit breaker features a blue lever indicating the ON and OFF positions for manual operation.

6.2. Automatic Tripping

The circuit breaker is designed to automatically trip (move to the 'OFF' position) when it detects an overload, short circuit, or leakage current exceeding its rated limits. This action protects the circuit and connected devices from damage.

- If the breaker trips, the lever will move to the 'OFF' position.
- Before resetting, identify and resolve the cause of the trip (e.g., unplug overloaded devices, check for short circuits).
- To reset, push the lever fully to the 'OFF' position first, then push it upwards to the 'ON' position.

7. MAINTENANCE

The Walfront DZ47-125 2P Miniature Circuit Breaker requires minimal maintenance. Regular inspections can help ensure its continued safe operation.

- **Visual Inspection:** Periodically check the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** Ensure the area around the circuit breaker is free from dust and debris. Use a dry, soft cloth for cleaning; never use liquids.

- **Do Not Disassemble:** Do not attempt to open or repair the circuit breaker. Internal repairs should only be handled by the manufacturer or authorized service personnel.
- **Test Button (if applicable):** Some circuit breakers include a test button for leakage protection. If present, press it periodically to ensure the leakage protection function is operational. (Note: This model's specifications do not explicitly mention a test button, so consult the device itself.)

8. TROUBLESHOOTING

If you encounter issues with your circuit breaker, refer to the following common troubleshooting steps:

8.1. Breaker Trips Frequently

- **Overload:** Disconnect some appliances or devices from the circuit to reduce the load.
- **Short Circuit:** Unplug all devices from the circuit and try to reset the breaker. If it trips immediately, there might be a wiring fault or a faulty appliance.
- **Ground Fault/Leakage:** If the breaker trips due to leakage, there might be a fault in an appliance or wiring causing current to flow to the ground. Disconnect appliances one by one to identify the faulty one.
- **Faulty Breaker:** If the issue persists after checking for overloads and faults, the circuit breaker itself might be faulty and require replacement by a qualified electrician.

8.2. Breaker Does Not Reset

- Ensure the lever is pushed fully to the 'OFF' position before attempting to push it to 'ON'.
- If there is still an active fault (overload, short circuit, or leakage), the breaker will not reset. Resolve the underlying issue first.
- If the breaker still won't reset after addressing potential faults, it may be damaged and needs to be replaced by a qualified electrician.

9. WARRANTY AND SUPPORT

No specific warranty information is provided in the product details. For product support, technical assistance, or inquiries regarding warranty, please contact your retailer or the manufacturer, Walfront, directly. Always provide your product model number (DZ47-125 2P) when seeking support.