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› Runleader Digital LCD Hour Meter User Manual

## Runleader RL-HM038AG

# Runleader Digital LCD Hour Meter User Manual

Model: RL-HM038AG

## 1. INTRODUCTION

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The Runleader Digital LCD Hour Meter (Model RL-HM038AG) is designed to accurately track the total operating hours of various machinery and equipment. This device is essential for maintenance scheduling, warranty tracking, and performance monitoring. Its robust, waterproof design ensures reliable operation in diverse environments.



Figure 1: Runleader Digital LCD Hour Meter (Model RL-HM038AG)

This image shows the compact black digital LCD hour meter with "HOURS" printed below the display. The display shows "0.0" hours.

## 2. KEY FEATURES

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- **Digital Hour Tracking:** Records total working hours (TOT) from 0 to 99,999 hours. Allows setting a starting hour value for new installations or replacements.
- **Resettable Timers:** Includes two resettable hour timers (TMR1 & TMR2) for tracking specific working periods.
- **Wide Voltage Compatibility:** Operates with external AC or DC power from 5V to 277V, accommodating common voltages like 12V, 24V, 36V, 48V, 72V, 90V, 110V, 120V, 220V, 230V.
- **High Water Resistance:** Constructed with 100% epoxy resin craft, providing IP68 waterproof rating, allowing normal operation up to 10 meters underwater.
- **Easy Installation:** Designed for drill-in and snap-in mounting with a panel cut-out size of 36.88mm x 24.5mm (1.45 inches x 0.96 inches). Simple two-pin connection (positive and negative are not distinguished).

- **Automatic Data Storage:** Features a built-in durable CR2050 battery to save important working data for extended periods, allowing hours to be viewed even when power is off.
- **Programmable:** Total and partial working hours can be programmed using the self-developed PG600 programmer (sold separately).



|                    |                                                |
|--------------------|------------------------------------------------|
| Brand              | Runleader                                      |
| Working Voltage    | AC/DC 5V to 277V                               |
| Hour Range         | 0 to 99,999 hours                              |
| Water Resistance   | IP68                                           |
| Panel Cut-out Size | 36.88mm x 24.5mm (1.45 inches x 0.96 inches)   |
| Built-in Battery   | CR2050 (included)                              |
| Material           | Acrylonitrile Butadiene Styrene (ABS)          |
| Item Weight        | 34.8 Grams                                     |
| Manufacturer       | Ningbo Jiangbei Run Leader Electronics Co.,Ltd |

# PRODUCT DIMENSIONS



Figure 3: Detailed dimensions of the Runleader Digital LCD Hour Meter.

This image provides a top-down and side-view diagram of the hour meter with precise measurements in millimeters and inches, indicating its compact size and the dimensions of its display and body.

## 4. PRODUCT COMPONENTS

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The package for your Runleader Digital LCD Hour Meter includes the following items:

- 1 x Runleader Digital LCD Hour Meter
- 1 x User Manual
- 2 x Insertion Spring Terminals
- 2 x Plug Spring Sheaths

### PRODUCT ACCESSORIES



Box\*1



User manual\*1



Insertion spring\*2



Plug spring sheath\*2

Figure 4: Contents included with the hour meter.

This image displays the product packaging box, the user manual, two insertion spring terminals, and two plug spring sheaths, which are the standard accessories provided with the hour meter.

## 5. SETUP AND INSTALLATION

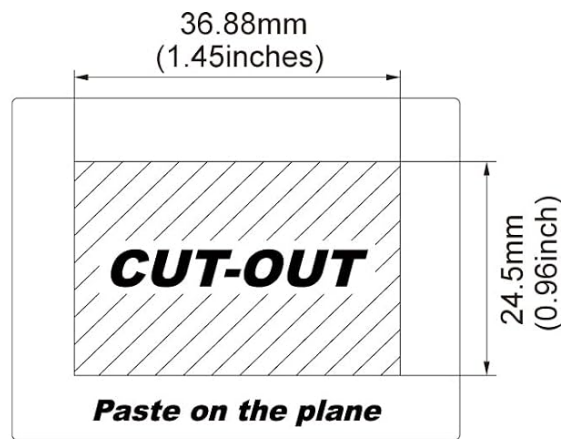
### 5.1 Product Mounting

The hour meter is designed for easy drill-in and snap-in mounting. Ensure the panel cut-out matches the specified dimensions for a secure fit.

1. Drill a rectangular hole in the desired mounting surface with dimensions of 36.88mm (1.45 inches) by 24.5mm (0.96 inches).
2. Insert the hour meter into the cut-out. The snap-in design will secure it in place.

## PRODUCT MOUNTING

### ■ Panel cut-out size



### ■ Snap-in mounting

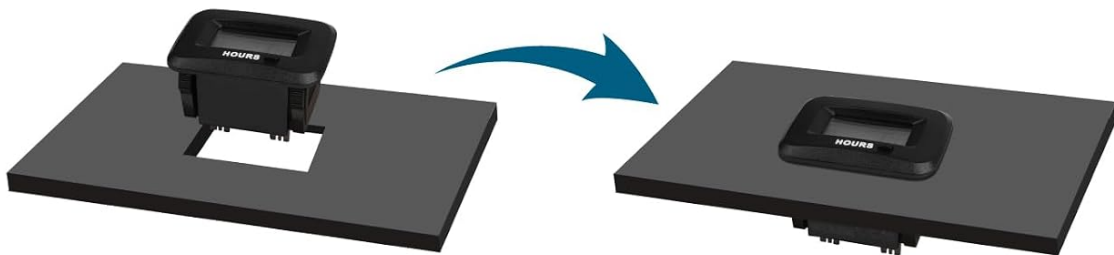


Figure 5: Panel cut-out dimensions and snap-in mounting process.

This image shows a diagram of the required panel cut-out size (36.88mm x 24.5mm) and an illustration of how the hour meter snaps into the panel for secure mounting.

### 5.2 Power Connection

The hour meter can be connected directly to a power source or through a power switch. The two pins on the meter are not

distinguished by positive or negative polarity, simplifying the connection process.

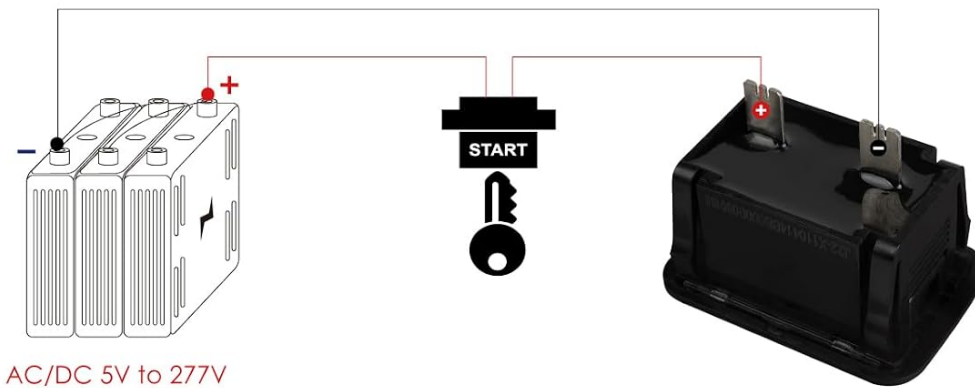
1. **Direct Connection:** Connect the two pins of the hour meter directly to the AC/DC 5V to 277V power source.
2. **Power Switch Connection:** For applications requiring the meter to activate with the machine, connect one pin to the power source and the other pin to the machine's power switch (e.g., ignition switch).

## POWER CONNECTION

### ■ Direct connection



### ■ Power switch connection



- The 2 power pins are not distinguished the positive and negative poles.

Figure 6: Wiring diagrams for direct and power switch connections.

This image illustrates two wiring methods: a direct connection where the hour meter is continuously powered by an AC/DC 5V to 277V source, and a power switch connection where the meter activates when the machine's power switch (like an ignition key) is turned on.

## 6. OPERATING INSTRUCTIONS

Once properly installed and powered, the Runleader Digital LCD Hour Meter will begin tracking hours automatically.

### 6.1 Total Hours (TOT)

The meter continuously displays the total accumulated working hours of the machine. This value is non-resettable by default and is stored even when power is off due to the internal battery.

- The display shows "HOURS" and the total accumulated time.
- The hourglass icon on the display will flash when the meter is actively recording time.
- The total hours can be programmed to a specific starting value using the optional PG600 programmer, useful for new meter installations or replacements.

## 6.2 Resettable Hours (TMR1 & TMR2)

The meter provides two resettable timers, TMR1 and TMR2, which can be used to track hours for specific tasks or maintenance intervals.

- To view TMR1 or TMR2, press the button on the front of the meter. Subsequent presses will cycle through TOT, TMR1, and TMR2.
- To reset TMR1 or TMR2, navigate to the desired timer display, then press and hold the button until the value resets to zero.

## 6.3 Programming with PG600 (Optional)

For advanced configuration, such as setting initial total hours or specific partial hour values, the Runleader PG600 programmer (sold separately) can be used.

- Refer to the PG600 programmer's manual for detailed instructions on connecting and programming the hour meter.

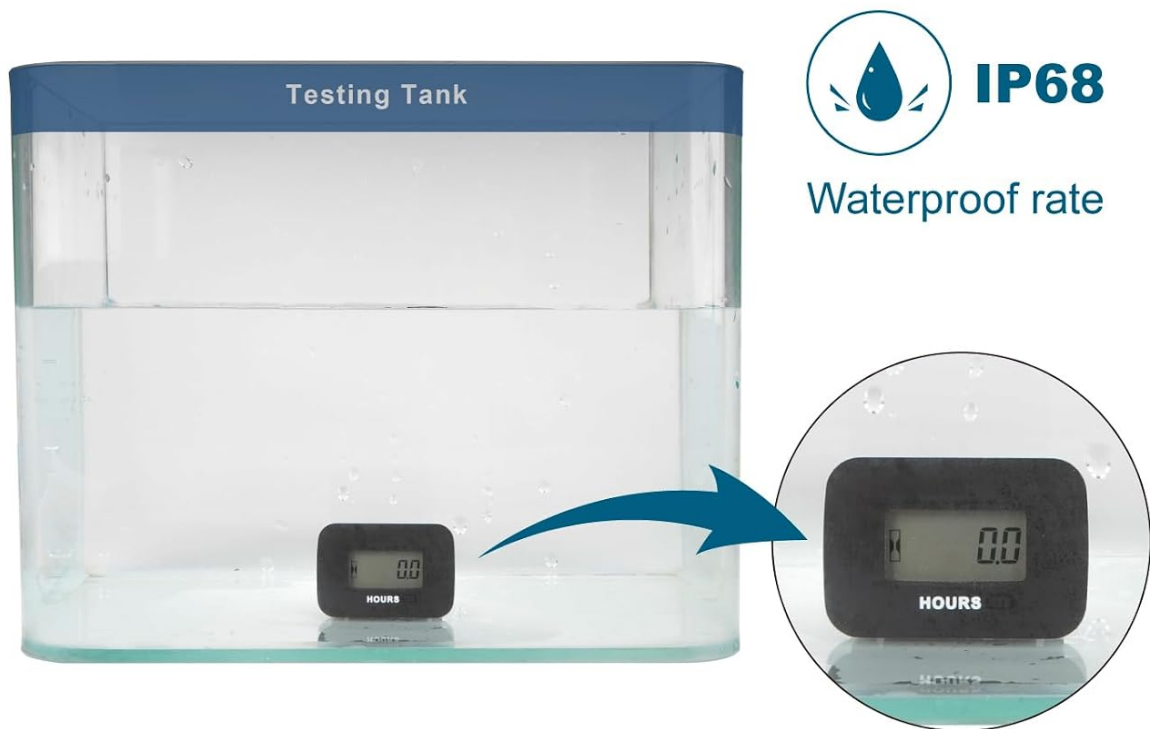
## 7. MAINTENANCE

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The Runleader Digital LCD Hour Meter is designed for minimal maintenance due to its robust construction and sealed design.

- **Cleaning:** Wipe the meter's surface with a soft, damp cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Water Resistance:** The IP68 rating ensures the meter is highly resistant to water and dust. No special maintenance is required for water protection.
- **Data Storage:** The built-in CR2050 battery ensures that all recorded data is saved automatically, even if external power is lost. The battery is designed for long-term data retention and is not user-replaceable.

# WATER RESISTANCE IP68



- It made by 100% epoxy resin craft which have strong water resistance.

Figure 7: Demonstration of the hour meter's IP68 water resistance.

This image shows the hour meter submerged in a testing tank, highlighting its IP68 waterproof rating and its ability to function normally even when fully immersed in water.

# AUTOMATIC DATA STORAGE



- The working data can be saved when power is off, the hours can be viewed at any time by built-in battery CR2050.

Figure 8: Illustration of automatic data storage with built-in CR2050 battery.

This image depicts the hour meter with an arrow pointing to a CR2050 battery, indicating that the device has a built-in battery for automatic data storage, ensuring that recorded hours are retained even when the external power supply is disconnected.

## 8. TROUBLESHOOTING

If you encounter issues with your Runleader Digital LCD Hour Meter, please refer to the following common troubleshooting steps:

| Problem                                   | Possible Cause                                                                  | Solution                                                                                                                                                                 |
|-------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Meter does not power on/display is blank. | No external power supply;<br>Incorrect wiring; Voltage outside specified range. | Verify power connections are secure and correct. Ensure the power source is within the 5V to 277V AC/DC range. Check for blown fuses in the power circuit if applicable. |

|                                             |                                                                           |                                                                                                                                                                |
|---------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hour count is not increasing.               | Meter not receiving continuous power signal; Hourglass icon not flashing. | Confirm the meter is receiving power when the machine is operating. Check wiring to ensure a consistent signal. The hourglass icon should flash when counting. |
| Resettable timers (TMR1/TMR2) do not reset. | Button not held long enough.                                              | Ensure you are pressing and holding the button for several seconds until the timer resets to zero.                                                             |

If the problem persists after attempting these solutions, please contact Runleader customer support for further assistance.

## 9. APPLICATIONS

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The Runleader Digital LCD Hour Meter is versatile and suitable for a wide range of equipment operating on AC or DC 5V to 277V power, including but not limited to:

- Lawn Mowers
- Generators
- Motorcycles
- Golf Carts
- Forklifts
- Scrubber Machines
- Boats
- Tractors
- Snowmobiles
- Other industrial and scientific equipment

# APPLICATIONS

It is applicable to AC or DC 5V to 277V equipments,such as:

- Lawn mower
- Boat
- Tractor
- Motorcycle
- Snowmobile
- Scrubber machine etc.



Figure 9: Examples of equipment where the hour meter can be used.

This image lists various applications for the hour meter, including lawn mowers, boats, tractors, motorcycles, snowmobiles, and scrubber machines, demonstrating its broad compatibility with different types of equipment.

## 10. WARRANTY AND SUPPORT

Runleader provides reliable after-sales service and technical support for its products.

- **Warranty:** This product comes with a 2-year warranty from the date of purchase. Please retain your proof of purchase for warranty claims.
- **Technical Support:** For any technical inquiries, installation assistance, or troubleshooting not covered in this manual, please contact Runleader customer service.
- **Contact Information:** Refer to the official Runleader website or the product packaging for the most current contact details.

## 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