Mastfuyi FY19XF

Mastfuyi Digital Multimeter FY19XF User Manual

Brand: Mastfuyi | Model: FY19XF

1. Introduction

This Mastfuyi Digital Multimeter, model FY19XF, is a versatile electrical testing instrument designed for safe and precise troubleshooting of automotive and household electrical systems. It features smart burnout prevention, overload protection, and a backlit LCD screen for clear readings in various environments. This manual provides essential information for proper setup, operation, and maintenance of your device.

2. What's in the Box

Upon opening the package, please verify that all the following items are included:

- Mastfuyi Digital Multimeter FY19XF
- Test Leads (Red and Black)
- K-type Thermocouple
- 1.5V AAA Batteries (3 pieces)
- User Manual

Image: Contents of the Mastfuyi Digital Multimeter FY19XF package.

3. Setup

3.1 Battery Installation

The multimeter requires 3 AAA batteries for operation. To install them:

1. Locate the battery compartment on the back of the device.
2. Open the compartment cover.
3. Insert the 3 AAA batteries, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

3.2 Test Lead Connection

Proper connection of test leads is crucial for accurate and safe measurements:

1. Always remove the protective caps from the test leads before use.
2. Connect the black test lead to the**COM** (Common) input jack.
3. Connect the red test lead to the appropriate input jack based on the measurement:

- For Voltage, Resistance, Continuity, Diode, Capacitance, Frequency, and Temperature measurements, connect the red lead to the **VΩHz/C/F** jack.
- For Current measurements (mA), connect the red lead to the**mA** jack.
- For High Current measurements (10A), connect the red lead to the**10A** jack.

4. Ensure both test leads are fully and securely inserted into their respective jacks.

Image: Test leads, rubber protective case, and back bracket of the multimeter.

3.3 Protective Case and Kickstand

The multimeter is equipped with a rubber protective case and an integrated kickstand:

- The rubber protective case provides enhanced durability and drop protection. Ensure it is properly fitted around the device.
- Utilize the integrated back bracket (kickstand) to prop up the multimeter for hands-free operation and improved viewing angle during measurements.

Your browser does not support the video tag.

Video: This video demonstrates the unboxing, battery installation, fitting of the rubber protective case, test lead storage, and deployment of the kickstand for the Mastfuyi Digital Multimeter FY19XF.

4. Operating Instructions

Image: Labeled diagram of the Mastfuyi Digital Multimeter FY19XF components.

4.1 General Operation

To begin a measurement:

1. Turn the central rotary switch to the desired measurement function (e.g., Voltage, Resistance, Current).
2. The multimeter features automatic range judgment, which simplifies operation by automatically selecting the appropriate measurement range.
3. Use the **SELECT** button to cycle through different measurement modes within a function (e.g., AC or DC voltage, different current ranges).
4. The **REL** button activates the relative value measurement function, allowing you to measure changes relative to a stored reference value.
5. The **Hz/BL** button can be used to toggle frequency measurement (if applicable to the selected function) and to activate the display backlight.
6. The **HOLD/LIGHT** button serves two purposes: a short press will hold the current reading on the display, and a long press will activate the integrated flashlight.

Image: Multimeter demonstrating backlight, flashlight, and automatic power-off.

4.2 Specific Measurements

The FY19XF multimeter supports a wide range of electrical measurements:

- **DC/AC Voltage Measurement:** Turn the rotary switch to the 'V' position. Use the SELECT button to choose between AC and DC. Connect the test leads in parallel across the component or circuit to measure voltage.
- **DC/AC Current Measurement:** Turn the rotary switch to the 'A' or 'mA' position. Use the SELECT button to choose between AC and DC. Connect the test leads in series with the circuit to measure current. Ensure the correct input jack (mA or 10A) is used for the expected current range.
- **Resistance Measurement:** Turn the rotary switch to the 'Ω' position. Connect the test leads across the component to measure its resistance.
- **Continuity Measurement:** Turn the rotary switch to the continuity symbol (often shared with resistance or diode). Connect the test leads across the circuit or component. An audible beep indicates continuity (low resistance).
- **Diode Measurement:** Turn the rotary switch to the diode symbol. Connect the test leads across the diode. The display will show the forward voltage drop.
- **Capacitance Measurement:** Turn the rotary switch to the capacitance symbol. Connect the test leads across the capacitor.

- **Frequency Measurement:** Turn the rotary switch to the 'Hz' position (or use the Hz/BL button in relevant modes). Connect the test leads to the signal source.
- **Temperature Measurement:** Turn the rotary switch to the '°C/°F' position. Connect the K-type thermocouple to the appropriate input jacks and place the probe on the object to be measured.
- **Non-Contact Voltage (NCV) Detection:** Turn the rotary switch to the 'NCV' position. Bring the top of the multimeter near a live electrical source. The device will beep and indicate voltage presence without direct contact.

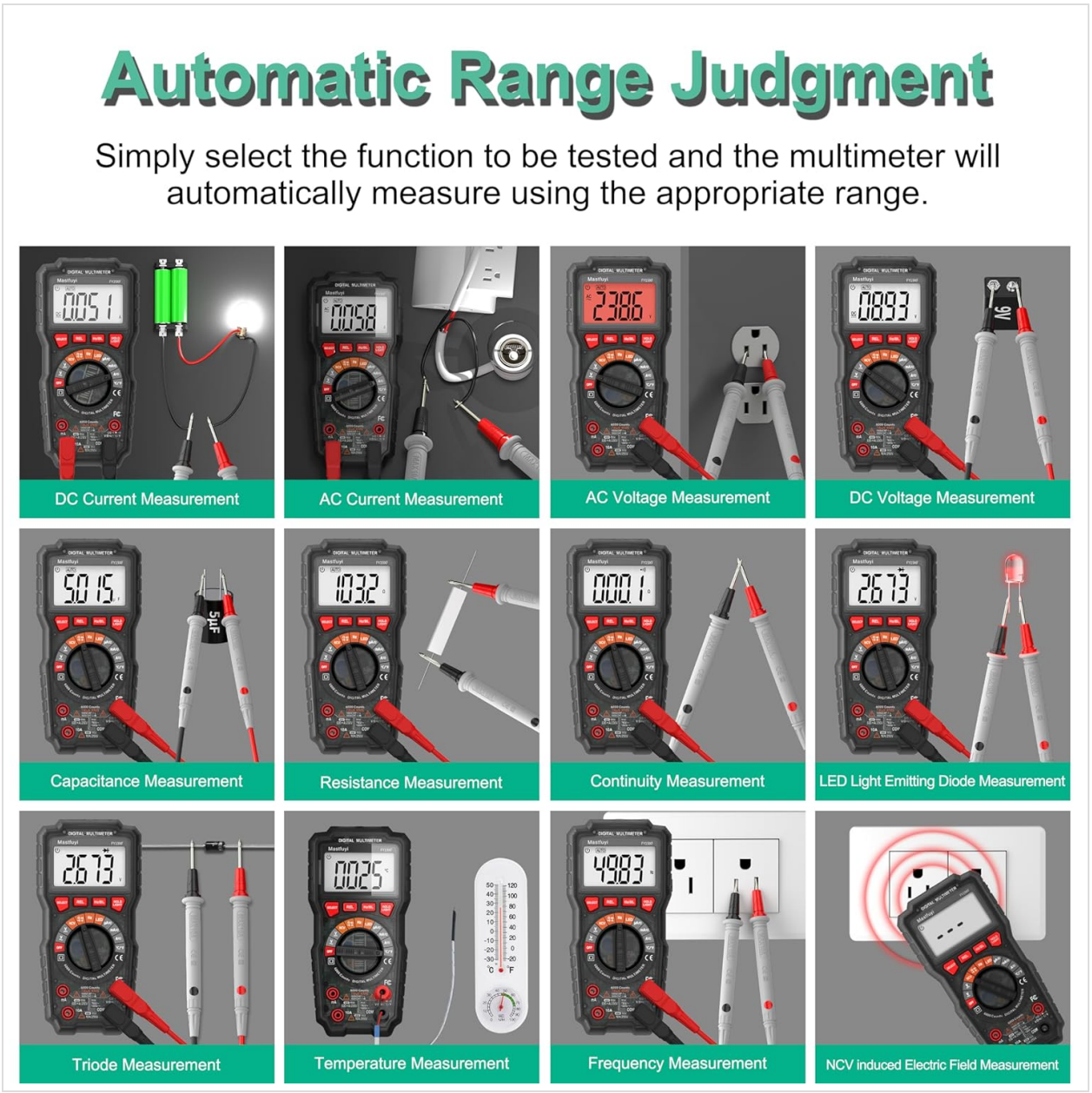

Image: Examples of various measurements performed by the multimeter.

Image: Capacitance measurement, NCV detection, and alarm indicators.

Your browser does not support the video tag.

Video: This video demonstrates various operational features including function selection, backlight activation, flashlight use, and NCV induced voltage detection.

5. Safety Information

Your Mastfuyi Digital Multimeter FY19XF is designed with safety in mind. Please observe the following precautions:

- **Smart Burnout Prevention and Overload Protection:** The multimeter incorporates a smart burnout prevention chip with a ceramic fuse, offering full-range overload protection. It provides 250V burnout prevention if an incorrect measurement function is selected.
- **High Voltage Alert:** A high voltage alert with a red backlit display will activate if the measured voltage exceeds 36V, indicating a potential hazard. Exercise extreme caution when this alert is active.
- **Misplaced Test Leads Alarm:** An audible alarm will sound if test leads are inserted into the current measurement jack without the rotary switch being set to the correct current function, preventing accidental damage to the device and potential hazards.
- Always remove the protective caps from the test leads before making any measurements.
- Do not attempt to measure AC currents or voltages below 100mV if the device cannot display results. Consult the manual for specific measurement limitations.
- Ensure the rotary switch is set to the correct function before connecting the test leads to a circuit.

Image: Multimeter highlighting internal MCU processor and dual ceramic fuse tubes for enhanced safety.

High Voltage Alert - Red Backlit Alarm

During the measurement, if the measured voltage is higher than 36V, the meter display will display a red backlight flashing to indicate a high pressure. Please pay attention to the danger when using it.

Misplaced Test Leads Alarm

When you insert the test leads into the current measurement jack without turning the function selector knob to the corresponding current function position, the multimeter will beep to alert you, so beginners can use it without worry.

Image: High voltage alert (red backlight) and misplaced test leads alarm feature.

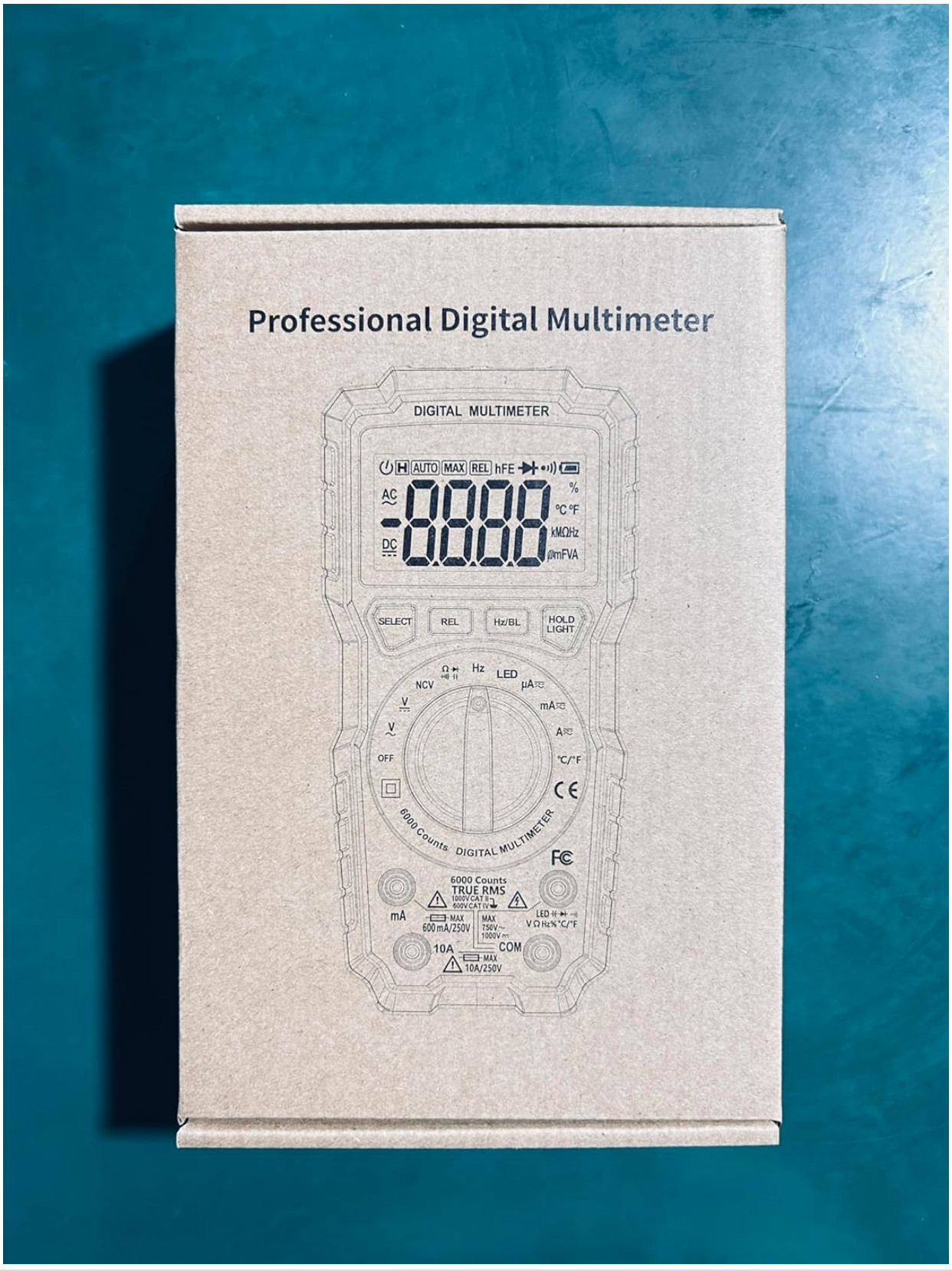

Image: Important operation note regarding the removal of test lead caps.

6. Maintenance

To ensure the longevity and accuracy of your multimeter, follow these maintenance guidelines:

- **Automatic Power Off:** The multimeter features an automatic power-off function after 15 minutes of inactivity to conserve battery life.
- **Cleaning:** Keep the device clean and dry. Wipe the exterior with a soft, damp cloth. Do not use abrasive

cleaners or solvents.

- **Storage:** Store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears on the display to ensure accurate readings and proper device function.

7. Troubleshooting

If you encounter issues with your multimeter, refer to the following common troubleshooting steps:

- **No Display or Incorrect Reading:**
  - Check if test lead plugs are fully inserted and correctly seated in the appropriate input jacks.
  - Ensure the manual rotary switch is positioned correctly for the desired measurement function.
  - Verify that the batteries have sufficient charge.
- **No AC Current or AC Voltage Reading Below 100mV:** This multimeter may not be able to measure all AC currents or AC voltages below 100mV. This is a characteristic of the device.
- **Device Not Turning On:** Check battery installation and ensure batteries are not depleted. Replace if necessary.

8. Specifications

Feature	Specification
Model Number	FY19XF
Brand	Mastfuyi
Power Source	Battery Powered (3x AAA)
Color	Black
Item Weight	0.29 Kilograms
Package Dimensions	8.54 x 5.55 x 2.32 inches
Date First Available	April 25, 2024

9. Warranty and Support

The Mastfuyi Digital Multimeter FY19XF comes with a **48-month unconditional warranty** and lifetime after-sales service. For any product inquiries, technical support, or assistance, please contact our professional support team. We are available online for prompt assistance to ensure your satisfaction.

Related Documents - FY19XF

	Mastfuyi FY19XF Digital Multimeter User Manual Comprehensive user manual for the Mastfuyi FY19XF Digital Multimeter, detailing its features, operation, and specifications, including 6000 counts, True RMS, auto-ranging, AC/DC voltage and current testing, resistance, frequency, and NCV detection.
	Mastfuyi FY8233K 6000 Counts Digital Multimeter User Guide: Operation and Specifications Comprehensive user guide for the Mastfuyi FY8233K digital multimeter, featuring 6000 counts. This guide provides detailed instructions for operation, safety precautions, technical specifications, and measurement procedures for AC/DC voltage, current, resistance, diode, and continuity.
	Mastfuyi FY128/FY128C/FY129C Smart Digital Multimeter User Manual User manual for the Mastfuyi FY128, FY128C, and FY129C handheld digital multimeters. Features include 5999 counts, large LCD, NCV, Live wire detection, capacitance, frequency, temperature measurement, and overload protection. Compliant with IEC-61010 standards.
	FY121 Triple Mode Infrared Temperature-Testing Multimeter User Manual Comprehensive user manual for the MASTFUYI FY121 Triple Mode Infrared Temperature-Testing Multimeter. Covers features like non-contact AC voltage detection, infrared temperature measurement, and standard multimeter functions. Includes detailed specifications, operation instructions, safety precautions, and maintenance guidelines.
	Mastfuyi FY129C Smart Digital Multimeter User Manual Comprehensive user manual for the Mastfuyi FY129C Smart Digital Multimeter, detailing its features, operation, technical specifications, safety precautions, and maintenance procedures.
	MASTFUYI FY890C PRO Digital Multimeter User Manual - Features, Specs, Operation Comprehensive user manual for the MASTFUYI FY890C PRO Digital Multimeter. Learn about its 6000 count True RMS capabilities, AC/DC voltage/current measurement, temperature testing, and safe operation for electricians, photovoltaic, and mining professionals.