PowMr BE 2

PowMr Battery Equalizer Voltage Balancer User Manual

Model: BE24

Product Overview

The PowMr Battery Equalizer is designed to maintain the charge and discharge balance between batteries connected in series or in parallel. This crucial function helps to keep your batteries in optimal health and significantly extends their overall service life. It is compatible with various types of 12V lead-acid batteries, including VRLA, Sealed (AGM), Flooded, Gel, and Calcium batteries, allowing for flexible system configurations such as 24V, 36V, 48V, and higher N*12V setups.

The equalizer actively monitors the voltage of individual batteries within a series-connected bank. When a voltage difference exceeding 10mV is detected between two batteries, the equalizer begins to work, shunting current from the higher voltage battery to the lower voltage one. This continuous balancing process ensures that all batteries in the bank maintain a balanced state, preventing overcharge or over-discharge of individual cells and maximizing the performance and longevity of your battery system.



Figure 1: PowMr Battery Equalizer BE24

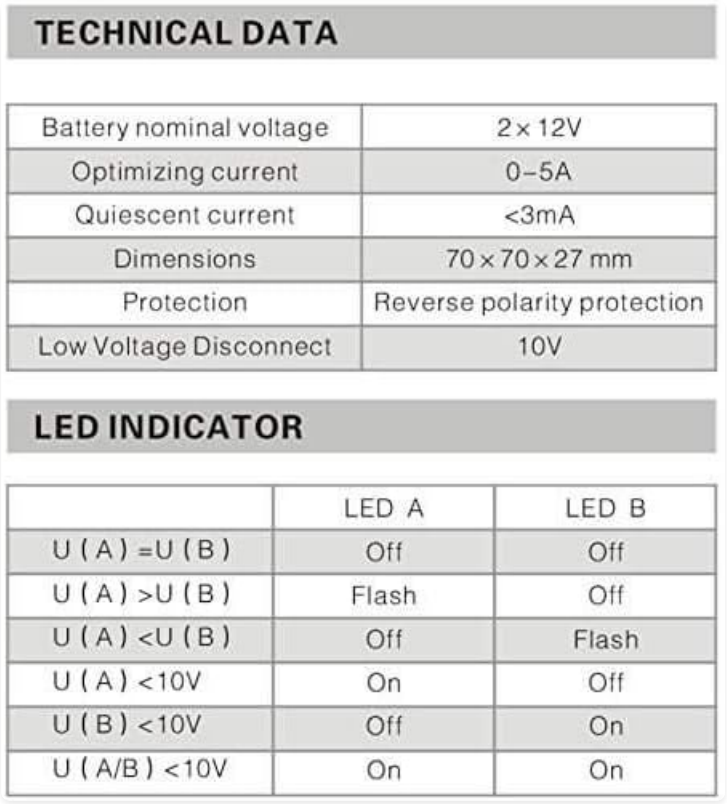
Setup and Installation

Proper installation is critical for the optimal performance and safety of your PowMr Battery Equalizer. Please follow these instructions carefully:

1. **Confirm Series Connection:** Ensure that your 12V batteries are correctly connected in series to achieve

the desired system voltage (e.g., two 12V batteries for a 24V system, three for 36V, etc.).

2. **Connect Cables:** Connect the battery equalizer to your battery bank as follows:
   - **Red Cable:** Connect to the positive (+) pole of Battery B.
   - **Black Cable:** Connect to the negative (-) pole of Battery A.
   - **White Cable:** Connect to the negative (-) pole of Battery B or the positive (+) pole of Battery A (this is the common pole connecting Battery A and Battery B in series).
3. **Secure Connections:** Ensure all cable connections are tight and secure to prevent loose contacts and potential hazards.



TECHNICAL DATA

Battery nominal voltage	2×12V
Optimizing current	0–5A
Quiescent current	<3mA
Dimensions	70×70×27 mm
Protection	Reverse polarity protection
Low Voltage Disconnect	10V

LED INDICATOR

	LED A	LED B
U(A)=U(B)	Off	Off
U(A)>U(B)	Flash	Off
U(A)<U(B)	Off	Flash
U(A)<10V	On	Off
U(B)<10V	Off	On
U(A/B)<10V	On	On

Figure 2: Installation Diagram for 24V, 36V, and 48V Battery Banks

Your browser does not support the video tag.

Video 1: Official guide on how to connect the PowMr Battery Equalizer for optimal performance and extended battery life.

Operating Instructions

Once correctly installed, the PowMr Battery Equalizer operates automatically to maintain battery balance. It continuously monitors the voltage of each battery in the series and initiates equalization when necessary. The device is designed for long-term connection to your battery system, ensuring automatic and consistent balancing.

LED Indicator Guide

The equalizer features LED indicators to provide real-time status information. Refer to the table below to understand the meaning of the LED lights:



Figure 3: Technical Data and LED Indicator Table

LED Indicator Status

Condition	LED A	LED B
U(A) = U(B) (Voltages Equal)	Off	Off
U(A) > U(B) (Battery A Higher Voltage)	Flash	Off
U(A) < U(B) (Battery B Higher Voltage)	Off	Flash
U(A) < 10V (Battery A Low Voltage)	On	Off
U(B) < 10V (Battery B Low Voltage)	Off	On
U(A/B) < 10V (Both Batteries Low Voltage)	On	On

MAINTENANCE

The PowMr Battery Equalizer is designed for minimal maintenance. Its primary function is to actively maintain the balance of your battery bank, thereby extending the lifespan of your batteries and reducing the need for frequent replacements. Regularly inspect the wiring connections to ensure they remain secure and free from corrosion. Keep the equalizer unit clean and free from dust or debris to ensure proper heat dissipation.

Troubleshooting

If you encounter any issues with your PowMr Battery Equalizer, refer to the LED Indicator Guide in the Operating Instructions section to diagnose the problem. The blinking or solid lights indicate specific voltage conditions or imbalances within your battery system. Ensure all connections are correct and secure. If the issue persists after checking connections and referring to the LED indicators, please contact customer support.

Specifications

Specification	Value
Battery Nominal Voltage	2 x 12V
Optimizing Current	0-5A
Quiescent Current	<3mA
Dimensions	70 x 70 x 27 mm
Protection	Reverse polarity protection
Low Voltage Disconnect	10V
Item Weight	0.81 ounces
Product Dimensions	4.72 x 4.33 x 1.57 inches
Item Model Number	BE 2
Voltage	2.4 Volts, 12 Volts
Lift Type	Automatically
Power Source	Battery Powered
Mounting Type	Surface Mount
Current Rating	5 Amps
Specification Met	UL

Warranty and Support

The PowMr Battery Equalizer is designed to extend your battery life by 1 year or more through consistent balancing. The product comes with a 1-year warranty from the manufacturer. For any technical assistance, troubleshooting beyond the scope of this manual, or warranty claims, please contact PowMr customer support directly.

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