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› [YOMAJURU](#) /

› YOMAJURU TOB1Z-63 DC Mini Circuit Breaker User Manual

## YOMAJURU TOB1Z-63

# YOMAJURU TOB1Z-63 DC Mini Circuit Breaker User Manual

Model: TOB1Z-63 | Brand: YOMAJURU

## 1. INTRODUCTION

The YOMAJURU TOB1Z-63 DC Mini Circuit Breaker is designed for reliable overload and short-circuit protection in direct current (DC) electrical systems. This device is suitable for applications with a rated DC voltage up to 125V and rated currents up to 63A. It is commonly used in DC applications such as communications, photovoltaic systems, and other low-voltage DC circuits. This manual provides essential information for the safe and effective installation, operation, and maintenance of your TOB1Z-63 circuit breaker.

## 2. SAFETY INFORMATION

- Installation and maintenance must be performed by qualified personnel only.
- Always disconnect power to the circuit before installing, wiring, or performing any maintenance on the circuit breaker.
- Ensure proper polarity when connecting DC circuits. Incorrect polarity can damage the device and connected equipment.
- Do not operate the circuit breaker if it appears damaged or has been subjected to excessive force.
- Verify that the circuit breaker's specifications (voltage, current, breaking capacity) match the requirements of your electrical system.
- Use appropriate personal protective equipment (PPE) when working with electrical systems.

## 3. PRODUCT OVERVIEW

The TOB1Z-63 DC Mini Circuit Breaker features a compact design for easy integration into various electrical panels. Below is a diagram illustrating the key components and their functions.

# PRODUCT APPEARANCE DISPLAY

DC MCB TOB7Z-63 series

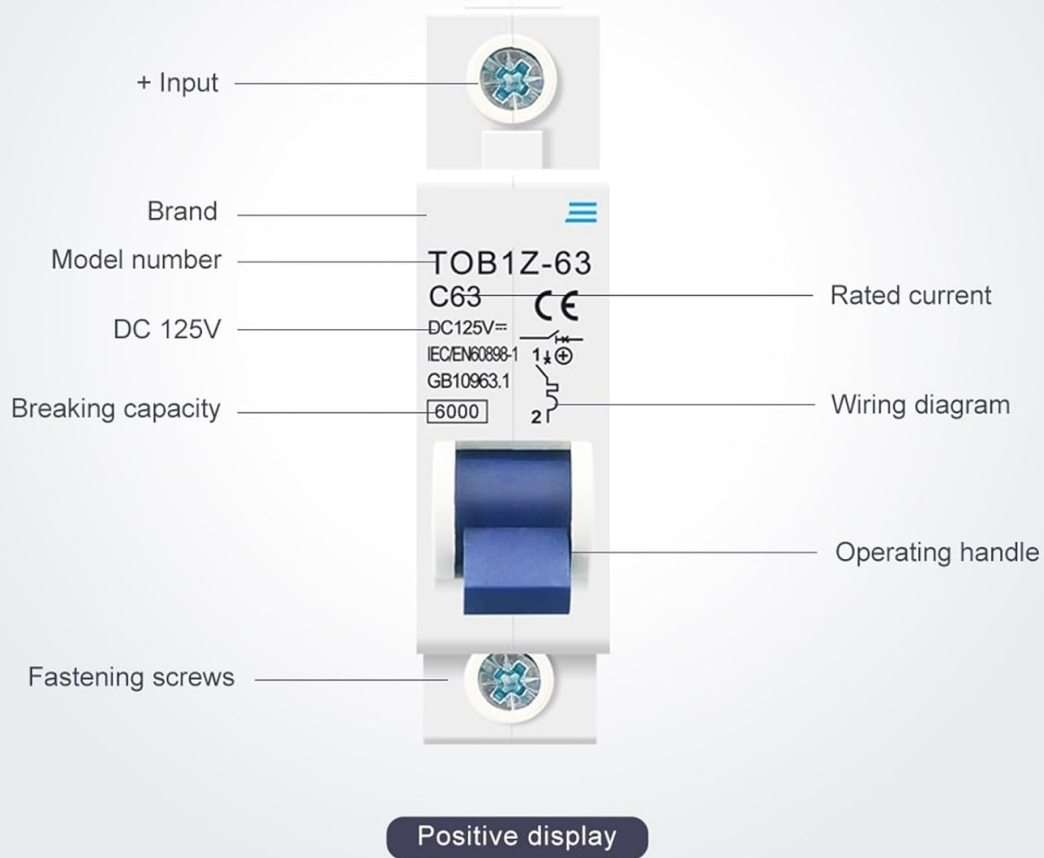


Figure 1: Product Appearance Display with Labeled Components

**Input:** Terminal for incoming DC power.

**Brand:** Manufacturer's brand name (YOMAJURU).

**Model Number:** Device identification (TOB1Z-63).

**DC 125V:** Rated operating voltage.

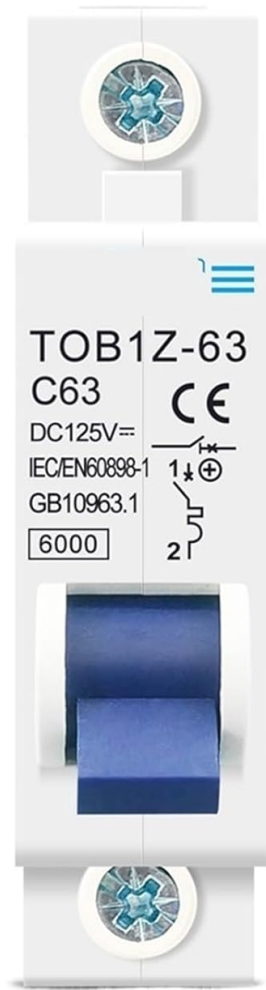
**Breaking Capacity:** Maximum fault current the breaker can safely interrupt (e.g., 6000A or 6KA).

**Fastening Screws:** Used to secure wiring connections.

**Rated Current:** Maximum continuous current the breaker is designed to carry (e.g., 3A, 6A, up to 63A).

**Wiring Diagram:** Schematic showing connection points and internal circuit.

**Operating Handle:** Lever to manually switch the breaker ON or OFF, and indicates trip status.



**Figure 2:** Front view of the TOB1Z-63 DC Mini Circuit Breaker, showing model number, voltage, and current ratings.

#### 4. SPECIFICATIONS

Feature	Specification
Model	TOB1Z-63
Rated DC Voltage	125V
Rated Current Range	3A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
Number of Poles	1P
Breaking Capacity	6KA
Maximum Connecting Ability	25mm <sup>2</sup>
Wiring Torque	3N·m
Material	Copper (terminals)

Feature	Specification
Mounting Type	DIN Rail
Dimensions (Approx.)	1.18 x 0.79 x 0.39 inches
Weight (Approx.)	1.76 ounces

## 5. INSTALLATION (SETUP)

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### 5.1 Mounting

The TOB1Z-63 circuit breaker is designed for DIN rail mounting. Follow these steps for secure installation:

1. Ensure the DIN rail is securely fastened within the electrical enclosure.
2. Position the circuit breaker over the DIN rail.
3. Engage the top clip of the circuit breaker onto the top edge of the DIN rail.
4. Press the circuit breaker downwards until the bottom clip snaps onto the DIN rail, securing the device in place.
5. To remove, gently pull the bottom clip outwards (often indicated by 'lift' or 'soulever' on the back) and tilt the breaker off the rail.



Figure 3: TOB1Z-63 mounted on a DIN rail.



**Figure 4:** Rear view illustrating the 'lift' and 'tilt out' mechanism for DIN rail mounting/removal.

## 5.2 Wiring

Proper wiring is crucial for safety and performance. Refer to the wiring diagram on the circuit breaker and follow these guidelines:

- Ensure all power is disconnected before wiring.
- Connect the positive (+) DC input wire to the designated positive terminal and the negative (-) DC output wire to the designated negative terminal. Observe polarity carefully.
- Use wires with a cross-sectional area appropriate for the rated current, up to a maximum of 25mm<sup>2</sup>.
- Strip wire insulation to the correct length, ensuring no bare wire is exposed outside the terminal and no insulation is clamped under the screw.
- Insert the wires fully into the terminals and tighten the fastening screws to a torque of 3N·m. Overtightening can damage the terminals, while undertightening can lead to loose connections and overheating.
- Double-check all connections for tightness and correct polarity before restoring power.

## 6. OPERATION

## 6.1 Switching On/Off

- **To switch ON:** Push the operating handle upwards to the 'ON' position.
- **To switch OFF:** Pull the operating handle downwards to the 'OFF' position.

## 6.2 Trip Indication and Reset

In the event of an overload or short-circuit, the circuit breaker will automatically trip, moving the operating handle to an intermediate or 'TRIPPED' position (often between ON and OFF). This indicates that the circuit has been safely interrupted to prevent damage.

- **After a trip:** Identify and rectify the cause of the overload or short-circuit (e.g., remove faulty equipment, fix wiring).
- **To reset:** Once the fault is cleared, fully push the operating handle downwards to the 'OFF' position, then push it upwards to the 'ON' position. If the breaker immediately trips again, a fault still exists in the circuit.

## 7. MAINTENANCE

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The TOB1Z-63 circuit breaker requires minimal maintenance. Regular inspections can help ensure its continued reliable operation.

- **Visual Inspection:** Periodically inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** If necessary, gently clean the exterior of the circuit breaker with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure power is disconnected before cleaning.
- **Connection Check:** Occasionally check the tightness of the terminal screws, especially after initial installation or if the breaker has been subjected to vibrations.

## 8. TROUBLESHOOTING

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If you encounter issues with your TOB1Z-63 circuit breaker, consider the following common scenarios:

- **Breaker trips frequently:** This usually indicates an overload or short-circuit in the protected circuit. Check for faulty appliances, damaged wiring, or excessive load. Ensure the total current draw does not exceed the breaker's rated current.
- **Breaker does not reset:** If the breaker trips and cannot be reset, a persistent fault likely exists. Disconnect all loads and attempt to reset. If it still doesn't reset, the breaker itself might be faulty and require replacement.
- **No power to the circuit:** Check if the breaker is in the 'ON' position. If it is, check for loose wiring connections at the breaker terminals or elsewhere in the circuit. Verify the incoming DC power supply.

If troubleshooting steps do not resolve the issue, consult a qualified electrician.

## 9. WARRANTY AND SUPPORT

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For specific warranty information regarding your YOMAJURU TOB1Z-63 DC Mini Circuit Breaker, please refer to the documentation provided at the time of purchase or contact your seller directly. Warranty terms typically cover manufacturing defects.

For technical support, product inquiries, or assistance with installation and troubleshooting beyond the scope of this manual, please contact the YOMAJURU customer service or your authorized distributor. Keep

your purchase receipt and product model information handy when seeking support.