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› TOOLTOP KM110F WiFi Remote RV Coulomb Meter User Manual

## TOOLTOP KM110F

# TOOLTOP KM110F WiFi Remote RV Coulomb Meter User Manual

Model: KM110F

## 1. INTRODUCTION

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The TOOLTOP KM110F WiFi Remote RV Coulomb Meter is a sophisticated battery monitoring device designed for precise measurement and real-time display of battery parameters. It supports various battery types, including ternary lithium, lead-acid, and lithium phosphate batteries, and features bidirectional current detection. With WiFi connectivity, users can remotely monitor and control the device via a mobile application, making it suitable for RVs, electric vehicles, solar systems, and other applications requiring accurate battery management.

# Compatible with Multiple Batteries



**Image:** The KM110F is compatible with a wide range of battery types and applications, including RVs, electric vehicles, and solar power systems.

## 2. SAFETY INFORMATION

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- Read all instructions carefully before installation and operation.
- Ensure all connections are correct and secure to prevent damage to the device or battery.
- Do not expose the device to extreme temperatures, moisture, or corrosive environments.
- Only use the specified current shunt for accurate measurements and safe operation.
- Disconnect power before making or changing any wiring connections.
- Keep out of reach of children.

## 3. PACKAGE CONTENTS

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Verify that all items listed below are present in your package:

1. Display Unit (1)
2. 5m Communication Cable (1)
3. 1m Red Positive Electrode Wire (1)
4. Quick Guide (1)
5. Sampler (Shunt) (1)



**Image:** The complete shipping list for the WiFi Battery Coulometer, showing all included components.

## 4. PRODUCT OVERVIEW

The KM110F Coulomb Meter consists of a display unit and a sampler (shunt). The display provides real-time data, while the sampler measures current and voltage. The device offers a clear interface for monitoring battery status.

### 4.1 Display Unit

The display unit shows critical battery information such as voltage, current, power, remaining capacity, and estimated

charge/discharge time. It features intuitive controls for navigation and settings.



**Image:** The KM110F display provides real-time data including voltage, current, power, remaining capacity, and estimated time.

## 4.2 Sampler (Shunt)

The sampler is responsible for measuring the current flowing in and out of the battery. The KM110F uses a 100A sampler. Ensure the correct sampler is used for your system's current requirements.

# KM Display



KM105F

50A Sampler



KM140F

400A Sampler



KM110F

100A Sampler



KM160F

600A Sampler

**Image:** Overview of the KM series display and various sampler models, including the KM110F 100A sampler.

## 5. SETUP

### 5.1 Wiring Diagram

Proper wiring is crucial for accurate measurement and safe operation. Refer to the quick guide for a detailed wiring diagram. Generally, the sampler is installed in series with the negative terminal of the battery, and the display unit connects to the sampler via the communication cable.

**Important:** Ensure all power is disconnected before performing any wiring. Connect the red positive electrode wire to the positive terminal of the battery and the corresponding input on the sampler.

### 5.2 Mobile App Installation and Connection

The KM110F supports mobile app control via WiFi and Bluetooth. Download the "Junce Home" app from your device's app store.

- # Multiple Control modes

More flexible and convenient to use

**Mobile APP control**

  1. Support Bluetooth connection;
  2. Support Wifi connection;
  3. Remote connection is supported.

**Monitor control**

  4. Display control

And display data

### 5.3 Initial Configuration

After connecting, configure the following parameters in the device settings (either via the display unit or the mobile app):

After connecting, configure the following parameters in the device settings (either via the display unit or the mobile app):

- **Battery Type:** Select the appropriate battery chemistry (e.g., Lead-Acid, Lithium).
- **Rated Capacity:** Enter the total capacity of your battery bank in Ampere-hours (Ah).
- **Full Voltage:** Set the voltage at which the battery is considered fully charged.
- **Empty Voltage:** Set the voltage at which the battery is considered empty.

- **Over-voltage/Under-voltage Protection:** Configure desired protection thresholds.
- **Over-current Protection:** Set the maximum allowable current.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Understanding the Display

The display unit provides real-time information at a glance:

- **Voltage (V):** Current battery voltage.
- **Current (A):** Current flowing into (charging) or out of (discharging) the battery. The device automatically detects direction.
- **Power (W):** Instantaneous power consumption or generation.
- **Remaining Capacity (%):** Percentage of battery capacity remaining.
- **Estimated Time:** Estimated time until full or empty based on current usage.
- **Capacity (Ah):** Total Ampere-hours consumed or charged.

# Remote Real-Time Monitoring



## Complete Control at Your “Fingertips”

Say goodbye to traditional close-range monitoring methods. Our WiFi Coulometer supports remote real-time monitoring functions. Whether it's for outdoor adventures, home electricity use, or other scenarios, you can easily manage the battery situation, making power usage worry-free.

**Image:** Remote real-time monitoring is possible through the mobile app, mirroring the display unit's information and showing dynamic charging effects.

## 6.2 Using the Mobile App

The "Junce Home" app offers enhanced control and monitoring features:

- **Real-time Data:** View all parameters displayed on the physical unit, including dynamic charging/discharging effects.
- **Comprehensive Settings:** Adjust all device parameters, including battery type, capacity, protection thresholds, and display preferences.
- **Data Analysis:** Access historical data and trends for better battery management.
- **Remote Control:** Manage settings and monitor your battery from anywhere with an internet connection (via WiFi).

More flexible and convenient to use

# Powerful mobile APP



## Design

In order to provide a better user experience, we are brand new. The APP interface of coulometer is designed. The interface of this APP is not only beautiful and has rich functions. More importantly, we have added the dynamic effect of charging to make you more straight. To understand the charging and discharging status of the battery, add APP. Sense of flexibility.



## Full Display

Through the APP, you can view the battery voltage, charge and discharge current, key data such as power, remaining capacity, and estimated time. These data will help you better understand the working condition of the battery and make corresponding decisions.

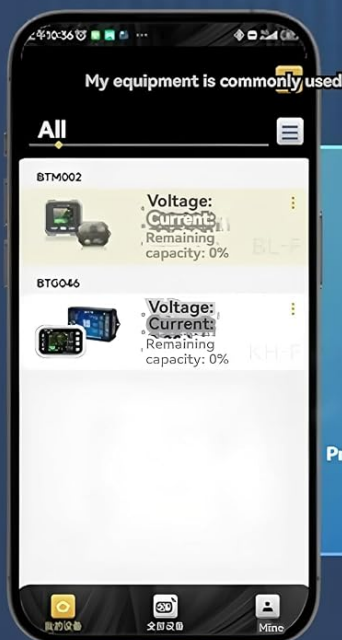
**Image:** The mobile app provides a powerful interface for monitoring and managing the coulometer, offering a full display of data and comprehensive settings.



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## Comprehensive settings

Not only can you view data, you can also use the APP to view Coulomb  
Perform comprehensive function settings. Adjust from simple interface style to complex  
Miscellaneous data analysis and parameter setting, APP provides you with one-stop  
The solution.



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## Intelligent Platform

Intelligent instrument platform, yes  
A fully integrated solution dedicated to providing stability to users around the world  
Fixed and reliable intelligent instrument service. The platform uses KM series Coulomb  
Considering JUNCTEK products as the core, combined with mobile APP control,  
Provide you with an unprecedented intelligent experience.

**Image:** The app allows for comprehensive settings adjustments, from interface styles to data analysis and parameter configurations.

## 7. MAINTENANCE

- **Cleaning:** Wipe the display unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Software Updates:** Check the "Junce Home" app regularly for any available firmware updates for the device to ensure optimal performance and new features.

## 8. TROUBLESHOOTING

| Problem                  | Possible Cause                     | Solution                                                                                                              |
|--------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Display not powering on. | No power supply; incorrect wiring. | Check power connections to the display unit and ensure the battery is charged. Verify wiring according to the manual. |

| Problem                           | Possible Cause                                                       | Solution                                                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inaccurate readings.              | Incorrect battery capacity setting; loose connections; faulty shunt. | Verify the rated capacity setting in the app/device. Check all wiring for secure connections. Ensure the shunt is correctly installed.                |
| App cannot connect to the device. | WiFi/Bluetooth off; device out of range; incorrect app settings.     | Ensure WiFi/Bluetooth is enabled on both the device and your phone. Move closer to the device. Restart the app and the device. Check app permissions. |
| No current reading.               | Shunt not connected or faulty; incorrect wiring through shunt.       | Ensure the sampler (shunt) is correctly wired in series with the negative battery terminal. Check communication cable between display and shunt.      |

## 9. SPECIFICATIONS

| Feature                  | Detail                                                 |
|--------------------------|--------------------------------------------------------|
| Model                    | KM110F                                                 |
| Current Range (KM110F)   | 100A (with 100A sampler)                               |
| Measurement Accuracy     | 0.5%                                                   |
| Connectivity             | WiFi, Bluetooth (via mobile app)                       |
| Compatible Battery Types | Ternary Lithium, Lead-Acid, Lithium Phosphate, etc.    |
| Material                 | Acrylonitrile Butadiene Styrene (ABS)                  |
| Power Source             | Battery Powered (requires external battery connection) |
| Item Weight              | 1 kg                                                   |
| Dimensions               | 20 x 15 x 10 cm (Parcel Dimensions)                    |
| Certifications           | CE, RoHS                                               |

## 10. WARRANTY AND SUPPORT

TOOLTOP products are designed for reliability and performance. For specific warranty details, please refer to the warranty card included with your product or contact TOOLTOP customer support. If you encounter any issues or have questions regarding the KM110F, please reach out to our support team through the contact information provided in your product packaging or on the official TOOLTOP website.

**EU Spare Part Availability Duration:** 1 Year

