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TKXEC 2303C

USB C Tester Power Meter User Manual

Model: TKXEC 2303C

1. INTRODUCTION

The TKXEC USB C Tester Power Meter (Model 2303C) is a versatile device designed for monitoring various electrical parameters of USB Type-C connections. It provides real-time data on voltage, current, power, capacity, electrical energy, timing, and CPU temperature. This device supports multiple fast charging protocols, making it an essential tool for testing chargers, rechargeable batteries, and other charging equipment.

Its compact design features a durable CNC metal case, offering dustproof and drop-proof protection. The 1.06-inch TFT high-definition display ensures clear visibility of data, and its full interface compatibility allows for broad application.



Figure 1: TKXEC USB C Tester Power Meter (Model 2303C)

This image shows the compact USB C Tester with its display showing various electrical readings like voltage, current, and power. The device has a USB-C male connector on one end and a USB-C female port on the other.

2. SETUP

Setting up the TKXEC USB C Tester is straightforward. It operates as an inline device between your power source (charger, power bank) and the device you wish to test (phone, laptop, etc.).

1. **Connect to Power Source:** Insert the USB-C male connector of the tester into the USB-C output port of your charger or power bank.
2. **Connect to Device:** Plug the USB-C cable from your device (e.g., smartphone, tablet, laptop) into the USB-C female port on the tester.
3. **Power On:** The tester will automatically power on and display real-time data once a connection is established and power flows through it.

Computer Charging Capacity Recording

Supports power down to save data



(A) Current
0-12A

(V) Voltage
4-30V

Figure 2: Connecting the tester for charging capacity recording.

This image illustrates the USB C Tester connected inline between a USB-C charger and a laptop, demonstrating its use for monitoring charging data and recording capacity.

3. OPERATING INSTRUCTIONS

The TKXEC USB C Tester offers multiple display modes and functions accessible via its single button.

3.1 Display Modes

The tester features three main display pages. You can cycle through these pages by briefly pressing the button located on the back of the device.



Figure 3: Cycling through display pages.

This image demonstrates the three different display pages available on the USB C Tester, showing how a single button press allows users to switch between detailed numerical data, a simplified view, and a graphical representation of voltage and current over time.

3.2 Screen Rotation

To rotate the screen display by 180 degrees, quickly double-tap the button on the back of the device. This is useful for adjusting the viewing orientation based on how the tester is plugged in.

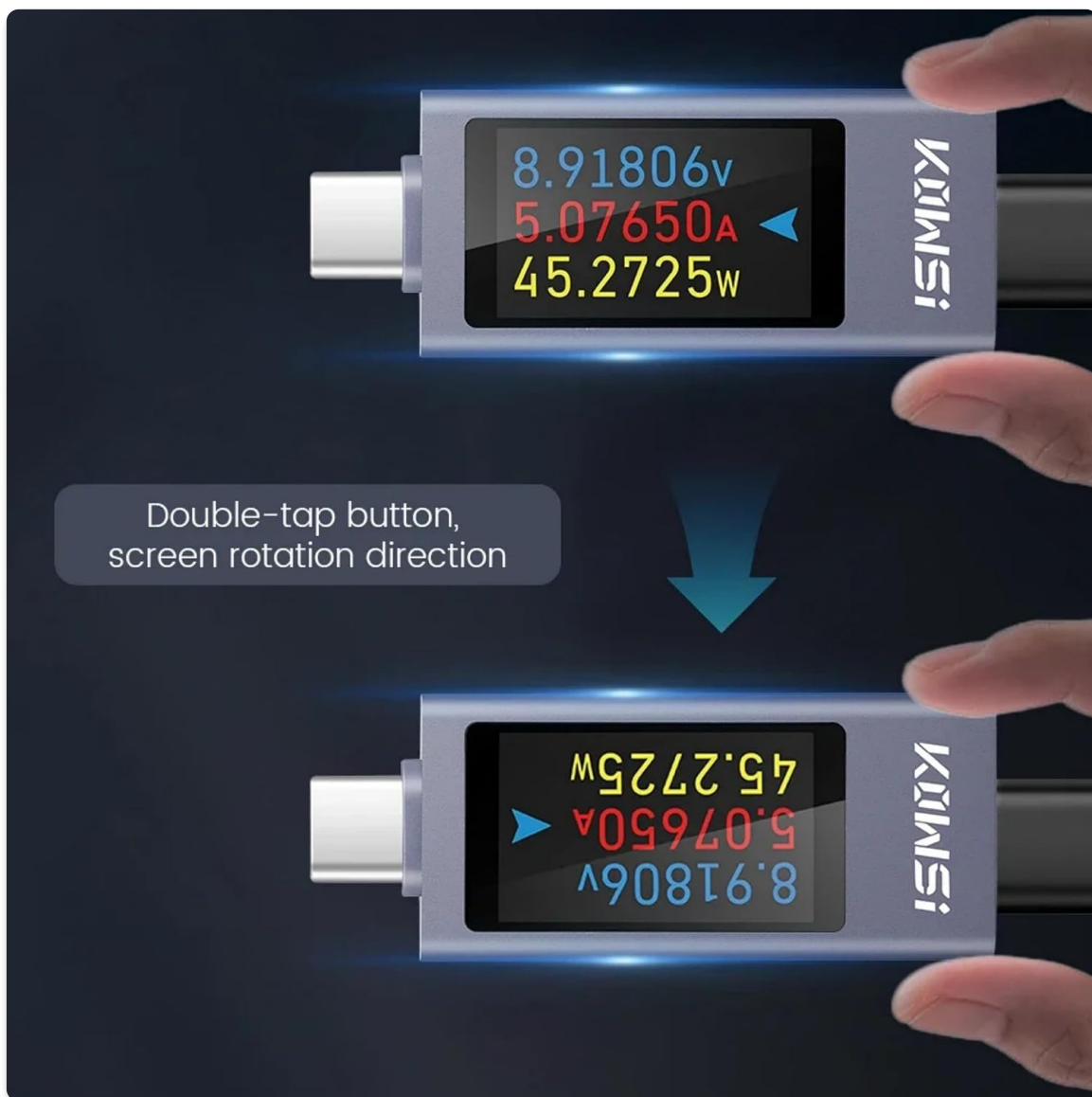


Figure 4: Double-tap button for screen rotation.

This image shows the USB C Tester's display rotating 180 degrees after a double-tap on its button, illustrating the convenience for different viewing angles.

3.3 Understanding the Display

The tester provides comprehensive data. Below are explanations for the various parameters displayed on the main screen and the graph screen.

Main Display Page (Detailed View)



Figure 5: Main Display Page with Data Points.

This image displays the main screen of the USB C Tester, highlighting various data points with numbered indicators for detailed analysis of charging parameters.



Figure 6: Legend for Main Display Data Points.

This image provides a legend explaining the numbered data points shown on the USB C Tester's main display, detailing what each measurement (voltage, current, power, capacity, etc.) represents.

- **1. Voltage (4-30V):** Real-time voltage reading.
- **2. Current (0-12A):** Real-time current reading.
- **3. Power (0-360W):** Real-time power consumption (Voltage x Current).

- **4. Data Interface Voltage:** Voltage on the data lines (D+/D-).
- **5. Capacity (0-666666mAh):** Accumulated charge capacity.
- **6. Electrical Energy (0-999999Wh):** Accumulated electrical energy.
- **7. Timing (0-99 hours):** Duration of the test.
- **8. Current Direction Marker:** Indicates the direction of current flow.
- **9. Record a Single Top Walkthrough:** (This description is unclear from the source, likely refers to peak value recording).
- **10. Record the Single Maximum Current:** Displays the highest current recorded during the test.
- **11. Record the Single Maximum Voltage:** Displays the highest voltage recorded during the test.
- **12. CPU Temperature:** Internal temperature of the tester's processor.
- **13. Current Direction Marker:** (Duplicate, likely refers to another indicator).
- **14. Page Curve Time:** (Relevant for graph page).
- **15. Voltage per Cell:** (Relevant for graph page).
- **16. Current per Cell:** (Relevant for graph page).

Note: 12A is the peak current. Do not use it for a long time.

Graph Display Page



Figure 7: Graph Display Page.

This image shows the graph display mode of the USB C Tester, providing a visual representation of voltage and current fluctuations over time, along with key numerical readings.

This page displays a real-time curve of voltage and current, allowing for visual analysis of stability and fluctuations during charging. Key parameters like current, voltage, and power are also shown numerically.

3.4 Fast Charging Protocol Support

The tester supports a wide range of fast charging protocols, including but not limited to:

- PD 2.0 / 3.0
- QC 2.0 / 3.0
- FCP
- SCP
- AFC
- PE
- DASH
- VOOC
- Super VOOC

3.5 Data Saving

The device supports power-down data saving, meaning accumulated capacity and energy data are retained even after the tester is disconnected from power.

3.6 Bidirectional Current Test

The tester is capable of bidirectional current testing, allowing it to measure current flow in both directions, which is useful for devices that can both charge and be charged (e.g., power banks, some laptops).

Bidirectional current Test Functions

Visible charging speed

A Current
0-12A

V Voltage
4-30V



Figure 8: Bidirectional Current Test Function.

This image illustrates the bidirectional current test capability of the USB C Tester, showing it connected to a smartphone and charger, indicating visible charging speed and current flow direction.

4. MAINTENANCE

To ensure the longevity and accurate performance of your TKXEC USB C Tester, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the device. Avoid using liquid cleaners or solvents, as they may damage the display or internal components.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** While the device features a durable metal case, avoid dropping it or subjecting it to strong impacts to prevent internal damage.
- **Connector Care:** Keep the USB-C connectors free from dust and debris. Avoid forcing connections, which can damage the ports.

CNC metal case

Dustproof and drop-proof

Dustproof and drop-proof

(A) Current
0-12A

(V) Voltage
4-30V



Figure 9: Durable CNC Metal Case.

This image highlights the robust CNC metal casing of the USB C Tester, emphasizing its dustproof and drop-proof qualities for enhanced durability.

5. TROUBLESHOOTING

If you encounter issues with your TKXEC USB C Tester, refer to the following common problems and solutions:

- **No Display/No Power:**

- Ensure the tester is properly connected to a working power source and a device.
- Verify that the power source (charger/power bank) is active and providing power.
- Check the USB-C cables for damage or improper connection.

- **Inaccurate Readings:**

- Ensure all connections are secure and free of debris.
- Test with different cables and devices to rule out external factors.
- The device is designed for general testing; for highly precise measurements, professional

calibration equipment may be required.

• **Screen Not Rotating:**

- Ensure you are performing a quick double-tap on the button. A single press changes pages, not rotates the screen.

• **Device Malfunction After Connection:**

- **Important Safety Note:** While this tester is designed for compatibility, always ensure that the voltage and current ratings of your charger and device are within the safe operating limits of the tester (4-30V, 0-12A). In rare cases, incompatible or faulty equipment can lead to unexpected behavior or damage to connected devices. If you suspect an issue, immediately disconnect the tester and the power source.

6. SPECIFICATIONS

Feature	Specification
Product Name	TYPE-C Tester
Model Number	2303C
Brand	TKXEC
Input/Output Voltage Range	DC 4-30V
Current Range	0-12A
Power Range	0-360W
Display	1.06 inch TFT High-Definition Display
Dimensions (L x W x H)	2.09 x 0.79 x 0.35 inches
Net Weight	Approximately 0.025 pounds (0.4 ounces)
Supported Protocols	PD 2.0/3.0, QC 2.0/3.0, FCP, SCP, AFC, PE, DASH, VOOC, Super VOOC
Data Storage	Power-down save data supported
Case Material	CNC Metal (Dustproof and Drop-proof)
UPC	016392819342

Figure 10: Key Product Specifications.

This image provides a summary of the product's name, model number, physical size, and net weight.

7. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the product packaging or contact TKXEC customer service directly through their official channels. Keep your purchase receipt for warranty claims.

For further assistance or technical inquiries, please visit the TKXEC official website or contact their support team.

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