MidNite Solar MNEPV30-600-2pp

MidNite Solar MNEPV30-600-2PP Circuit Breaker User Manual

Model: MNEPV30-600-2pp | Brand: MidNite Solar

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of the MidNite Solar MNEPV30-600-2PP Circuit Breaker. Please read this manual thoroughly before installation or use to ensure proper functionality and safety.

2. Safety Information

WARNING: Electrical shock hazard. Installation and servicing should only be performed by qualified personnel. Always disconnect power before working on electrical systems.

- Ensure all local and national electrical codes are followed.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Verify voltage and current ratings of the circuit breaker match the application.
- Do not operate the circuit breaker if it appears damaged.

3. Product Overview

The MidNite Solar MNEPV30-600-2PP is a 30A, 600VDC two-pole circuit breaker designed for DIN rail mounting. It features a 10,000A (10kA) AIC (Amperes Interrupting Capacity) rating and is polarized for specific DC applications.

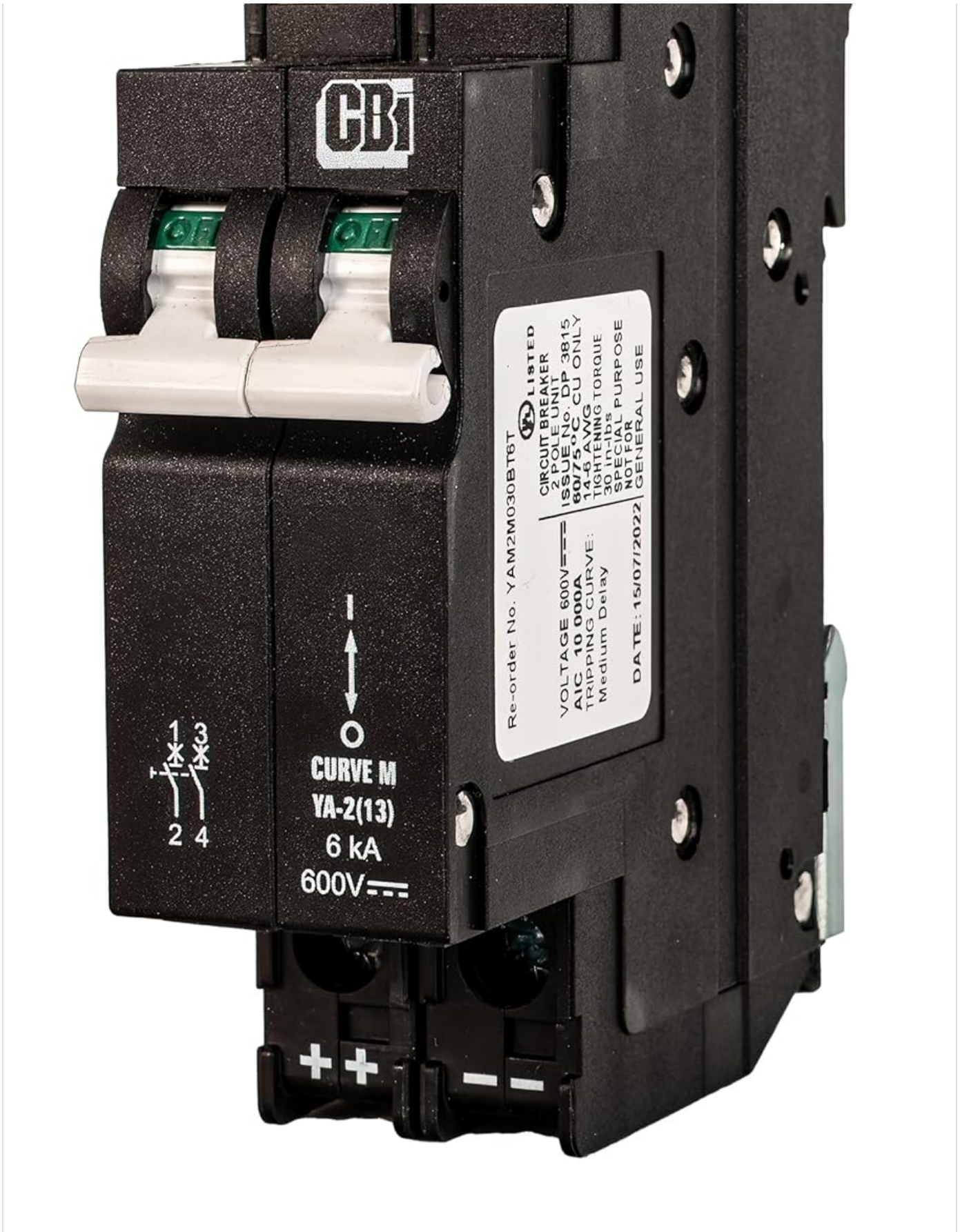

Figure 3.1: Front view of the MidNite Solar MNEPV30-600-2PP Circuit Breaker. This image shows the two poles, the ON/OFF levers, the CBI branding, and the product label with specifications like voltage, AIC, and tripping curve.

Key Features:

- 600VDC din rail mount two pole breaker
- 10,000A (10kA) AIC (Amperes Interrupting Capacity)

- Polarized design for DC systems
- Width: 1 inch (26mm)

4. Setup and Installation

The MNEPV30-600-2PP circuit breaker is designed for DIN rail mounting. Follow these steps for proper installation:

1. **Mounting:** Securely attach the circuit breaker to a standard 35mm DIN rail. Ensure the metal clips engage properly for a firm fit.
2. **Wiring:** Connect the DC positive (+) and negative (-) conductors to the appropriate terminals. The breaker is polarized, so observe the '+' and '-' markings on the terminals. Refer to the product label for detailed wiring diagrams if available.
3. **Terminal Torque:** Tighten terminal screws to the specified torque of 30 in-lbs. Use appropriate tools to prevent overtightening or undertightening, which can lead to poor connections or damage. The breaker accepts 14-6 AWG CU wire.
4. **Verification:** After wiring, visually inspect all connections to ensure they are secure and correctly polarized.

Note: For detailed installation diagrams, it is recommended to search for official factory installation diagrams from MidNite Solar, as suggested by user reviews for clarity on polarity markings.

5. Operation

The circuit breaker functions as a protective device for DC electrical circuits. It has two primary states:

- **ON Position:** When the levers are in the 'ON' position (typically upwards), the circuit is closed, allowing current to flow.
- **OFF Position:** When the levers are in the 'OFF' position (typically downwards), the circuit is open, interrupting current flow.
- **Tripped Position:** In the event of an overcurrent or short circuit, the breaker will automatically trip to an intermediate position, opening the circuit to prevent damage. To reset a tripped breaker, first identify and resolve the fault, then push the levers fully to the 'OFF' position before pushing them back to 'ON'.

6. Maintenance

The MidNite Solar MNEPV30-600-2PP Circuit Breaker is designed for minimal maintenance. However, periodic checks are recommended:

- **Visual Inspection:** Regularly inspect the breaker for any signs of physical damage, discoloration, or loose connections.
- **Terminal Tightness:** Periodically check the tightness of the terminal screws, especially after initial installation, to ensure they remain at the specified torque of 30 in-lbs.
- **Cleaning:** If necessary, gently clean the exterior of the breaker with a dry, lint-free cloth. Do not use solvents or abrasive cleaners.

CAUTION: Always disconnect power to the circuit before performing any maintenance or inspection.

7. Troubleshooting

If the circuit breaker is not functioning as expected, consider the following:

- **Breaker Trips Frequently:** This indicates an overcurrent or short circuit condition in the protected circuit. Identify and resolve the fault (e.g., overloaded device, shorted wiring) before attempting to reset the breaker. Do not repeatedly reset a breaker without addressing the underlying issue.
- **Breaker Does Not Reset:** Ensure the fault has been cleared. If the breaker still does not reset after being moved fully to the 'OFF' position and then to 'ON', the breaker itself may be damaged and require replacement.
- **No Power Through Breaker (Not Tripped):** Check all wiring connections for looseness or incorrect polarity. Verify that power is present at the input side of the breaker. If connections are secure and input power is present, the breaker may be faulty.

If issues persist, consult a qualified electrician or contact MidNite Solar customer support.

8. Specifications

Specification	Value
Brand	MidNite Solar
Model Number	MNEPV30-600-2pp
Current Rating	30 Amps
Voltage Rating	600VDC
Number Of Poles	2
Circuit Breaker Type	Standard
Mounting Type	DIN Rail Mount
AIC (Amperes Interrupting Capacity)	10,000A (10kA)
Tripping Curve	Medium Delay (Curve M, YA-2(13))
Wire Gauge Compatibility	14-6 AWG CU
Terminal Tightening Torque	30 in-lbs
Package Dimensions	4 x 3 x 1 inches
Date First Available	August 15, 2023

9. Warranty and Support

MidNite Solar products are typically covered by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or visit the official MidNite Solar website. For technical support or inquiries, contact MidNite Solar customer service directly.
MidNite Solar Official Website: www.midnitesolar.com