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> Legrand DX³6000 Miniature Circuit Breaker 407704 - 40A, 230V, C-Curve User Manual

Legrand 407704

Legrand DX³6000 Miniature Circuit Breaker 407704 User Manual

Model: 407704 | Brand: Legrand

1. INTRODUCTION

This manual provides essential information for the safe installation, operation, and maintenance of your Legrand DX³6000 Miniature Circuit Breaker, model 407704. This device is designed to protect electrical circuits from overcurrents and short circuits, ensuring the safety of your electrical installation.

Please read this manual thoroughly before installation and keep it for future reference. Proper installation and use are crucial for the device's performance and your safety.

2. SAFETY INFORMATION

WARNING: Electrical work should only be performed by qualified and authorized personnel. Failure to follow these instructions can result in serious injury or death.

- Always disconnect the main power supply before working on electrical circuits.
- Ensure that the circuit breaker's specifications (voltage, current, breaking capacity) match your electrical installation requirements.
- Do not use the device if it appears damaged.
- Adhere to all local and national electrical codes and regulations.
- Use appropriate personal protective equipment (PPE).

3. PRODUCT OVERVIEW

The Legrand DX³6000 Miniature Circuit Breaker (MCB) model 407704 is a single-module device designed for protection against overloads and short circuits in residential and commercial electrical installations. It features a 10kA breaking capacity and a C-curve tripping characteristic, suitable for general applications.



Figure 1: Legrand DX³6000 Miniature Circuit Breaker (Model 407704). This image shows the front view of the circuit breaker, highlighting its compact 1-module design, the toggle switch for ON/OFF operation, and the terminal connections.

Key Features:

- **Model:** 407704
- **Type:** Miniature Circuit Breaker (MCB)
- **Current Rating (In):** 40 A
- **Voltage:** 230V~
- **Breaking Capacity:** 10kA
- **Tripping Curve:** C-curve
- **Poles:** U+N (Unipolar + Neutral)
- **Module Size:** 1 module
- **Connection:** Screw terminals (top input, bottom output)
- **Mounting:** DIN rail
- **Compatibility:** Designed for HX³ optimized universal busbars (e.g., ref. 4 049 26/37 or tetrapolar ref. 4 052

- **Standards:** Conforms to NF EN 60898-1

4. INSTALLATION

Before beginning installation, ensure the main power supply to the distribution board is switched OFF and locked out to prevent accidental re-energization.

4.1 Mounting

1. Locate an available space on the DIN rail within your electrical distribution board.
2. Position the circuit breaker onto the DIN rail. The device is designed for easy clip-on mounting.
3. Press firmly until the circuit breaker clicks securely into place on the DIN rail.

4.2 Wiring

The Legrand 407704 features top input and bottom output screw terminals for U+N connections.

1. Connect the incoming phase (U) and neutral (N) wires to the top terminals of the circuit breaker. Ensure proper polarity.
2. Connect the outgoing phase (U) and neutral (N) wires to the bottom terminals of the circuit breaker, leading to the circuit it protects.
3. Tighten all screw terminals securely to the recommended torque to ensure good electrical contact and prevent overheating. Refer to local electrical codes for specific torque values.
4. If using HX³ optimized universal busbars, ensure they are correctly inserted and connected according to the busbar manufacturer's instructions.

After wiring, double-check all connections for tightness and correct polarity before restoring power.

5. OPERATION

5.1 Switching ON/OFF

- To switch the circuit breaker ON, push the toggle switch upwards to the 'I' (ON) position.
- To switch the circuit breaker OFF, push the toggle switch downwards to the 'O' (OFF) position.

5.2 Automatic Tripping

The circuit breaker will automatically trip to the 'O' (OFF) position in the event of an overload or short circuit. This action protects the electrical circuit and connected appliances from damage.

If the circuit breaker trips, investigate the cause of the fault before attempting to reset it. Common causes include too many appliances on one circuit or a faulty appliance.

5.3 Resetting the Circuit Breaker

1. Identify and rectify the cause of the trip (e.g., unplug faulty appliances, reduce load).
2. Push the toggle switch fully downwards to the 'O' (OFF) position first, then push it upwards to the 'I' (ON) position to reset.
3. If the circuit breaker immediately trips again, do not attempt to reset it further. Consult a qualified electrician.

6. MAINTENANCE

The Legrand DX³6000 circuit breaker is designed for maintenance-free operation under normal conditions. However, periodic checks are recommended:

- **Visual Inspection:** Periodically inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Terminal Tightness:** Over time, screw terminals can loosen due to thermal cycling. It is advisable to have a qualified electrician periodically check and retighten all terminal screws to ensure optimal electrical contact.
- **Cleaning:** If necessary, clean the exterior of the circuit breaker with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure power is OFF before cleaning.

Do not attempt to open or repair the circuit breaker. There are no user-serviceable parts inside.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overload on the circuit (too many devices). Short circuit in wiring or appliance. Faulty appliance.	Reduce the load on the circuit. Inspect wiring and appliances for damage. Disconnect faulty appliances. Consult a qualified electrician if the problem persists.
Circuit breaker does not reset.	Persistent fault (short circuit or severe overload). Internal damage to the circuit breaker.	Ensure the fault is cleared before attempting to reset. If it still doesn't reset, the breaker may be damaged and needs replacement. Consult a qualified electrician.
Circuit breaker feels hot.	Loose terminal connections. Overload. Internal fault.	Immediately disconnect power. Have a qualified electrician check and retighten connections. Investigate for overload. Replace if internal fault is suspected.

For issues not listed here or if troubleshooting steps do not resolve the problem, contact a qualified electrician or Legrand customer support.

8. SPECIFICATIONS

Parameter	Value
Model Number	407704
Brand	Legrand
Current Rating (In)	40 A
Voltage	230 Volts (230V~)
Breaking Capacity	10 kA (DX ³ 6000)
Tripping Curve	C-curve
Number of Poles	1 (U+N - Unipolar + Neutral)

Parameter	Value
Module Size	1 module
Connection Type	Screw terminals (Vis/vis)
Mounting Type	DIN Rail Mounting
Standards Compliance	NF EN 60898-1
Compatibility	HX ³ optimized universal busbars (e.g., ref. 4 049 26/37 or tetrapolar ref. 4 052 00/01/02/10)

9. WARRANTY INFORMATION

Specific warranty terms and conditions for the Legrand DX³6000 Miniature Circuit Breaker (Model 407704) are provided by the manufacturer, Legrand, or the authorized seller at the time of purchase.

Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the documentation included with your product or visit the official Legrand website.

10. CUSTOMER SUPPORT

If you require technical assistance, have questions regarding installation, operation, or maintenance, or need to report a fault, please contact:

- **Your Authorized Legrand Distributor or Seller:** Refer to your purchase documentation for contact details.
- **Legrand Official Website:** Visit www.legrand.com for product information, FAQs, and contact options in your region.

When contacting support, please have your product model number (407704) and purchase details readily available.

