

Sanzla DZ47LED-63

SaNzia DZ47LED-63 2P Anti-Surge Earth Leakage Circuit Breaker User Manual

Model: DZ47LED-63 | Brand: SaNzia

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the SaNzia DZ47LED-63 2P Anti-Surge Earth Leakage Circuit Breaker. Please read this manual thoroughly before installation and keep it for future reference.

The SaNzia DZ47LED-63 is a miniature circuit breaker designed for terminal power distribution applications. It integrates earth leakage protection, anti-surge capabilities, and lightning protection to enhance electrical safety in residential and commercial environments.

2. PRODUCT OVERVIEW

The DZ47LED-63 is a 2-pole device that combines the functions of a Residual Current Circuit Breaker with Overcurrent Protection (RCBO) and a Surge Protective Device (SPD). It is designed to protect against overloads, short circuits, earth leakage faults, and transient overvoltages caused by lightning or switching operations.

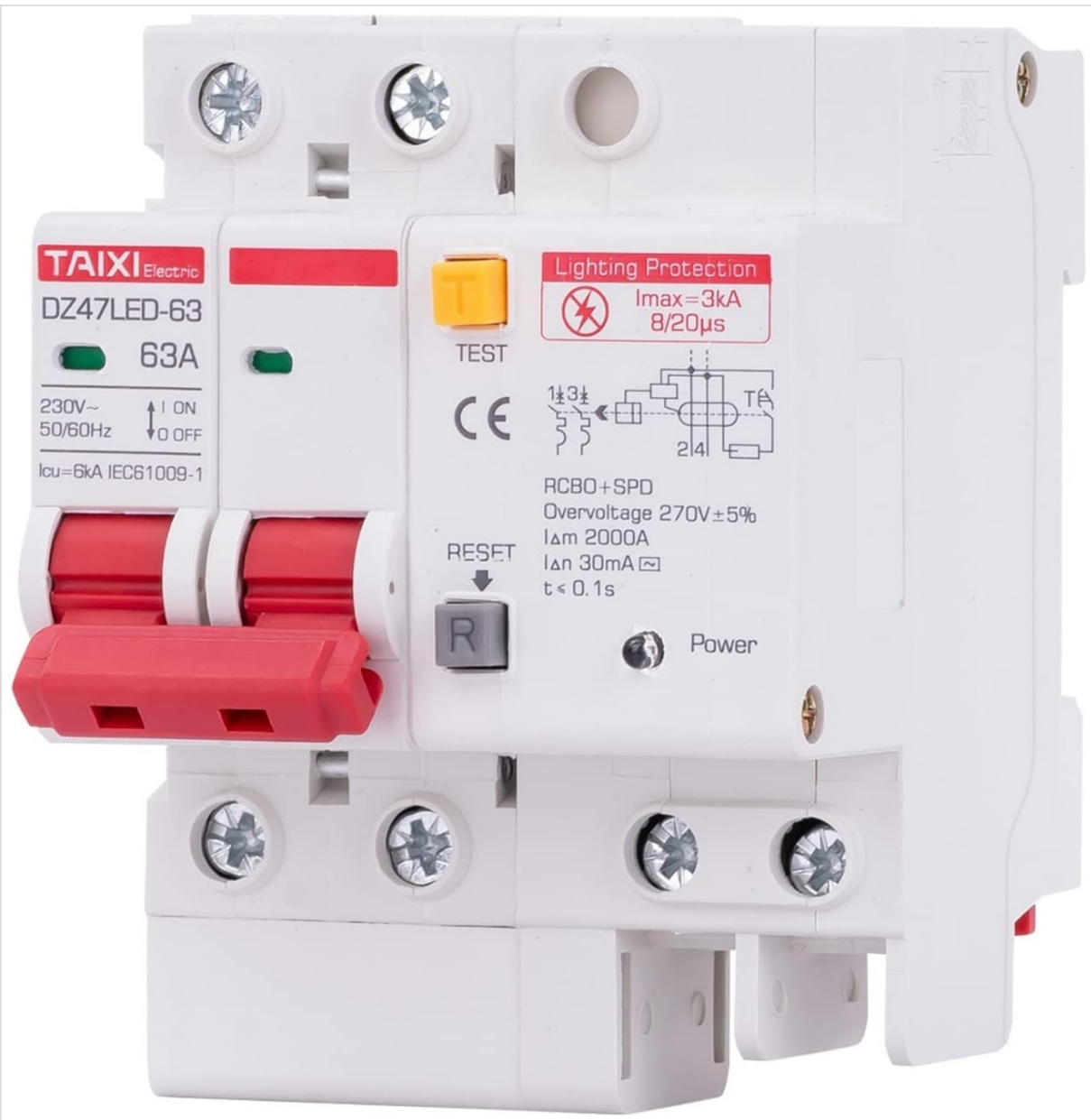


Figure 1: Front view of the SaNzia DZ47LED-63 circuit breaker, showing the main switch, test button, reset button, and technical specifications printed on the casing.

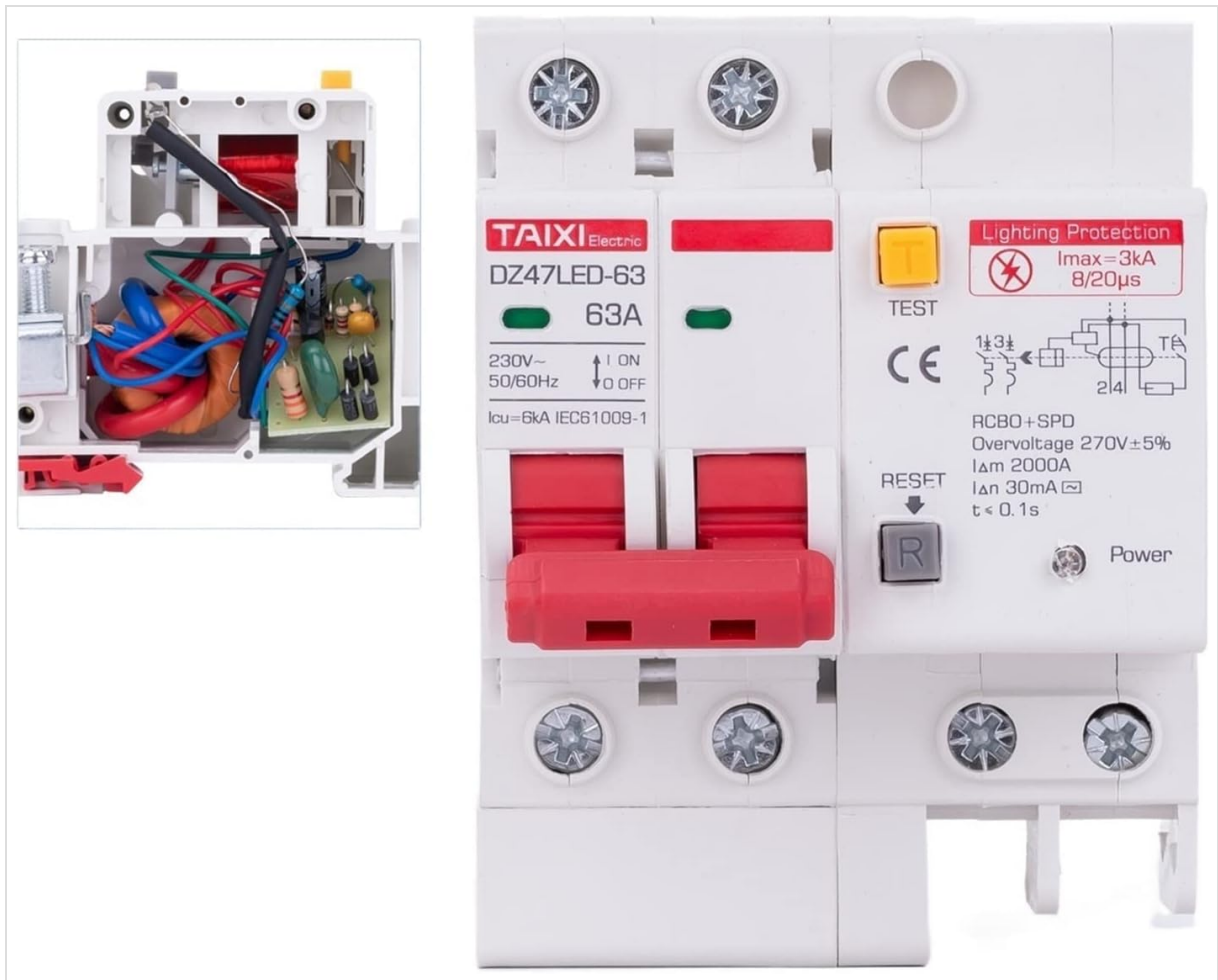


Figure 2: View of the circuit breaker with a partial cutaway, revealing some internal wiring and components, illustrating the compact design.

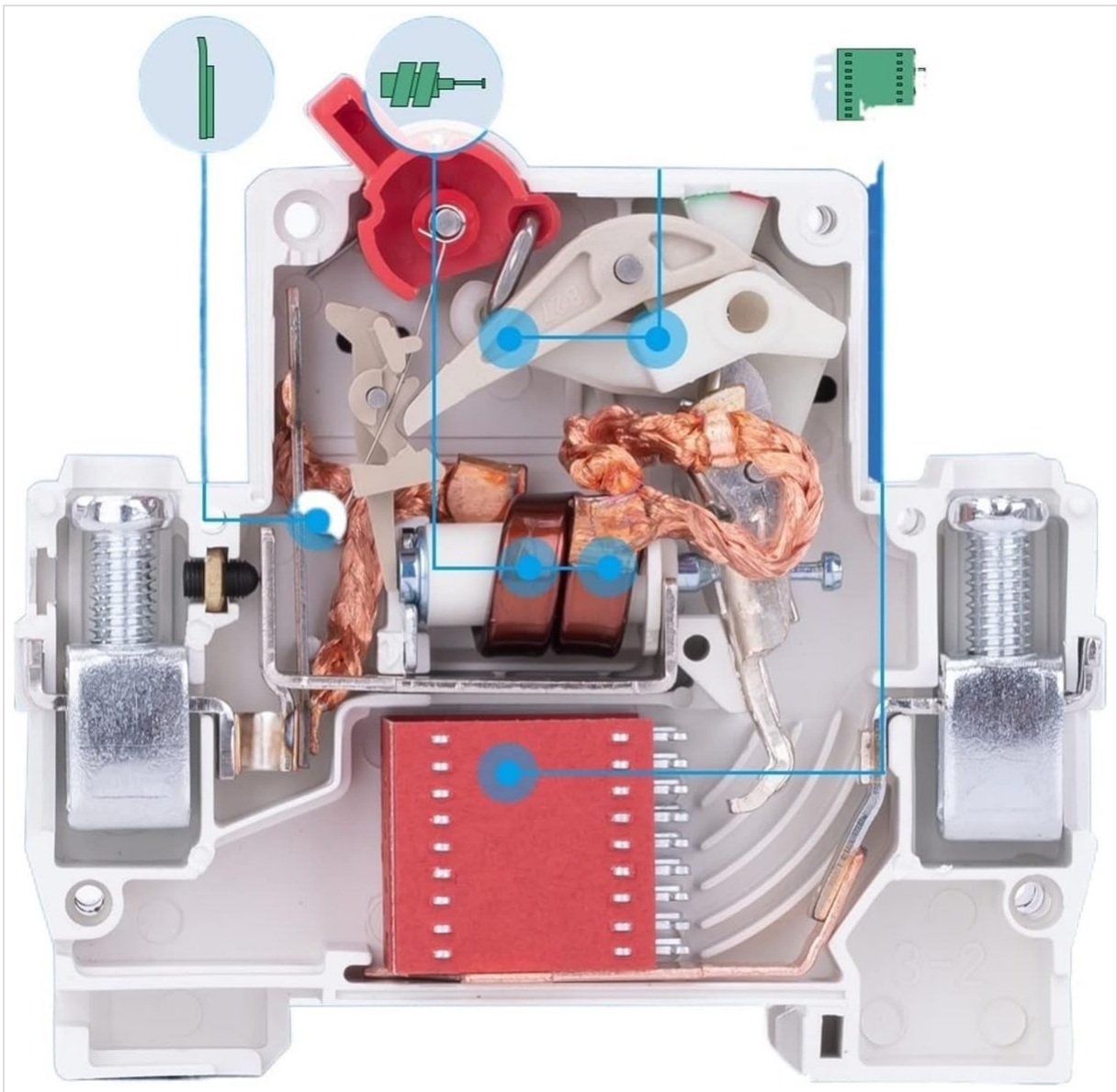


Figure 3: Detailed internal diagram of the circuit breaker, highlighting key components such as the bimetallic strip, electromagnetic coil, and arc extinguishing chamber.

3. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance must be performed by qualified personnel only. Always disconnect power before working on electrical circuits.

- Ensure the main power supply is switched off before attempting any installation or wiring.
- Verify that the voltage and current ratings of the circuit breaker match the requirements of your electrical system.
- Do not operate the device if it appears damaged.
- Follow all local electrical codes and regulations.

4. SPECIFICATIONS

Parameter	Value
Model	DZ47LED-63
Number of Poles	2P

Parameter	Value
Rated Current (Example)	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A (Specific rating indicated on product label)
Rated Voltage	230V~
Frequency	50/60Hz
Rated Short-Circuit Breaking Capacity (Icu)	6kA (IEC61009-1)
Lightning Protection (Imax)	3kA (8/20 μ s waveform)
Overvoltage Protection	270V \pm 5%
Rated Residual Operating Current (I Δ n)	30mA
Residual Non-Operating Current (I Δ m)	2000A
Operating Time (t)	< 0.1s
Product Type	Earth Leakage Circuit Breaker (RCBO+SPD)
Application Range	Terminal Power Distribution
Certifications	CCC (3C certificate number: 2020970307004624)
Item Weight	14.1 ounces

5. INSTALLATION

The SaNzia DZ47LED-63 circuit breaker is designed for DIN rail mounting in electrical distribution boards. Ensure proper ventilation and clearance around the device.

5.1 Wiring Diagram

Refer to the following diagram for correct wiring connections. Always ensure the main power supply is disconnected before wiring.

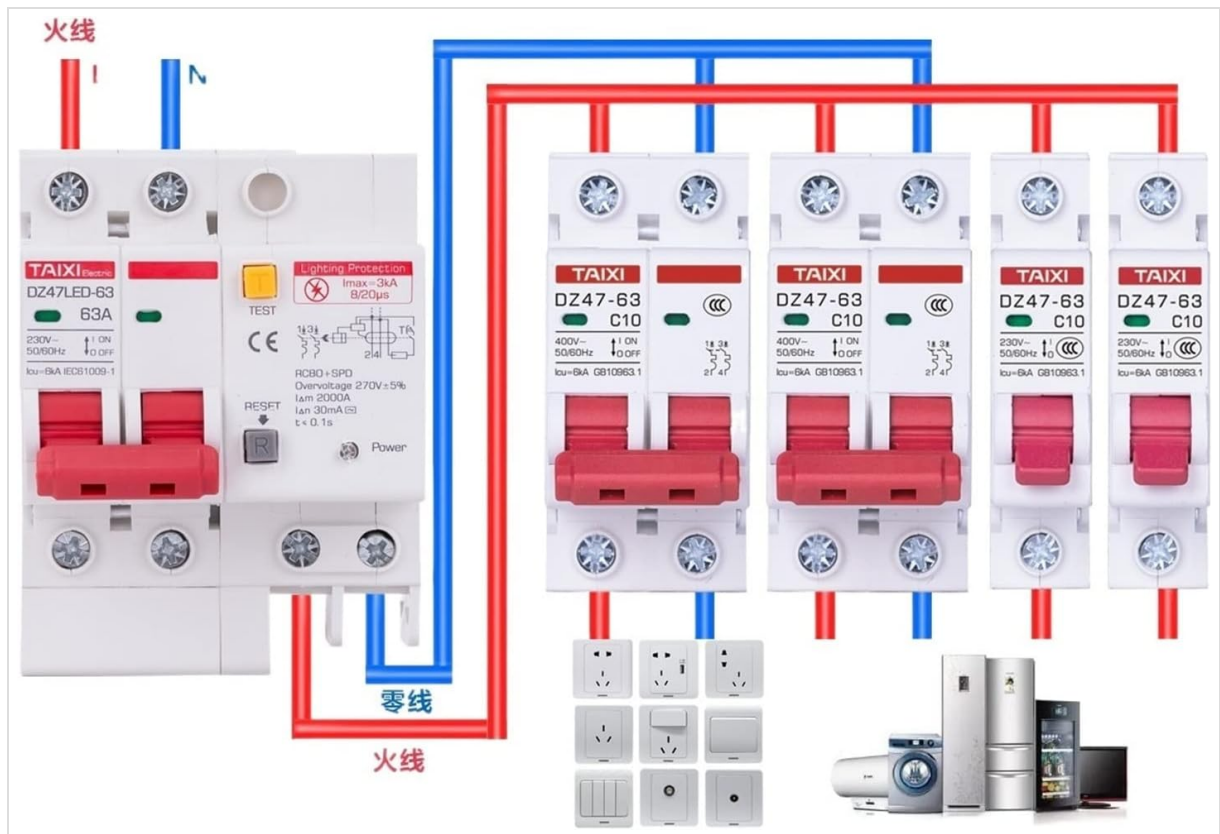


Figure 4: Example wiring diagram showing the connection of the DZ47LED-63 circuit breaker to a power source and downstream loads, including other circuit breakers and various appliances. The diagram illustrates live () and neutral () connections.

1. Mount the DZ47LED-63 onto a standard DIN rail securely.
2. Connect the incoming live (L) and neutral (N) wires to the upper terminals of the circuit breaker as indicated.
3. Connect the outgoing live (L') and neutral (N') wires to the lower terminals, leading to the protected circuit or load.
4. Ensure all connections are tight and secure to prevent loose contacts and overheating.
5. Verify correct polarity for all connections.

6. OPERATING INSTRUCTIONS

6.1 Switching On/Off

- To switch the circuit breaker ON, push the red handle upwards to the "I ON" position.
- To switch the circuit breaker OFF, push the red handle downwards to the "O OFF" position.

6.2 Test Function

The circuit breaker is equipped with a test button to verify the earth leakage protection function. Regular testing is crucial for ensuring proper operation.

1. Ensure the circuit breaker is in the ON position.
2. Press the yellow "TEST" button. The circuit breaker should trip immediately, moving the handle to the OFF position.
3. If the circuit breaker does not trip, it indicates a malfunction, and the device should be replaced immediately.
4. To reset after a test trip, push the handle fully down to the "O OFF" position, then push it up to the "I ON" position.

It is recommended to perform this test monthly to ensure the earth leakage protection is functioning correctly.

6.3 Resetting After a Trip

If the circuit breaker trips due to an overload, short circuit, earth leakage, or surge event, the handle will move to the OFF position or an intermediate trip position. To reset:

1. Identify and rectify the cause of the trip (e.g., remove overloaded appliances, fix wiring faults).
2. Push the handle fully down to the "O OFF" position.
3. Push the handle up to the "I ON" position to restore power.
4. If the circuit breaker trips again immediately, do not force it on. Consult a qualified electrician.

7. MAINTENANCE

The SaNzia DZ47LED-63 circuit breaker is largely maintenance-free. However, periodic checks are recommended:

- **Visual Inspection:** Regularly inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Test Button:** Perform the test button operation monthly as described in Section 6.2.
- **Cleaning:** If necessary, gently clean the exterior of the device with a dry, soft cloth. Do not use liquids or abrasive cleaners.
- **Professional Inspection:** It is advisable to have your electrical system, including circuit breakers, inspected by a qualified electrician periodically (e.g., every 3-5 years).

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overload, short circuit, earth leakage fault, faulty appliance, or nuisance tripping.	<ul style="list-style-type: none">• Disconnect appliances one by one to identify the faulty one.• Check for visible wiring damage or loose connections.• Ensure total load does not exceed the circuit breaker's rated current.• If problem persists, consult a qualified electrician.
Circuit breaker does not reset.	Persistent fault (e.g., short circuit, severe earth leakage) or internal damage to the breaker.	<ul style="list-style-type: none">• Ensure all loads are disconnected from the circuit.• Attempt to reset again. If it still doesn't reset, do not force it.• Contact a qualified electrician for inspection and potential replacement.
Test button does not trip the breaker.	Malfunction of the earth leakage protection mechanism.	The circuit breaker is faulty and must be replaced immediately by a qualified electrician.

Problem	Possible Cause	Solution
No power to circuit, but breaker is ON.	Loose wiring connection, fault in downstream wiring, or internal breaker failure.	<ul style="list-style-type: none">• Check all wiring connections for tightness.• Inspect downstream wiring for breaks or damage.• If no external fault is found, the breaker may be faulty. Consult an electrician.

9. WARRANTY AND SUPPORT

Specific warranty information for the SaNzia DZ47LED-63 is typically provided at the point of purchase or within the product packaging. Please retain your proof of purchase for warranty claims.

For technical support or inquiries, please contact your retailer or the manufacturer directly. Ensure you have your product model number (DZ47LED-63) and purchase details available when seeking assistance.