Agatige Agatigewo3mfr17sg

Agatige AC Miniature Circuit Breaker (Model Agatigewo3mfr17sg) User Manual

For Solar PV Systems & RV Applications

1. Product Overview

This manual provides instructions for the safe and effective use of the Agatige AC Miniature Circuit Breaker, Model Agatigewo3mfr17sg. This device is designed to protect electrical systems from overvoltage and undervoltage conditions, ensuring the safety of connected appliances and personnel. It is suitable for various applications, including solar PV systems and RVs, offering reliable power distribution and protection against overload and short circuits.

Image 1.1: Front view of the Agatige AC Miniature Circuit Breaker, showing input/output terminals and indicator lights.

2. Important Safety Information

Please read and understand all safety instructions before installing or operating this device. Failure to follow these instructions may result in electrical shock, fire, or serious injury.

- Installation should only be performed by a qualified electrician or trained professional.
- Always disconnect power at the main supply before performing any installation, wiring, or maintenance.
- Do not operate the device with wet hands or in damp conditions.
- Ensure all wiring connections are secure and comply with local electrical codes.
- This device is designed for AC 230V 50Hz systems. Do not use it with other voltage or frequency specifications.
- Do not attempt to open or repair the device. There are no user-serviceable parts inside.

3. Key Features

- **Overvoltage and Undervoltage Protection:** Automatically cuts off power when voltage exceeds or falls below safe operating limits (Overvoltage > 270VAC +/-5V, Undervoltage < 170VAC +/-5V).
- **Auto-Recovery Function:** Automatically restores power within 1 minute after the voltage returns to the normal range (175-270 Vac).
- **Indicator Lights:** Two indicator lights (green and red) provide clear visual feedback on the device's operational status.
- **Compact DIN Rail Mount:** Designed for easy installation on a standard 35mm DIN rail, saving space in electrical panels.
- **High Current Capacity:** Supports a maximum transmit current of 40A and a maximum power of 8.8KVA.
- **Fast Response Time:** Overvoltage and undervoltage cut-off occurs in less than 1 second.

4. Setup and Installation

Follow these steps for proper installation of the Agatige AC Miniature Circuit Breaker.

4.1 Physical Installation

1. **Power Disconnection:** Ensure all power to the electrical system is disconnected at the main breaker before beginning installation.
2. **Mounting:** Attach the circuit breaker onto a standard 35mm DIN rail. Ensure it is securely clipped into place.

Image 4.1: Dimensions of the Agatige AC Miniature Circuit Breaker (77mm x 35mm x 45mm).

4.2 Wiring Connections

Refer to the wiring diagram below for correct input and output connections. Ensure proper polarity and secure terminal connections.

1. **Input Connection:** Connect the incoming AC power supply (Line and Neutral) to the 'N Input L' terminals at the top of the device. Typically, this would come from an upstream circuit breaker (e.g., DZ47-63 as shown in the diagram).
2. **Output Connection:** Connect the load (appliances, solar PV system, RV electrical system) to the 'N Output L' terminals at the bottom of the device.
3. **Secure Connections:** Tighten all terminal screws firmly to prevent loose connections, which can cause overheating or intermittent operation.

Image 4.2: Wiring diagram showing input from a typical upstream circuit breaker (DZ47-63) to the Agatige AC Miniature Circuit Breaker (SVP-60) and then to the output load.

Important Note: When connecting the product for the first time, you must wait for approximately 1 minute after restoring power. The device will only begin normal operation once the red indicator light goes out.

5. Operating Instructions

The Agatige AC Miniature Circuit Breaker operates automatically to protect your electrical system. Its status is indicated by two LED lights on the front panel.

Image 5.1: Front panel of the circuit breaker, highlighting the 'Power' (green) and 'Protection' (red) indicator lights.

5.1 Indicator Lights

- **Green Indicator Light (Power):** When this light is illuminated, it indicates that the power supply is working normally and the device is in an operational state.
- **Red Indicator Light (Protection):** When this light is illuminated, it indicates an overvoltage or undervoltage condition has been detected, and the device has cut off power to protect the connected load.

5.2 Automatic Operation

The device continuously monitors the AC voltage. If the voltage deviates outside the normal range (175-270 Vac), the protection function will activate, and power will be automatically cut off within 1 second. Once the voltage returns to the normal range, the device will automatically re-power on after a delay of less than 60 seconds (auto-recovery function).

6. Maintenance

The Agatige AC Miniature Circuit Breaker is designed for reliable, maintenance-free operation. However, periodic inspection is recommended to ensure optimal performance and safety.

- **Visual Inspection:** Periodically inspect the device for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** Keep the device clean and free from dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Connection Check:** Ensure all wiring connections remain tight and secure.
- **No User Serviceable Parts:** Do not attempt to disassemble or repair the unit. If the device malfunctions, contact a qualified electrician or the manufacturer for assistance.

7. Troubleshooting

If you encounter issues with your Agatige AC Miniature Circuit Breaker, refer to the following troubleshooting guide:

- **Device Not Powering On / No Green Light:**
  - Check the main power supply to ensure it is active.
  - Verify all wiring connections are correct and secure.
  - If it's the first time connecting, ensure you have waited the initial 1-minute delay for startup.
- **Red Light Illuminated / Power Cut Off:**
  - This indicates an overvoltage or undervoltage condition. Check the incoming AC voltage with a multimeter to confirm it is within the normal operating range (175-270 Vac).
  - If the voltage is unstable, wait for it to stabilize. The device should auto-recover within 60 seconds once stable.
  - If the voltage is consistently outside the normal range, consult an electrician to diagnose the power supply issue.
- **Device Not Auto-Recovering:**
  - Ensure the voltage has returned to the stable normal range for at least 60 seconds.
  - If the issue persists, disconnect and reconnect the power supply (after ensuring safety) to reset the device. If it still fails to recover, the device may require replacement.

For issues not covered here, please contact customer support or a qualified electrician.

8. Technical Specifications

Specification	Value
Function	Overvoltage and Undervoltage Protection
Rated AC	230V 50Hz
Maximum Transmit Current	40A
Maximum Power	8.8KVA
Overvoltage Action Cut-Off Value	> 270VAC +/-5V
Normal Voltage Range	175-270 Vac
Undervoltage Action Cut-Off Value	< 170VAC +/-5V
Overvoltage and Undervoltage Cut-Off Time	< 1s
Power Transmission Delay After Power Failure	< 60s
Own Power Consumption	< 2W
Motor Life	100,000 Times
Dimensions (L x W x H)	77 x 35 x 45mm (3.03 x 1.38 x 1.77 inches)
Installation	35mm DIN Rail
Model Number	Agatigewo3mfr17sg
ASIN	B09Q7VSVPD

Specification	Value
Number of Poles	1

9. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the product packaging or contact Agatige customer service through their official channels. Keep your purchase receipt as proof of purchase.