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Runleader TS003-HM035T

Runleader Engine Temp Gauge Meter, Hour Meter and Tachometer User Manual

Brand: Runleader | Model: TS003-HM035T

PRODUCT OVERVIEW

The Runleader multifunctional meter is an essential tool for monitoring the health and performance of your gas engine. It integrates a temperature meter, tachometer, and hour meter into a single compact device, providing critical data at a glance. Designed for durability, it features a replaceable battery and a high waterproof rating, making it suitable for a wide range of applications.



Image: Runleader Multifunctional Meter with included temperature sensor and signal wire.

Key Features:

- **Multifunctional Display:** Combines Temperature Meter, Tachometer, and Hour Meter.

- **Temperature Monitoring:** Measures real-time engine temperature (-20°C to +220°C / -4°F to 428°F) with programmable over-temperature alerts and resettable maximum value.
- **Tachometer:** Displays real-time RPM, programmable for different engine firing patterns for improved accuracy, with programmable RPM alerts and resettable maximum value.
- **Hour Meter:** Tracks total engine running hours (non-resettable), includes a resettable job timer for specific tasks, and provides maintenance reminders (e.g., oil change, air filter change).
- **User-Friendly Design:** Features a replaceable battery, battery capacity level display, IP67 waterproof rating, easy installation, and selectable backlight modes.

SETUP AND INSTALLATION

Proper installation is crucial for accurate readings and device longevity. Follow these steps carefully:

1. Mounting the Meter:

The meter offers two primary mounting options:



Image: Stick-on mounting using double-sided tape.

Stick-on Mounting: Use the provided double-sided tape to adhere the meter to a clean, flat surface. Ensure the surface is free of dust and grease for optimal adhesion.

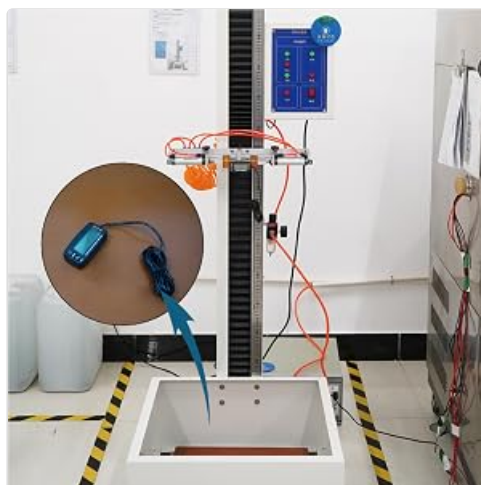


Image: Screw-on mounting using bolts and nuts.

Screw-on Mounting: Utilize the included bolts and nuts to securely fasten the meter to a desired location. Pre-drill

holes if necessary.

2. Engine Signal Connection:

The meter picks up engine signals via a signal cable. This cable is typically wrapped around the spark plug wire.

1.Engine signal connection



2.Power Connection

■ Stick-on mounting



■ Screw-on mounting



Image: Engine signal connection by wrapping the signal wire around the spark plug cable.

Wrap the signal cable around the spark plug wire of your engine. The number of wraps may vary depending on the engine type and desired signal strength. Ensure a secure connection to prevent signal loss.

3. Temperature Sensor Connection:

Connect the temperature sensor to the designated port on the meter. The sensor is designed to measure the real-time temperature of the engine, often placed near the radiator or engine block. Ensure the sensor is securely attached and in good contact with the surface to be measured.

OPERATING INSTRUCTIONS

The Runleader meter provides various functions accessible via its buttons. Familiarize yourself with the display modes and settings.

Temperature Measurement:

The meter displays the engine's real-time temperature. It can also record the maximum temperature reached and alert you if a pre-set temperature threshold is exceeded.

ENGINE TEMPERATURE MEASUREMENT



■ REAL-TIME TEMPERATURE

Help to measure the real-time temperature for engine oil when the probe sensor connect correctly.



■ MAX TEMPERATURE

Display the maximum temperature value during historic measurement process.

Image: Meter showing real-time temperature (24.0°C).

Real-time Temperature: Displays the current temperature value measured by the sensor.

RPM & HOURS DISPLAY



■ REAL-TIME RPM

Display real-time RPM value when engine is on.



■ HOURS

Display total running hours when engine is off.
You also can view a partial hours (JOB) during a single working period.

Image: Meter showing maximum recorded temperature (80.0°C).

Max Temperature: Records and displays the highest temperature value during operation. This value can be reset.

Over-Temperature Alert: You can program a maximum temperature threshold. If the engine temperature exceeds this value, the meter will provide a visual alert (e.g., red backlight).

RPM & Hours Display:

Monitor engine revolutions per minute (RPM) and total operating hours.

SVC MAINTENANCE TIMER



- It perform an regular maintenance task by countdown,advise you the arrival time.

Image: Meter showing real-time RPM (4500 RPM).

Real-time RPM: Displays the current engine RPM when the engine is running. The accuracy can be improved by programming the correct engine firing pattern.

GREEN & RED BACKLIGHTS DISPLAY

■ GREEN BACKLIGHT

The programmable green backlight by default, it can be set as 3 modes: sleeping, always on and always off.



Sleeping mode



Always on mode



Always off mode

■ RED BACKLIGHT

The green backlight will turn red when maintenance is arrived and alert the RPM/TEMP exceed.



Maintenance reminder



RPM Alert



TEMP Alert

Image: Meter showing total operating hours (0.0 TOT).

Total Hours (TOT): Displays the cumulative running hours of the engine. This value is non-resettable.

Job Timer (JOB): A resettable timer that measures the duration of a particular work session.

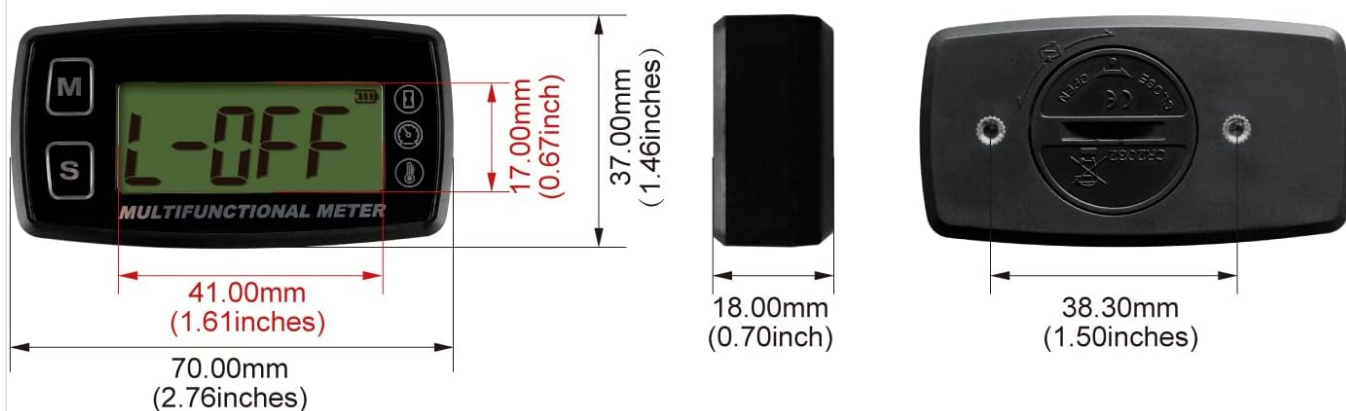
RPM Alert: Similar to temperature, you can set an RPM threshold. The meter will alert you if the engine RPM exceeds this programmed limit.

Backlight Display:

The meter features a green backlight for normal operation and a red backlight for alerts.

DIMENSIONS & ACCESSORIES

■ Dimensions



■ Accessories



Box*1



Bolt*2



Flat washer*2



Cable tie*2



Double-sided tape



Nut*4



Battery CR2032



TEMP sensor PT100



User manual

Image: Green backlight modes (Sleeping, Always On, Always Off).

Green Backlight: The default programmable green backlight can be set to three modes: sleeping (L-AVE), always on (L-ON), and always off (L-OFF).

FAVORABLE WATER RESISTANCE



IP65

Waterproof rate



Image: Red backlight indicating alerts (Maintenance, RPM Alert, TEMP Alert).

Red Backlight: The backlight will turn red to indicate a maintenance reminder or if the RPM/temperature exceeds the programmed alert thresholds.

MAINTENANCE

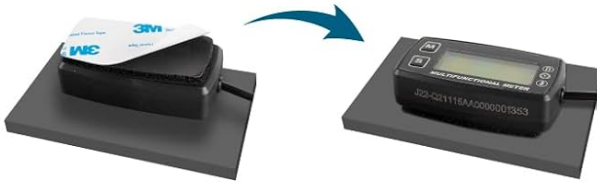
Regular maintenance ensures the longevity and accuracy of your Runleader meter.

SVC Maintenance Timer:

The meter includes a Service (SVC) maintenance reminder. This feature allows you to set a countdown timer for routine maintenance tasks.

Product mounting

■ Stick-on mounting



■ Screw-on mounting



■ Replaceable battery



- It is included built-in replaceable battery CR2032 with long lifetime.

Signal pickup

■ Engine signal pickup



- It can works on 13 types of gas engine:
2 stroke 1/2/3/4/6 cylinders.
4 stroke 1/2/3/4/5/6/12/16 cylinders.

Image: Meter showing SVC maintenance timer (20.0 hours remaining).

When the countdown reaches zero, the meter will alert you that maintenance is due. This helps in scheduling timely service for your engine, such as oil changes or air filter replacements.

Battery Replacement:

The meter is powered by a replaceable CR2032 lithium metal battery, ensuring long-term usability.

APPLICATION

It is applicable to gas engine powered equipments,such as:

- Lawn mower
- Generator
- Motorcycle
- Boat
- Chainsaw
- ATV



Image: View of the replaceable CR2032 battery compartment on the back of the meter.

When the battery capacity level display indicates low power, replace the CR2032 battery by opening the battery compartment on the back of the unit. Ensure correct polarity when inserting the new battery.

TROUBLESHOOTING

If you encounter issues with your Runleader meter, consider the following common troubleshooting steps:

- **No Display/Low Battery:** Check the battery capacity level. If low, replace the CR2032 battery. Ensure the battery is inserted with correct polarity.

- **Inaccurate RPM Readings:** Verify that the signal wire is securely wrapped around the spark plug wire. Ensure the correct engine firing pattern is programmed in the meter's settings.
- **Inaccurate Temperature Readings:** Check that the temperature sensor is properly connected to the meter and is in good contact with the surface being measured. Ensure the sensor is not damaged.
- **No Readings:** Confirm all connections (signal wire, temperature sensor) are secure. Ensure the engine is running for RPM and temperature readings.
- **Display Not Responding:** Try resetting the device if possible (refer to the full user manual for specific reset procedures if available).
- **Water Damage:** Although the device is IP67 waterproof, ensure all covers and seals are properly closed after battery replacement or any adjustments to maintain its water resistance.

For persistent issues not resolved by these steps, please contact Runleader customer support.

PRODUCT SPECIFICATIONS

Specification	Detail
Brand	Runleader
Model Number	TS003-HM035T
Material	Acrylonitrile Butadiene Styrene (ABS)
Item Dimensions (L x W x H)	2.64 x 1.38 x 0.69 inches
Item Weight	3.88 ounces (110 Grams)
Temperature Measurement Range	-20°C to +220°C / -4°F to 428°F
Waterproof Rate	IP67
Battery Type	1 Lithium Metal (CR2032, replaceable)
UPC	713095428986

APPLICATIONS

The Runleader multifunctional meter is versatile and applicable to a wide range of gas engine-powered equipment. It is compatible with 2-stroke (1/2/3/4/6 cylinders) and 4-stroke (1/2/3/4/5/6/12/16 cylinders) engines.



Image: Visual representation of common applications for the meter.

Common Applications Include:

- Lawn Mowers
- Generators
- Motorcycles
- Boats (Outboard Marine)
- Chainsaws
- ATVs (All-Terrain Vehicles)
- Garden Tractors
- Jetskis
- Snowmobiles
- Compressors

QUALITY AND CERTIFICATIONS

Runleader products undergo rigorous quality control to ensure reliability and performance.



Image: Certifications including CE, RoHS, and IP65 waterproof rating.

The Runleader meter is designed to meet high standards, including CE and RoHS compliance, and boasts an IP67

waterproof rating, ensuring durability in various environments.



REAL-TIME TEMP



MAX TEMP



TEMP ALERT



RPM



MAX RPM



ALERT RPM



HOURS



PARTIAL TIME



SVC



BACKLIGHT



IP65
WATERPROOF

Image: Overview of Runleader's facilities, highlighting R&D, manufacturing, testing, and quality control.

Our commitment to quality is reflected in our comprehensive R&D, manufacturing, and testing processes, ensuring each product delivers reliable performance.

WARRANTY AND SUPPORT

Runleader products are backed by a manufacturer's warranty. For specific warranty details, claims, or technical support, please refer to the warranty card included with your product or visit the official Runleader website.

For further assistance, you may also contact the seller directly through the platform where the product was purchased.

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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

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