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Runleader Runleader Multi-Voltage Battery Indicator and Hour/Voltage Gauge

Runleader Multi-Voltage Battery Indicator and Hour/Voltage Gauge User Manual

Model: Runleader Multi-Voltage Battery Indicator and Hour/Voltage Gauge

INTRODUCTION

This manual provides detailed instructions for the Runleader Multi-Voltage Battery Indicator and Hour/Voltage Gauge. This device is designed to monitor battery percentage, track total operating hours, and measure real-time battery voltage. It is compatible with various battery types and voltage configurations, making it suitable for a wide range of applications.



Front view of the Runleader Multi-Voltage Battery Indicator, displaying battery percentage, hour meter, and voltage. It features two control buttons labeled 'M' and 'S'.

The indicator is versatile, supporting applications in golf carts, forklifts, motorcycles, lawn mowers, chainsaws, and scrubber machines, among others.

APPLICATION

It can be worked on DC 12V to 48V Lead acid, GEL, LiFePO4, Trojan, AGM, 18650 lithium powered equipments, such as:

- Golf cart
- Forklift
- Motorcycle
- Lawn mower
- Chainsaw
- Scrubber machine etc.



Diagram illustrating various applications for the Runleader battery indicator, including golf carts, forklifts, motorcycles, lawn mowers, chainsaws, and scrubber machines.

SETUP AND INSTALLATION

Follow these steps for proper installation of your Runleader battery indicator:

1. **Panel Cut-out:** Prepare a circular panel cut-out with a diameter of $\phi 60.50\text{mm}$ (2.38 inches) at your desired mounting location.
2. **Mounting:** Insert the indicator into the cut-out and secure it using the snap-in mounting method.
3. **Power Connection:** Connect the positive (+) and negative (-) ports of the indicator to your battery terminals. This provides power to the unit.
4. **Key Switch Connection (Optional):** To enable normal battery power display and monitoring, connect the 'key switch' port to the positive (+) terminal.
5. **LED Bar and Function Lights:** Ensure Port 3 is connected to Port 4 to illuminate the LED bars and function lights.



Diagram showing the panel cut-out size of $\phi 60.50\text{mm}$ (2.38 inches) and the snap-in mounting method for the Runleader battery indicator.



Detailed wiring diagram for the Runleader battery indicator, showing connection ports, key switch power connection, and direct power connection. It highlights the importance of connecting Port 3 to Port 4 for LED bar and function lights.

OPERATING INSTRUCTIONS

1. Battery Type and Voltage Programming

The meter is programmable for various battery types, including Lead Acid (with 3 parameter selections), GEL, LiFePO₄, Trojan, AGM, 18650, and one customizable setting. You can also program applicable battery voltages (12V, 24V, 36V, 48V) using the device's buttons. Advanced parameter programming is possible via RS323 communication with the optional PG600 programmer.

APPLICABLE BATTERY TYPES & VOLTAGE



■ Programmable battery types

You can program the applicable battery types to Lead acid(3 types,bt-1/bt-7/bt-8) ,GEL(bt-2), LiFePO4(bt-3),Trojan(bt-4),AGM(bt-5),18650 lithium (bt-6), and 1 customized parameters(bt-9).

■ Programmable battery voltages

You can program the applicable battery voltage to 12V(U-12),24V(U-24),36V(U-36),48V(U-48).

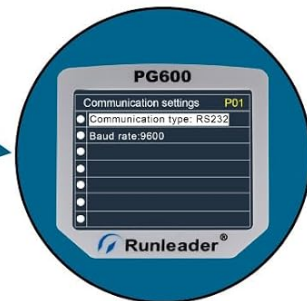


Image illustrating the programmable battery types (Lead Acid, GEL, LiFePO4, Trojan, AGM, 18650, custom) and programmable voltage settings (12V, 24V, 36V, 48V) for the Runleader indicator.

2. Battery Level Display

The battery level indicator displays the remaining battery capacity as a percentage and through 10 progress bars, where each bar represents 10% of the battery's power.

BATTERY POWER PERCENTAGE DISPLAY



Programmable operating mode,
charge/discharge parameters
by PG600 programmer
(need to buy it separately).

- It help to know how much battery power have left by percentage and LCD progress bars.

Display showing 80% battery power with 8 out of 10 progress bars illuminated. An inset image indicates programmable operating modes and charge/discharge parameters via the optional PG600 programmer.

3. Hour Meter (TOT) and Maintenance Timer (SVC)

This device tracks the total operating hours of the equipment (TOT function). It also features a maintenance timer (SVC function) to remind users of scheduled service. The SVC function provides a countdown, and alerts are indicated by a red backlight and flashing values.

TOT & SVC



■ TOT

It keep track of total running hours of machine when power is on.



■ SVC

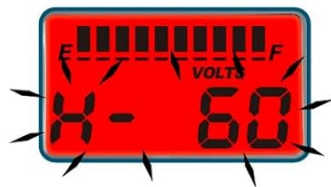
It perform the regular maintenance task by countdown, red backlight and flashed value & icon remind it arrival status.

Displays showing the Total Hours (TOT) function, which tracks total running hours, and the Service (SVC) function, which provides a countdown for maintenance tasks with a red backlight alert.

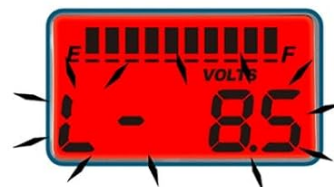
4. Voltage Measurement and Alerts

The indicator measures real-time battery voltage and provides alerts for over-voltage or under-voltage conditions. Alerts are indicated by a red backlight and flashing values based on user-defined thresholds.

BATTERY VOLTAGE MEASUREMENT



Over voltage alert
(range:12V to 60V)



Under voltage alert
(range:8.5V to 59V)

- It measure the real-time battery voltage value when power is on.
- It remind the voltage exceed and voltage lackness based on preset voltage alert value.

Display showing real-time voltage measurement (60V) and examples of over-voltage (X-60V) and under-voltage (L-8.5V) alerts with red backlights.

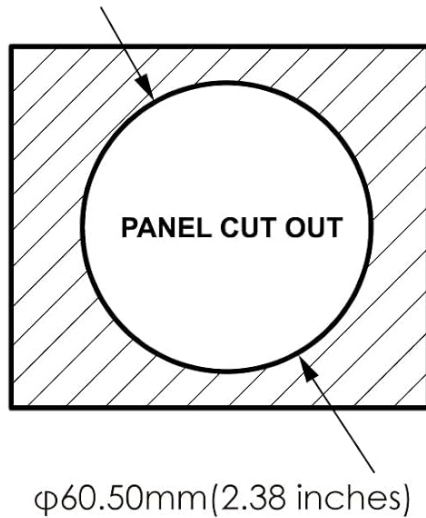
MAINTENANCE

The Runleader battery indicator is designed for durability with 100% epoxy resin craft and an IP67 water resistance rating, minimizing the need for extensive maintenance.

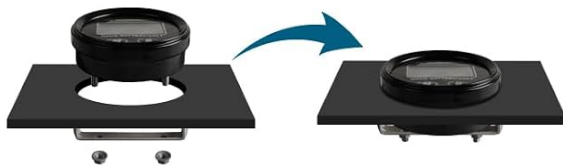
- **Cleaning:** Periodically wipe the display and casing with a soft, damp cloth to remove dust and dirt. Avoid abrasive cleaners.
- **Connection Check:** Ensure all electrical connections remain secure and free from corrosion.
- **Environmental Protection:** While water-resistant, avoid prolonged submersion or exposure to harsh chemicals.

INSTALLATION METHODS

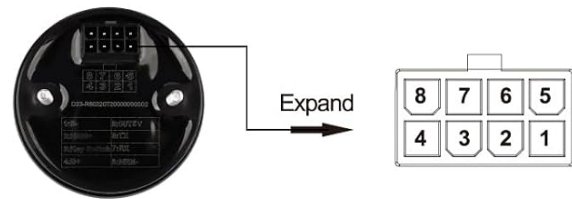
■ Panel-cut out size



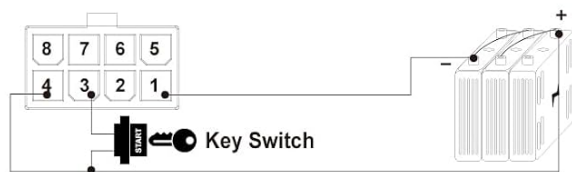
■ Snap-in mounting



■ Connection ports



■ Key switch power connection



■ Direct power connection



Note: You must to connect "Port 3" with port "+" to lighten the LED bars & 3 function lights

Image demonstrating the Runleader battery indicator submerged in water, highlighting its IP67 waterproof rating.

TROUBLESHOOTING

If you encounter issues with your Runleader battery indicator, consider the following common problems and solutions:

- **Battery Percentage Not Updating:** If the battery percentage reading does not update after initial power-on, try cycling the power to the unit. Turn it off, wait for it to power down completely, then turn it back on. This often refreshes the reading.
- **No Battery Percentage or Bargraph Display:** Ensure the 'key switch' wire is properly connected to the positive (+) terminal, especially if a physical key switch is not being used. This connection is crucial for the battery percentage and bargraph functions to operate correctly.
- **Temporary Voltage Alarms:** If the low voltage alarm triggers temporarily during equipment movement, this may be normal if the battery voltage dips below the set threshold under load. The alarm should clear once the voltage recovers. The device does not feature a configurable delay for these alarms.
- **No Display:** Check all power connections (positive and negative) to ensure they are secure and receiving adequate voltage from the battery.

SPECIFICATIONS

Feature	Specification
Brand	Runleader
Model	Multi-Voltage Battery Indicator and Hour/Voltage Gauge
Applicable Battery Types	Lead Acid (3 types), GEL, LiFePO4, Trojan, AGM, 18650, 1 Customized
Applicable Voltages	12V, 24V, 36V, 48V (programmable)
Min. Operating Voltage	9 Volts
Voltage Measurement Range	DC 8V to 65V
Over Voltage Alert Range	12V to 60V (programmable)
Under Voltage Alert Range	8.5V to 59V (programmable)
Total Hours (TOT) Range	0 to 99,999 hours
Maintenance Timer (SVC) Range	5 to 2000 hours / OFF
Water Resistance Rating	IP67
Panel Cut-out Size	φ60.50mm (2.38 inches)
Dimensions (Overall)	φ64.40mm (2.54 inches) diameter, 19.10mm (0.75 inches) depth
Power Source	Battery Powered
Certifications	CSA, IP67, RoHS, UL

FAVORABLE WATER RESISTANCE



Diagram showing the dimensions of the Runleader battery indicator (35.00mm diameter, 19.10mm depth) and a list of included accessories: color box, cut-out sticker, user manual, connector plug, connector springs, M4 flange nuts, mounting bracket, and connector wiring.

WARRANTY AND SUPPORT

Runleader provides a **2-year warranty** for this product, ensuring quality and reliability. For any technical assistance, troubleshooting, or warranty claims, please contact Runleader customer support.

For support, please refer to the contact information provided with your product packaging or visit the official Runleader website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

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