

WENGART WGM12-63H 20A 2-Pole

Wengart WGM12-63H 20A 2-Pole Miniature Circuit Breaker Instruction Manual

Brand: WENGART | Model: WGM12-63H 20A 2-Pole

1. INTRODUCTION

This manual provides essential information for the safe installation, operation, and maintenance of the Wengart WGM12-63H 20A 2-Pole Miniature Circuit Breaker (MCB). This device is designed for low-voltage electrical distribution systems, offering crucial protection against overcurrent and short circuits in various applications, including household appliances and lighting circuits.

The WGM12-63H MCB is compact, designed for DIN rail mounting, and features a rapid response time to ensure electrical safety. Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified electricians in accordance with local electrical codes and regulations.

- Always disconnect power at the main supply before installing, servicing, or removing the circuit breaker.
- Ensure the circuit breaker's ratings (voltage, current, breaking capacity) match the requirements of your electrical system.
- Do not operate the circuit breaker if it appears damaged or has been subjected to excessive force.
- Ensure proper grounding where required.
- Use appropriate personal protective equipment (PPE) during installation and maintenance.
- Never bypass or tamper with the circuit breaker's protective mechanisms.

3. PRODUCT COMPONENTS

The Wengart WGM12-63H Miniature Circuit Breaker consists of several key components:

PRODUCT ANALYSIS

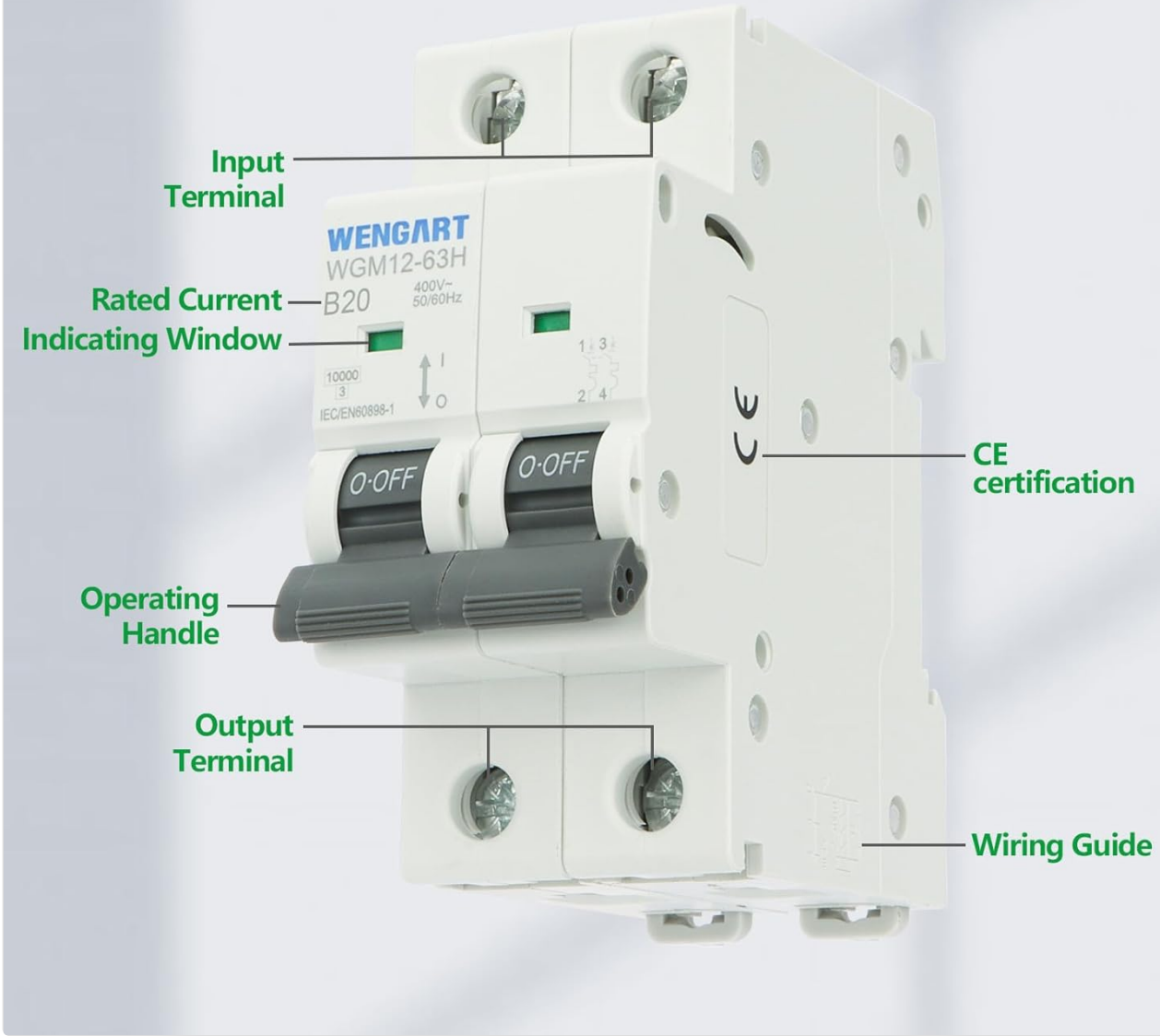


Figure 3.1: Product Analysis of the Wengart WGM12-63H MCB. Key components include Input Terminal, Rated Current (B20), Indicating Window, Operating Handle, Output Terminal, CE certification mark, and Wiring Guide.

- **Input Terminal:** Connects to the incoming power supply.
- **Output Terminal:** Connects to the load circuit.
- **Operating Handle:** Used to manually switch the circuit breaker ON or OFF, and indicates its current status.
- **Indicating Window:** Displays the operational status (e.g., ON/OFF, tripped).
- **Rated Current (B20):** Specifies the nominal current rating and tripping curve type (B-type).
- **CE Certification:** Indicates compliance with European safety standards.
- **Wiring Guide:** Provides information on proper wiring connections.

4. TECHNICAL SPECIFICATIONS

Below are the technical specifications for the Wengart WGM12-63H 20A 2-Pole Miniature Circuit Breaker:

Feature	Specification
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Feature	Specification
Model Number	WGM12-63H
Rated Current	20 A
Rated Voltage	AC 240/415V~ (AC 400V for 2-pole)
Number of Poles	2
Standard	IEC/EN60898-1
Magnetic Tripping Characteristic	B-type (3-5 times I _n)
Protection Type	Overcurrent and Short-circuit
Tripping Type	Thermomagnetic
Energy Limiting Class	3
Rated Impulse Withstand Voltage (U _{imp})	4000 V
Rated Breaking Capacity	10000 A (10 kA)
Mechanical Life	10,000 operations
Electrical Life	4,000 operations
Degree of Protection	IP20
Maximum Wiring Capacity	25 mm ²
Tightening Torque	2.5 Nm
Installation	35 mm DIN Rail Mounting
Dimensions (approx.)	9 x 8 x 4.2 cm; 224 grams (Package)
Origin	China

TECHNICAL PARAMETERS

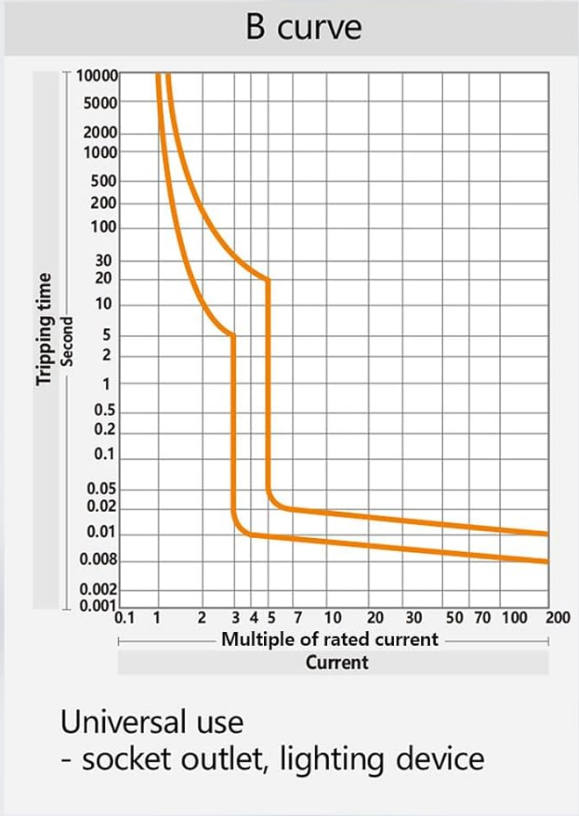
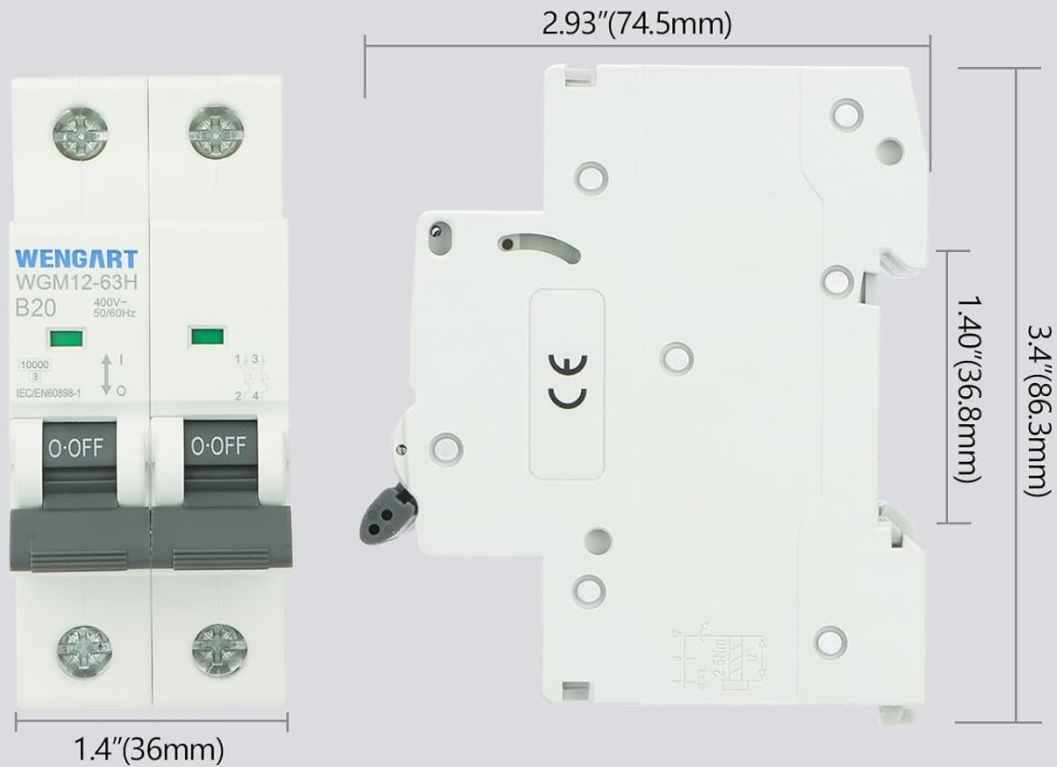


Figure 4.1: B-Type Tripping Curve. This curve illustrates the circuit breaker's response time to overcurrents, suitable for general purpose loads like socket outlets and lighting devices.

PRODUCT SIZE



MODEL NUMBER : WGM12-63H

STANDARD : IEC/EN60898-1

RATED CURRENT : 20A

RATED VOLTAGE : 400V

RATED BREAKING CAPACITY : 10000A

CERTIFIED : CE

INSTALLATION : 35MM DIN RAIL

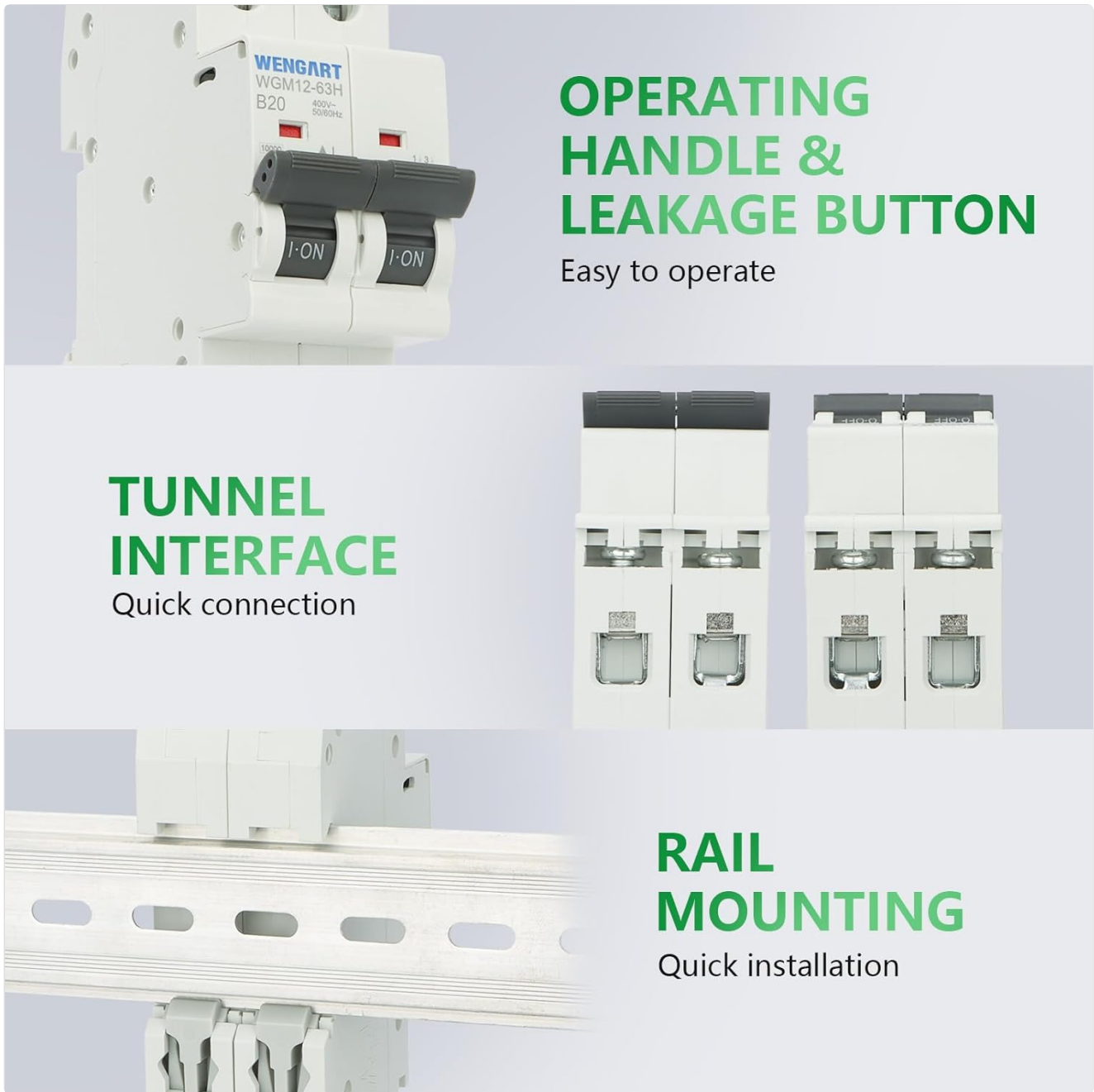
CONNECTION : FROM TOP AND BOTTOM

Figure 4.2: Product Dimensions. The image displays the length, width, and height of the circuit breaker, along with key specifications like model number, rated current, rated voltage, breaking capacity, standard, certification, installation type, and connection method.

5. INSTALLATION AND SETUP

The Wengart WGM12-63H MCB is designed for quick and secure installation on a 35mm DIN rail.

5.1. DIN Rail Mounting

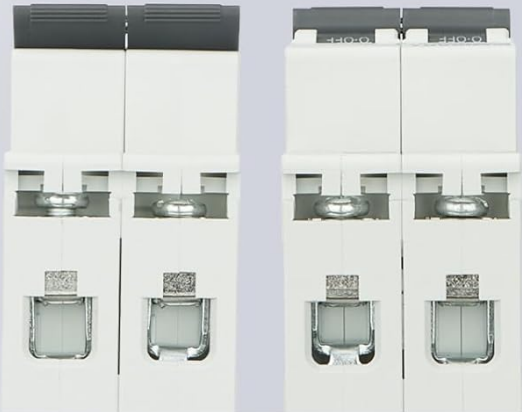


OPERATING HANDLE & LEAKAGE BUTTON

Easy to operate

TUNNEL INTERFACE

Quick connection



RAIL MOUNTING

Quick installation

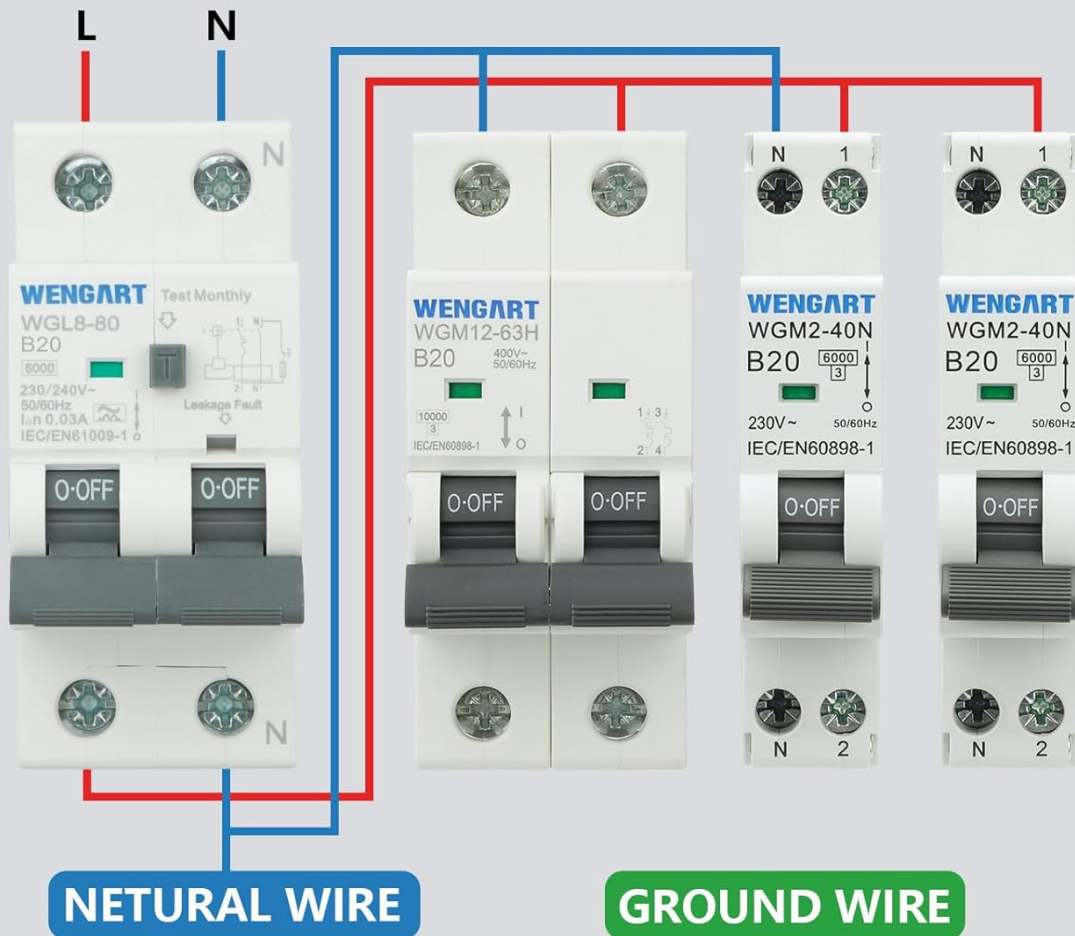
Figure 5.1: DIN Rail Mounting. The circuit breaker features a quick installation mechanism for 35mm DIN rails, ensuring a secure fit within distribution boxes.

1. Ensure the main power supply is OFF.
2. Align the circuit breaker with the DIN rail.
3. Press the circuit breaker firmly onto the rail until it clicks into place. Ensure it is securely fastened and does not wobble.

5.2. Wiring Connections

Connect the input and output wires to the designated terminals. The circuit breaker supports a maximum wiring capacity of 25 mm².

WIRING



Max.terminal size for cable 25mm², Max.tightening torque 2.5N.m

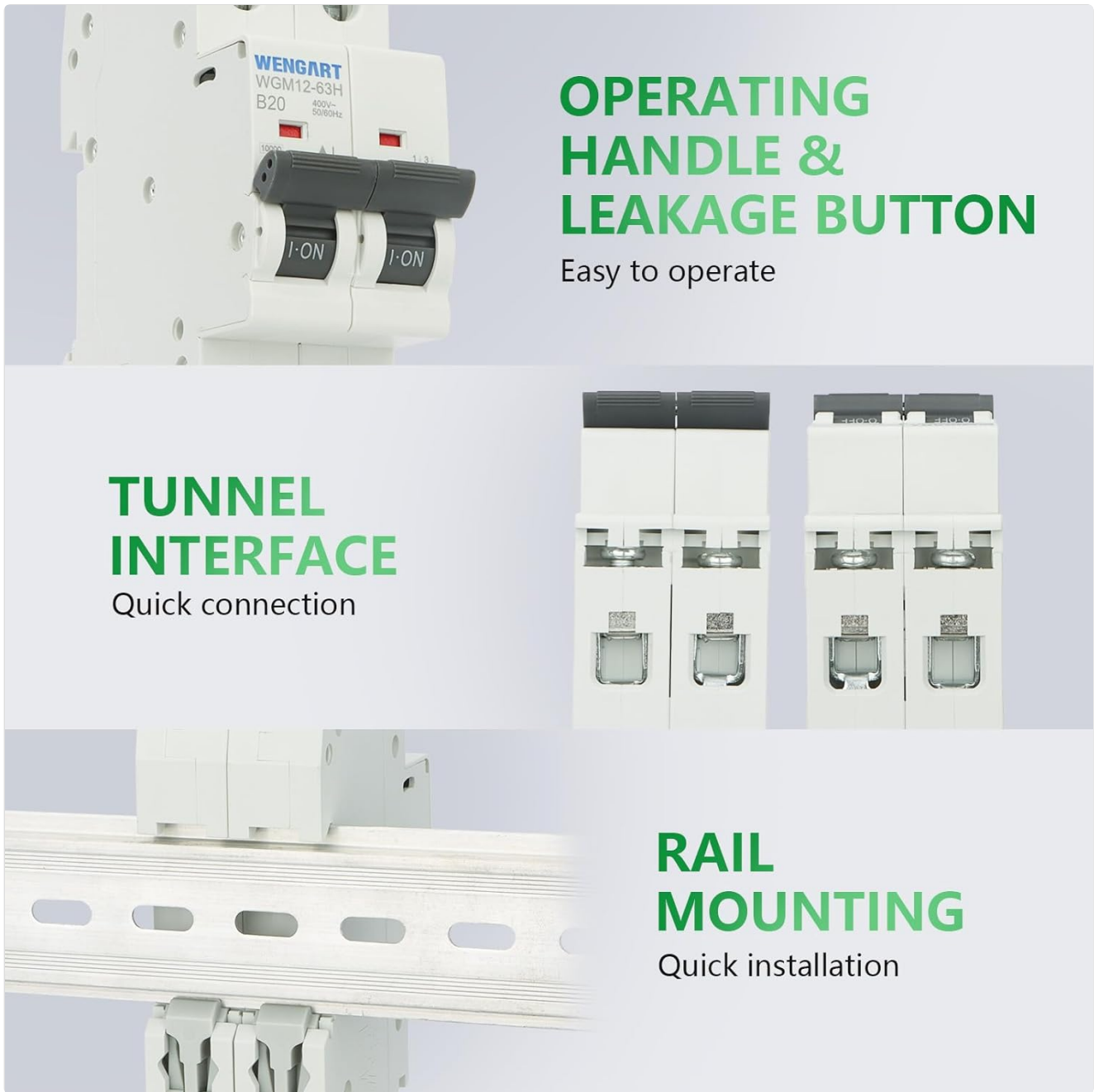
Figure 5.2: Wiring Diagram. This diagram illustrates the correct connection of Line (L) and Neutral (N) wires to the input and output terminals of the 2-pole circuit breaker. Max terminal size for cable is 25mm², with a max tightening torque of 2.5 N.m.

1. Ensure the main power supply is OFF.
2. Strip the insulation from the ends of the wires to the appropriate length.
3. Insert the incoming Line (L) and Neutral (N) wires into the upper (input) terminals.
4. Insert the outgoing Line (L) and Neutral (N) wires (to the load) into the lower (output) terminals.
5. Tighten the terminal screws to a torque of 2.5 Nm to ensure a secure connection.
6. Verify all connections are tight and correct before restoring power.

6. OPERATION

The Wengart WGM12-63H MCB is designed for simple and clear operation.

6.1. Switching ON/OFF

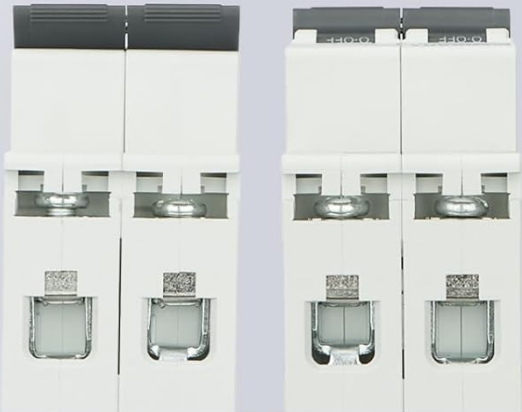


OPERATING HANDLE & LEAKAGE BUTTON

Easy to operate

TUNNEL INTERFACE

Quick connection



RAIL MOUNTING

Quick installation



Figure 6.1: Operating Handle. The handle allows for manual switching of the circuit breaker and indicates its current status.

- To turn the circuit ON, push the operating handle upwards to the "I-ON" position.
- To turn the circuit OFF, pull the operating handle downwards to the "O-OFF" position.

6.2. Status Indication

INDICATOR WINDOWS



Red Line Connection



Green Line Disconnection

Figure 6.2: Indicator Windows. The red indicator signifies a live connection (ON), while the green indicator signifies disconnection (OFF or tripped state).

- **Red Indicator:** When the operating handle is in the "I-ON" position, a red indicator is visible, signifying that the circuit is connected and power is flowing.
- **Green Indicator:** When the operating handle is in the "O-OFF" position or if the breaker has tripped due to an overload or short circuit, a green indicator is visible, signifying that the circuit is disconnected and power is interrupted.

7. MAINTENANCE

The Wengart WGM12-63H MCB is designed for long-term reliability with minimal maintenance. However, periodic checks are recommended to ensure optimal performance and safety.

- **Visual Inspection:** Regularly inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** Keep the circuit breaker and its surroundings clean and free from dust and debris. Use a dry, non-abrasive cloth for cleaning. Do not use liquids or solvents.

- **Connection Check:** Periodically check the tightness of the terminal screws. Loose connections can lead to overheating and potential hazards.
- **Functional Test:** If safe to do so and in accordance with local regulations, occasionally test the trip mechanism by simulating an overload or short circuit (only by qualified personnel).

IMPORTANT: Any maintenance requiring internal access or complex repairs must be performed by qualified personnel only.

8. TROUBLESHOOTING

If the circuit breaker trips or fails to operate correctly, follow these steps:

1. Breaker Trips (Green Indicator Visible):

- **Identify Cause:** A tripped breaker indicates an overload or short circuit. Disconnect all appliances or devices connected to the affected circuit.
- **Reset:** After identifying and resolving the cause (e.g., unplugging a faulty appliance, fixing a short), push the operating handle fully down to the "O-OFF" position, then push it up to the "I-ON" position.
- **Persistent Tripping:** If the breaker trips immediately after resetting, do not attempt to reset it again. There may be a serious electrical fault. Contact a qualified electrician.

2. Breaker Does Not Reset:

- Ensure the handle is pushed fully to the "O-OFF" position before attempting to push it to "I-ON".
- If it still does not reset, there might be an internal fault with the breaker or a severe electrical issue. Do not force the handle. Contact a qualified electrician.

3. Overheating:

- If the circuit breaker or surrounding wiring feels hot, immediately disconnect power at the main supply.
- Check for loose connections, overloaded circuits, or damaged wiring. Contact a qualified electrician.

9. WIDE RANGE OF APPLICATION

The Wengart WGM12-63H 20A 2-Pole Miniature Circuit Breaker is suitable for various low-voltage electrical distribution systems, providing reliable protection in diverse environments.

WIDE RANGE OF APPLICATION



Figure 9.1: Application Examples. The WGM12-63H MCB is suitable for use in residential homes, office buildings, commercial establishments, and industrial machinery for circuit protection.

- **Residential Homes:** Protecting household appliances and lighting circuits.
- **Office Buildings:** Ensuring safety for office equipment and lighting systems.
- **Commercial Buildings:** Suitable for various commercial electrical installations.
- **Factory Machinery:** Providing circuit protection for light industrial applications.

10. WARRANTY INFORMATION

Specific warranty details for the Wengart WGM12-63H 20A 2-Pole Miniature Circuit Breaker are not provided in the product information. Please refer to the retailer or manufacturer's official website for current warranty terms and conditions.

11. CUSTOMER SUPPORT

For technical assistance, troubleshooting beyond this manual, or inquiries regarding your Wengart WGM12-63H

MCB, please contact the manufacturer or your point of purchase. Ensure you have your product model number and purchase details available when seeking support.

Manufacturer: WENGART ELECTRIC CO.,LTD