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## diymore U-18

# diymore U-18 USB Tester Meter User Manual

Model: U-18

## 1. INTRODUCTION

The diymore U-18 USB Tester Meter is a versatile diagnostic tool designed for monitoring and analyzing USB power delivery. It provides real-time data on voltage, current, power, capacity, and supports various fast charging protocols. This manual provides instructions for the proper setup, operation, and maintenance of your device.

## 2. SAFETY INFORMATION

- Do not expose the device to moisture or extreme temperatures.
- Avoid dropping or subjecting the device to strong impacts.
- Do not attempt to disassemble or modify the device. Unauthorized modifications may void the warranty and pose safety risks.
- Ensure connections are secure before applying power.
- Operate the device within its specified voltage and current limits to prevent damage.

## 3. PRODUCT OVERVIEW

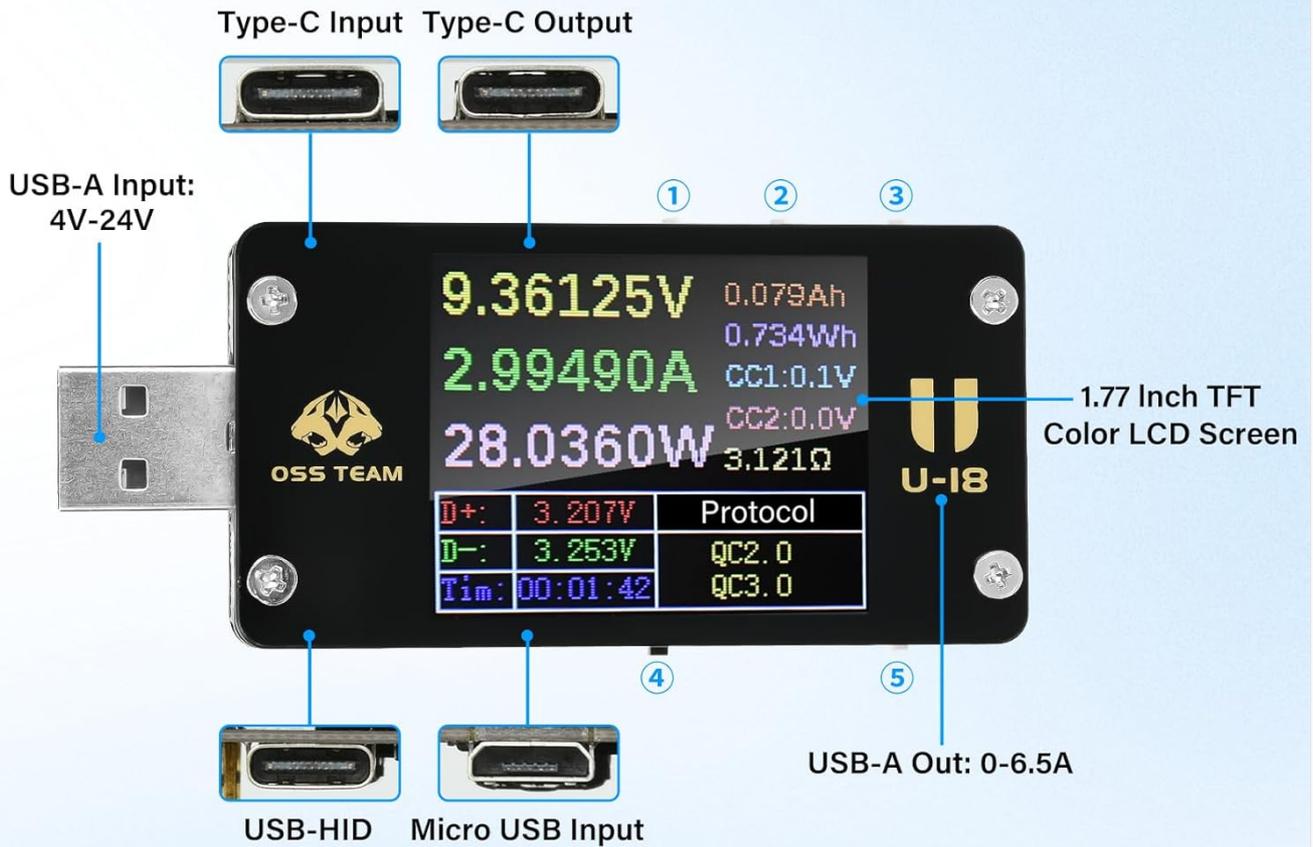
The diymore U-18 features a 1.77-inch TFT color LCD screen for clear data display and multiple input/output ports for broad compatibility.

# Multi-function USB tester

- Cable internal resistance measurement
- 1.77-inch TFT Display
- PD Fast charging
- 0-6.5A Current
- Data storage
- QC 2.0/3.0
- DC 4-24V



Figure 3.1: diymore U-18 USB Tester Meter showing its various ports and functionalities.



- ① ENTER Key
- ② KEY - Key
- ③ KEY + Key (Long press to toggle display orientation)
- ④ PD Communication Switch
- ⑤ BACK Key

Figure 3.2: Detailed diagram illustrating the input/output ports and control keys of the U-18 tester.

## Key Features:

- **1.77-inch TFT Screen:** High-definition display for real-time monitoring of charging data.
- **Multi-functional Interfaces:** Seven distinct display interfaces for various data presentations.
- **Fast Charging Protocol Support:** Compatible with PD, QC2.0, QC3.0, and other protocols.
- **Comprehensive Data Display:** Shows voltage, current, power, energy, capacity, and fast charging protocol status.
- **Cable Internal Resistance Measurement:** Utilizes the voltage drop method to calculate cable resistance.

## 4. SETUP

### 4.1 What's in the Box

- diymore U-18 USB Tester Meter

## 4.2 Initial Connection

To begin using the U-18 USB Tester Meter, connect it inline between your power source (charger, power bank) and the device you wish to test.

1. Connect the USB-A Input (4V-24V) or Type-C Input port of the U-18 to your power source.
2. Connect the USB-A Out (0-6.5A) or Type-C Output port of the U-18 to your device (e.g., smartphone, tablet, laptop).
3. The display will automatically power on and begin showing real-time measurement data.

## 5. OPERATING INSTRUCTIONS

### 5.1 Basic Measurement Display

Upon connection, the tester will display key parameters on its 1.77-inch TFT screen.



## Multiple Test Data Indicates

Comprehensive testing of various rechargeable digital products, meeting diverse testing requirements

Figure 5.1: The tester's display showing voltage, current, power, energy, capacity, and fast charging protocol information.

- **Voltage Display:** Shows the real-time voltage (V).
- **Current Display:** Shows the real-time current (A).
- **Power Display:** Shows the real-time power (W).
- **Energy Statistics:** Accumulates total energy consumed (Wh).
- **Capacity Statistics:** Accumulates total charge capacity (Ah).
- **Fast Charging Protocol Display:** Indicates detected fast charging protocols (e.g., PD, QC2.0, QC3.0).

## 5.2 Navigating Display Interfaces

The U-18 offers 7 types of display interfaces. Use the **KEY -** and **KEY +** buttons (labeled 2 and 3 in Figure 3.2) to cycle through different display modes and settings.

# Multi-Functional Interface Settings



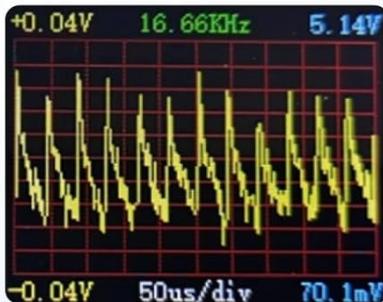
Setting Interfac



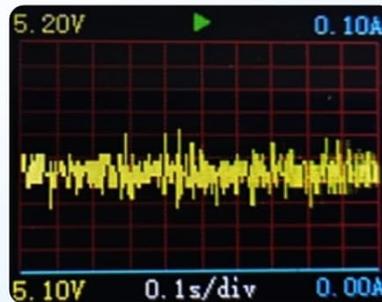
Simple Interface Mode



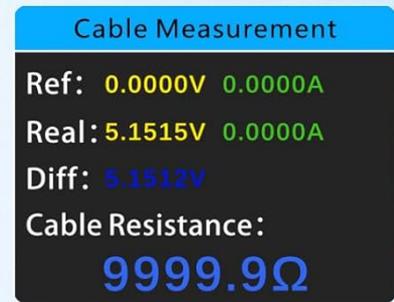
Settings Interface



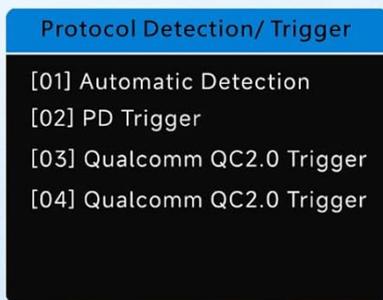
Ripple/Voltage/Current Curve Interface 1



Ripple/Voltage/Current Curve Interface 2



Cable Internal Resistance Measurement Interface



Fast Charging Protocol Testing



Protocol Trigger Interface



Figure 5.2: Examples of various display interfaces, including system settings, simple measurement, detailed settings, ripple measurement, and protocol detection.

## 5.3 Cable Internal Resistance Measurement

This feature allows you to assess the quality of your USB cables.

# Wire Internal Resistance Measurement

Employing the voltage drop method to measure wire internal resistance, the system automatically calculates cable resistance following connection.



Figure 5.3: The tester connected to a power source and device, displaying cable resistance measurement.

1. Connect the U-18 to a power source.
2. Navigate to the "Cable Measurement" interface (refer to Figure 5.2).
3. Connect the cable you wish to test between the U-18's output and a load (e.g., a device drawing current).
4. The system will automatically calculate and display the cable's internal resistance. A lower resistance indicates a better quality cable.

## 5.4 Display Orientation

To toggle the display orientation, long-press the **KEY +** button (labeled 3 in Figure 3.2).

## 6. MAINTENANCE

- Keep the device clean and dry. Use a soft, dry cloth to wipe the screen and casing.
- Avoid using abrasive cleaners or solvents.
- Store the device in a cool, dry place when not in use.

## 7. TROUBLESHOOTING

- **No Display:** Ensure the tester is properly connected to a power source and a load. Check if the power source is active.
- **Inaccurate Readings:** Verify that all connections are secure. Ensure the power source and load are functioning correctly. Readings can be affected by poor quality cables or unstable power sources.
- **Device Not Charging:** Check the connections between the tester, power source, and device. Ensure the power source is providing sufficient power.
- **Cable Resistance Reads 9999.9Ω:** This typically indicates an open circuit or a very poor connection in the cable being tested. Re-check cable connections.

## 8. SPECIFICATIONS

Product Specifications			
Indicators	Mileage	Resolution	Accuracy
Monitor voltage	4~24V	0.00001V	±(0.2‰+2)
Monitor current	0~6.5A	0.00001A	±(0.5‰+2)
Monitor power	0~156W	0.00001W	±(0.5‰+2)
D+/D- Voltage	0~3.3V	0.001V	±(1.0‰+2)
Capacity	0~9999.99Ah	0.00001Ah	—
Electricity consumption	0~9999.99Wh	0.00001Wh	—
Cable internal resistance	0~9999.99Ω	0.0001 Ω	—
Running time of equipment	99 days 23:59:59	1 Second	—
Record time	1900/2/10 15:59:59	1 Second	—

Figure 8.1: Detailed product specifications for the diymore U-18 USB Tester Meter.

## diymore U-18 USB Tester Meter Specifications

Parameter	Range	Resolution	Accuracy
Monitoring Voltage	DC 4-24V	0.00001V	± (0.2%+2)
Monitoring Current	0-6.5A	0.00001A	± (0.5%+2)
Monitoring Power	0-156W	0.00001W	± (0.5%+2)
D+/D- Voltage	0-3.3V	0.001V	± (1.0%+2)
Capacity	0-9999.99AH	0.00001Ah	-
Power Consumption	0-9999.99WH	0.00001Wh	-
Cable Internal Resistance	0-9999.9Ω	0.000001Ω	-
Equipment Runtime	99 days 23:59:59 seconds	1 second	-
Recording Time	999:59:59	1 second	-

- **Dimensions:** 2.56 x 1.38 x 0.49 inches
- **Item Weight:** 1.41 ounces (0.04 Kilograms)
- **Power Source:** Battery Powered (internal, charged via USB connection)
- **Measurement Type:** Multimeter

## 9. WARRANTY

This product comes with a standard manufacturer's warranty. Please refer to the product packaging or contact diymore customer support for specific warranty terms and conditions.

## 10. SUPPORT

For technical assistance, troubleshooting, or further inquiries, please contact diymore customer support through the retailer's platform or the official diymore website.