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› NDNCZDHC TF03K RV Battery Monitor User Manual

## NDNCZDHC TF03K

# NDNCZDHC TF03K RV Battery Monitor User Manual

Model: TF03K

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your NDNCZDHC TF03K RV Battery Monitor. This device is designed to accurately measure and display battery voltage, current, and capacity percentage, ensuring reliable monitoring of your battery system.

## 2. PRODUCT OVERVIEW

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### 2.1 Key Features

- Clear display for easy reading of battery data.
- Compact and waterproof design, suitable for RV and marine applications.
- Multiple functions: voltage meter switching, battery capacity percentage display, backlight control, sleep mode, and battery type selection.
- Reverse polarity protection for safe operation.
- Wide voltage range: 8-120V.
- Includes shielded wire for easy and secure connection.

### 2.2 Package Contents

Upon opening the package, please verify that all items listed below are present and in good condition:

- 1 x TF03K Battery Monitor Unit
- 1 x Shielded Wire
- 1 x Sampler (Shunt)
- 1 x User Manual (this document)



Image 1: Contents of the TF03K package, including the monitor, sampler, and shielded wire.

### 3. SPECIFICATIONS

Parameter	Value
Model	TF03K
Voltage Range	8-120V
Current (Sampler)	50A (0-75A)
Material	Environmentally Friendly ABS, Metal
Color	Black
Item Weight	0.2 Kilograms

### 4. SETUP AND INSTALLATION

Proper installation is crucial for accurate readings and safe operation. Please follow these steps carefully.

## 4.1 Safety Precautions

- Always disconnect the battery power before beginning installation.
- Wear appropriate personal protective equipment (PPE), such as safety glasses and gloves.
- Ensure all connections are secure to prevent loose contacts and potential hazards.
- The device features reverse polarity protection, but always double-check wiring to prevent damage to other components.

## 4.2 Wiring Diagram and Connection

The TF03K battery monitor requires connection via a sampler (shunt) and a shielded wire. The sampler must be connected in series with the negative circuit of the battery pack.

1. **Connect the Sampler:** Install the 50A sampler (shunt) in the negative line of your battery system. Ensure all current flowing from the battery passes through the sampler. The sampler has terminals labeled B- (to battery negative) and P- (to load negative).
2. **Connect the Shielded Wire:** Connect one end of the shielded wire to the sampler's small terminal block (B+, B-, G, RS+, RS-).
3. **Connect to Monitor:** Connect the other end of the shielded wire to the corresponding port on the back of the TF03K battery monitor unit.
4. **Power Connection:** The monitor draws power through the shielded wire connection to the battery via the sampler. No separate power connection is typically needed for the monitor itself.



*Image 2: Rear view of the TF03K monitor, illustrating the shielded wire connection port.*



Image 3: The 50A sampler (shunt) with B- and P- terminals, and the small terminal block for the shielded wire connection.

**Important:** Ensure the sampler is correctly rated for your system's maximum current. The provided sampler is 50A. Using a sampler of different specifications or mixing meters is not recommended.

## 5. OPERATING INSTRUCTIONS

The TF03K monitor features a clear display and intuitive buttons for easy operation.



Image 4: Front view of the TF03K monitor, showing the display and control buttons.

## 5.1 Basic Display Information

Once powered on, the monitor will display key battery parameters, typically including:

- **Voltage (V):** Current battery voltage.
- **Current (A):** Real-time current flow (charging or discharging).
- **Capacity Percentage (%):** Remaining battery capacity as a percentage.

## 5.2 Button Functions

The monitor typically has several buttons (e.g., UP, DOWN, OK, and possibly a menu/back button) to navigate and adjust settings.

- **Voltage Meter Switching:** Use the navigation buttons to cycle through different display modes, which may include voltage-only or other combined views.
- **Backlight Control:** A dedicated button or a combination of buttons may control the backlight, allowing you to turn it on or off to conserve power or adjust visibility.
- **Sleeping Mode:** The monitor may have a sleep mode to reduce power consumption. Refer to the on-screen prompts or specific button combinations to activate/deactivate.

- **Battery Type Selection:** For initial setup or recalibration, you may need to select the battery type (e.g., Lead-Acid, Lithium-ion) to ensure accurate capacity calculations. Access this setting via the menu or specific button presses.
- **OK Button:** Typically used to confirm selections or enter menu options.

Refer to the on-screen menu and prompts for specific navigation and setting adjustments.

## 6. MAINTENANCE

To ensure the longevity and accurate performance of your TF03K battery monitor, follow these maintenance guidelines:

- **Cleaning:** Wipe the display and casing with a soft, dry cloth. Avoid using abrasive cleaners or solvents, which can damage the waterproof surface and display.
- **Connections:** Periodically check all wiring connections to ensure they remain tight and free from corrosion.
- **Environmental Conditions:** While waterproof, avoid prolonged exposure to extreme temperatures or direct sunlight, which can affect the device's lifespan.
- **Storage:** If storing the monitor for an extended period, ensure it is disconnected from the battery system and stored in a cool, dry place.

## 7. TROUBLESHOOTING

If you encounter issues with your TF03K battery monitor, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Monitor does not power on.	No power supply; loose connection; battery voltage outside range.	Check all wiring connections, especially the shielded wire to the sampler and battery. Ensure battery voltage is within 8-120V.
Inaccurate readings (voltage, current, capacity).	Incorrect battery type setting; loose sampler connection; faulty sampler.	Verify the correct battery type is selected in the monitor settings. Check sampler connections. Ensure all current flows through the sampler.
Display is dim or flickering.	Low battery voltage; backlight setting.	Check battery voltage. Adjust backlight settings via the monitor buttons.
No current reading.	Sampler not correctly installed in series; faulty sampler or shielded wire.	Ensure the sampler is installed in the negative line of the battery system and all current passes through it. Check shielded wire for damage.

If the problem persists after attempting these solutions, please contact customer support.

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided at the time of purchase or contact NDNCZDHC customer service. Keep your purchase receipt as proof of purchase.

For further assistance, you may visit the NDNCZDHC Store on Amazon.

