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Westinghouse WMBB2C04-1

Westinghouse UL 489 AC Miniature Circuit Breaker Instruction Manual

Model: WMBB2C04-1

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Westinghouse UL 489 AC Miniature Circuit Breaker. Please read this manual thoroughly before installation or use and retain it for future reference. This circuit breaker is designed for primary branch circuit protection in the United States and Canada.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Installation and servicing should only be performed by qualified personnel. Disconnect power before working on or near the circuit breaker.

- Always follow local and national electrical codes.
- Ensure the circuit breaker's ratings match the application's requirements.
- Do not operate the breaker if it appears damaged.
- Use appropriate personal protective equipment (PPE).

3. PRODUCT OVERVIEW

The Westinghouse UL 489 AC Miniature Circuit Breaker (Model WMBB2C04-1) is a 2-pole, 4 Amp, C Curve, 10kA rated device designed for 480Y/277V AC and 125V DC systems. It features thermal-magnetic trip characteristics and is UL Listed for primary branch circuit protection. It is designed for DIN rail mounting.

3.1 Key Features

- UL 489 Certified for primary branch circuit protection.
- Current Limiting Thermal/Magnetic Trip.
- AC/DC Rating: 480Y/277V AC, 125V DC.
- 10kA Interrupting Capacity.

- Non-polarized design.
- DIN Rail Mountable (standard 35mm).
- Visible contact position indicator (ON/OFF).
- Lockable handle for enhanced safety.
- IP20 Touch Safe twin terminals with shields.
- Accommodates fork or spade terminals.
- Suitable for solid or stranded copper wires (8-3 AWG for stranded, 14-10 AWG for solid).

3.2 Product Components



Figure 3.2.1: Front view of the Westinghouse Miniature Circuit Breaker. This image shows the main body of the circuit breaker, including the blue ON/OFF handle and the visible contact position indicator.

Suitable for solid
or stranded wires.

Accommodates fork
or spade terminals.



Figure 3.2.2: Detailed view highlighting key components. This image points out features such as terminal shields, captive screws, contact position indicator, lockable handle, and accessory connections.

4. SETUP AND INSTALLATION

Before installation, ensure all power is disconnected from the electrical panel or system where the circuit breaker will be installed. Verify that the breaker's specifications (voltage, current, poles, curve) match your application's requirements.

4.1 Mounting on DIN Rail

1. Ensure the DIN rail is securely mounted within the electrical enclosure.
2. Align the circuit breaker's rear clips with the top edge of the 35mm DIN rail.
3. Press the circuit breaker firmly downwards until it clicks into place on the rail. The latches at the bottom will secure it.
4. To remove, pull down the bottom latches and pivot the breaker off the rail.

Easy Din Rail Installation

Fits on Standard 35mm Rail



Figure 4.1.1: Easy DIN Rail Installation. This image demonstrates a hand installing the circuit breaker onto a standard 35mm DIN rail, highlighting the ease of mounting.

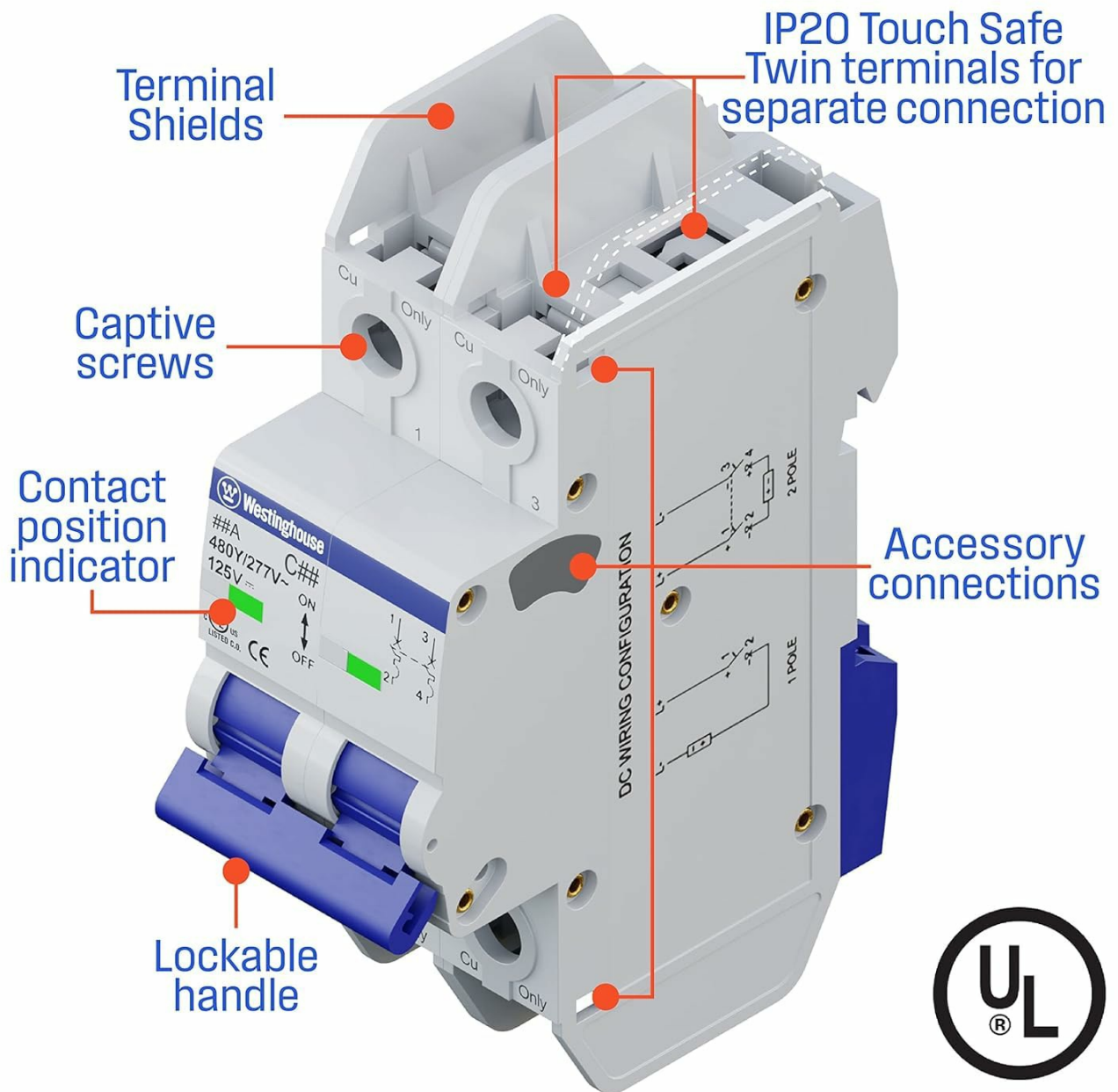


Figure 4.1.2: Circuit breaker mounted on DIN rail. This image shows the circuit breaker securely attached to a DIN rail, with red wires indicating connections. It also highlights compatibility with solid or stranded wires and fork/spade terminals.

4.2 Wiring Connections

The circuit breaker features twin terminals for separate connections and is suitable for both solid and stranded copper wires. It accommodates fork or spade terminals. Ensure proper torque is applied to terminal screws.

- **Wire Gauge:** Stranded: 8 - 3 AWG; Solid: 14 - 10 AWG.
- **Terminal Torque:** 2.5 Nm (22.2 lb.in).
- **Wiring Configuration:** Refer to the clear markings on the side of the breaker for DC wiring configuration (1-pole and 2-pole diagrams).



Figure 4.2.1: Side view with wiring specifications. This image displays the side of the circuit breaker with detailed product code, UL listing, and wiring specifications including wire gauges and torque requirements.



Figure 4.2.2: DC Wiring Configuration. This diagram illustrates the wiring for 1-pole and 2-pole DC applications, showing L+ and L- connections.

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Video 4.2.1: Westinghouse 2-Pole Miniature Circuit Breaker Overview. This video provides a visual overview of the circuit breaker, highlighting its features, UL certification, AC/DC rating, safety features like captive screws and lockable handles, accessory compatibility, clear markings, twin terminals, and DIN rail compatibility.

5. OPERATING INSTRUCTIONS

The circuit breaker is designed for simple operation with a clear ON/OFF mechanism.

5.1 Turning On/Off

- To turn the circuit ON, push the handle upwards to the "ON" position. The visible contact position indicator will show green.
- To turn the circuit OFF, pull the handle downwards to the "OFF" position. The visible contact position indicator will show red.

5.2 Trip Indication

In the event of an overload or short circuit, the breaker will automatically trip to the "OFF" position. The handle will be in the downward position, and the indicator will show red. Before resetting, identify and resolve the cause of the trip.

5.3 Resetting the Breaker

1. Ensure the cause of the trip has been resolved.
2. Push the handle fully to the "OFF" position (if it's not already there).
3. Then, push the handle upwards to the "ON" position to restore power.

6. MAINTENANCE

Westinghouse circuit breakers are designed for long-term reliability with minimal maintenance. However, periodic inspection is recommended.

- **Visual Inspection:** Regularly inspect the breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** Keep the breaker clean and free from dust and debris. Use a dry, non-abrasive cloth for cleaning. Do not use solvents or liquids.
- **Connection Check:** Periodically check terminal screw tightness to ensure secure electrical connections.
- **Operational Check:** Occasionally cycle the breaker (turn ON and OFF) to ensure smooth mechanical operation.

Note: Do not attempt to repair a damaged circuit breaker. Replace it with a new, appropriately rated Westinghouse breaker.

7. TROUBLESHOOTING

Troubleshooting Guide

Problem	Possible Cause	Solution
Breaker trips frequently.	Overload, short circuit, or ground fault in the circuit.	Identify and remove the overload. Check for short circuits or ground faults in the wiring or connected equipment. If the problem persists, consult a qualified electrician.
Breaker does not reset.	Persistent fault in the circuit, or internal damage to the breaker.	Ensure the fault has been cleared. If the breaker still does not reset, it may be damaged and requires replacement.
No power to the circuit, but breaker is ON.	Loose wiring connection, fault elsewhere in the circuit, or upstream power issue.	Check all wiring connections for tightness. Verify power supply to the breaker. Inspect the circuit for open wires or other faults.

If troubleshooting steps do not resolve the issue, contact Westinghouse customer support or a qualified electrician.

8. TECHNICAL SPECIFICATIONS

Westinghouse UL 489 AC Miniature Circuit Breaker (WMB2C04-1)

Parameter	Value
Model Number	WMBB2C04-1
Brand	Westinghouse
Circuit Breaker Type	Thermal Magnetic, Current Limiting
Number of Poles	2
Rated Current	4 Amp
Trip Curve	C Curve
AC Rated Operating Voltage	480Y/277V AC
DC Rated Operating Voltage	125V DC
Maximum Short Circuit Rating (kAIC)	10kA
Mounting Type	DIN Rail Mount (35mm)
Wire Compatibility	Copper wires only; Stranded: 8-3 AWG; Solid: 14-10 AWG
Terminal Torque	2.5 Nm (22.2 lb.in)
Electrical Endurance	6,000 Operations
Mechanical Endurance	20,000 Operations
Product Dimensions (L x W x H)	4.25 x 3 x 1.38 inches (108mm x 35mm x 61mm)
Weight	8 ounces
Certifications	UL 489 Listed (UL File Number E517928), CE
Operating Temperature	-25 to 55°C (-13 to 131°F)

Dimensions

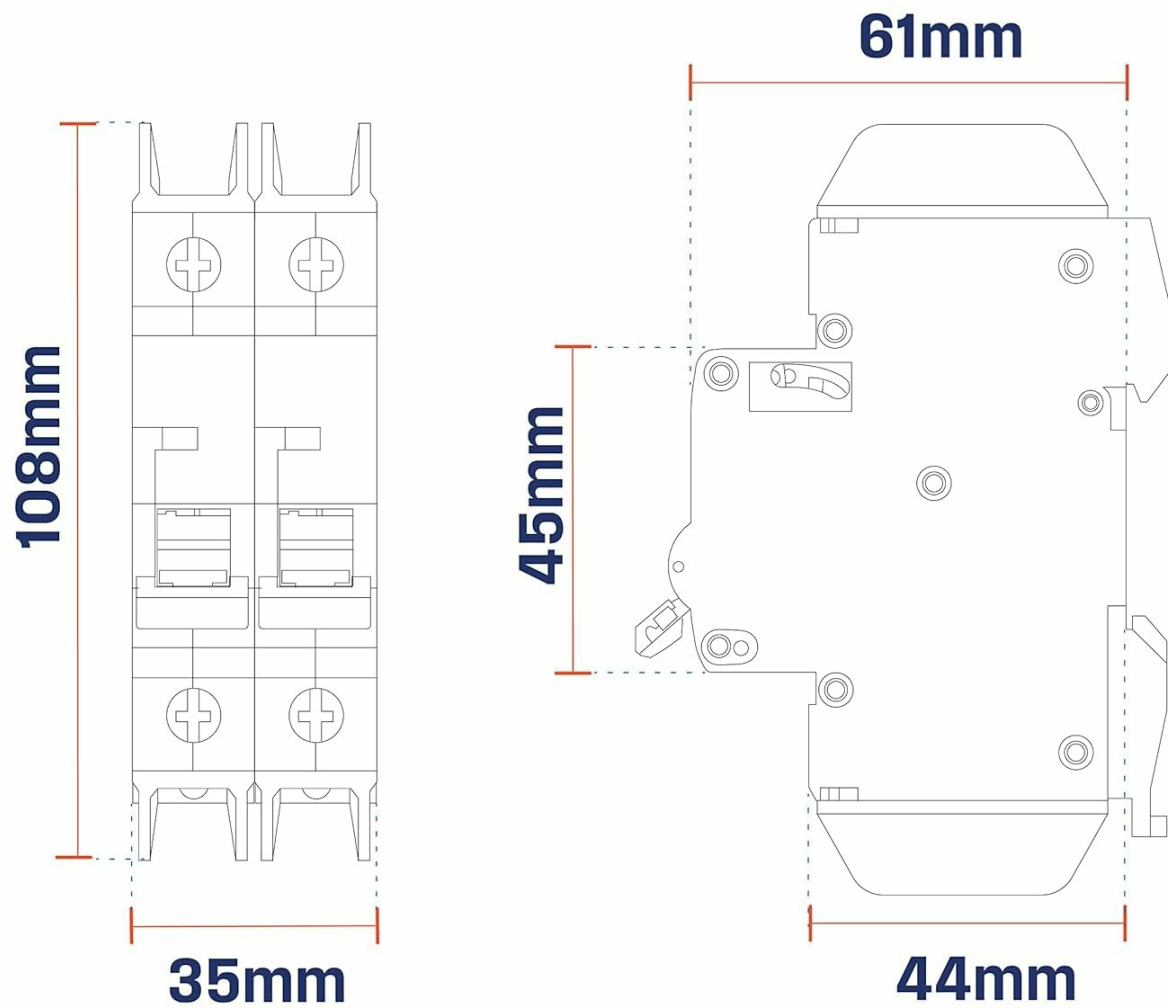


Figure 8.1: Dimensional drawing of the circuit breaker. This diagram provides precise measurements for height (108mm), width (35mm), and max depth (61mm).



489 Certified
UL File Number E517928

- **Current Limiting**
- **Short Circuit Protection**
- **Overload Protection**
- **277V AC / 125V DC**

Figure 8.2: UL 489 Certified. This image highlights the UL 489 certification and lists key protective features: Current Limiting, Short Circuit Protection, Overload Protection, and AC/DC voltage ratings.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Westinghouse customer support. Refer to the product packaging or the official Westinghouse website for the most current contact details.

Manufacturer: Westinghouse

Seller: Gladiator Manufacturing Solutions, LLC

Website: [Westinghouse Official Store on Amazon](#)

