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› Mastfuyi FY12DMM Thermal Imager Multimeter Instruction Manual

Mastfuyi FY12DMM

Mastfuyi FY12DMM Thermal Imager Multimeter Instruction Manual

Model: FY12DMM

1. INTRODUCTION

The Mastfuyi FY12DMM is a versatile 2-in-1 device integrating a high-resolution thermal imager with a comprehensive digital multimeter. This instrument is designed for precise fault detection and analysis across various applications, including electrical, mechanical, construction, automotive, and industrial equipment.

Key features include a 3.98-inch full-view visual touch screen, a 320x320 thermal imager with a 25Hz frame rate, 15 color palettes, and a temperature range of -20°C to 550°C (-4°F to 1022°F). The integrated multimeter offers 20,000 counts and supports a wide range of electrical measurements, including AC/DC voltage, resistance, capacitance, diode, switch testing, frequency, and duty cycle. It also features intelligent high and low temperature alarms for enhanced safety and diagnostic capabilities.

2. SAFETY INFORMATION

Please read and understand all safety information and operating instructions before using this instrument. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always adhere to local and national safety codes.
- Do not use the device if it appears damaged or is operating abnormally.
- Ensure the test leads are in good condition and properly connected before any measurement.
- Do not exceed the maximum input ratings for any function.
- Exercise extreme caution when working with live circuits.
- Keep fingers behind the finger guards on the test probes during measurements.
- Replace batteries promptly when the low battery indicator appears to ensure accurate readings.
- Do not operate the device in explosive atmospheres or in the presence of flammable gases or dust.

3. WHAT'S IN THE BOX

Verify that all items are present upon unpacking:

- Mastfuyi FY12DMM Thermal Imager Multimeter

- Instruction Manual
- USB Charging Cable
- Multimeter Probes (Red and Black)
- Temperature Probe
- Cloth Bag
- Packaging Box

What's in the box



Thermal Imaging Multimeter 2-in-1



Packaging Box



Cloth Bag



Instruction Manual



USB Charging Cable



Multimeter Probe



Temperature Probe

Image: Contents of the Mastfuyi FY12DMM package. This image displays the thermal imager multimeter, a cloth bag, an instruction manual, a USB charging cable, multimeter probes, a temperature probe, and the packaging box.

4. SETUP

4.1 Charging the Device

Before initial use, fully charge the Mastfuyi FY12DMM using the provided USB charging cable. Connect the USB cable to the device's charging port and to a standard USB power adapter (not included) or a computer's USB port. The charging indicator on

the device will show the charging status.

4.2 Connecting Probes

- **Multimeter Probes:** Insert the red multimeter probe into the 'VΩmA' input jack and the black probe into the 'COM' input jack for most electrical measurements. For high current measurements, refer to the specific function's input requirements.
- **Temperature Probe:** For temperature measurements using the probe, insert it into the designated temperature input jacks, typically marked with a temperature symbol.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

Press and hold the power button located on the side of the device to turn it on or off. The device will perform a self-test upon startup.

5.2 Using the Thermal Imager

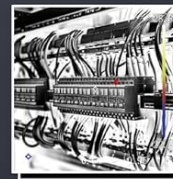
The thermal imager function allows for non-contact temperature measurement and visualization of heat patterns.

- **Display:** The 3.98-inch touch LCD screen displays real-time thermal images with a 320x320 resolution and a 25Hz frame rate.
- **Temperature Range:** The imager measures temperatures from -20°C to 550°C (-4°F to 1022°F).
- **Thermal Sensitivity:** A sensitivity of 50mk allows for the visualization of subtle temperature differences.
- **Color Palettes:** Select from 15 different color modes to best visualize temperature variations for specific applications. Access these through the on-screen menu.
- **High/Low Temperature Alarm:** Set custom temperature thresholds. The device will trigger audible and visual alarms if temperatures exceed or fall below these limits.
- **Automatic Hot/Cold Spot Tracking:** The device can automatically identify and display the hottest, coldest, and central temperature points within the thermal image.

15 Thermat Palettes



White heat



Black hot



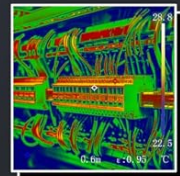
Fusion 1



Iron red 1



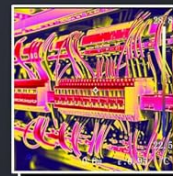
Iron Red 2



Rainbow



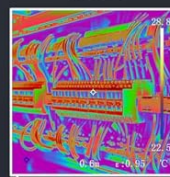
Color 1



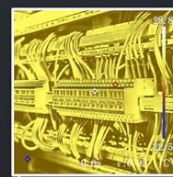
Color 2



Green hot



Rain



Dark brown



Ice and fire



Fusion 2



Red hot



Deep blue

Image: This image illustrates the 15 thermal color palettes available on the Mastfuyi FY12DMM, such as White Heat, Black Hot, Iron Red, Rainbow, and Deep Blue, which help in visualizing temperature differences.

Automatic Capture of High and Low Temperatures

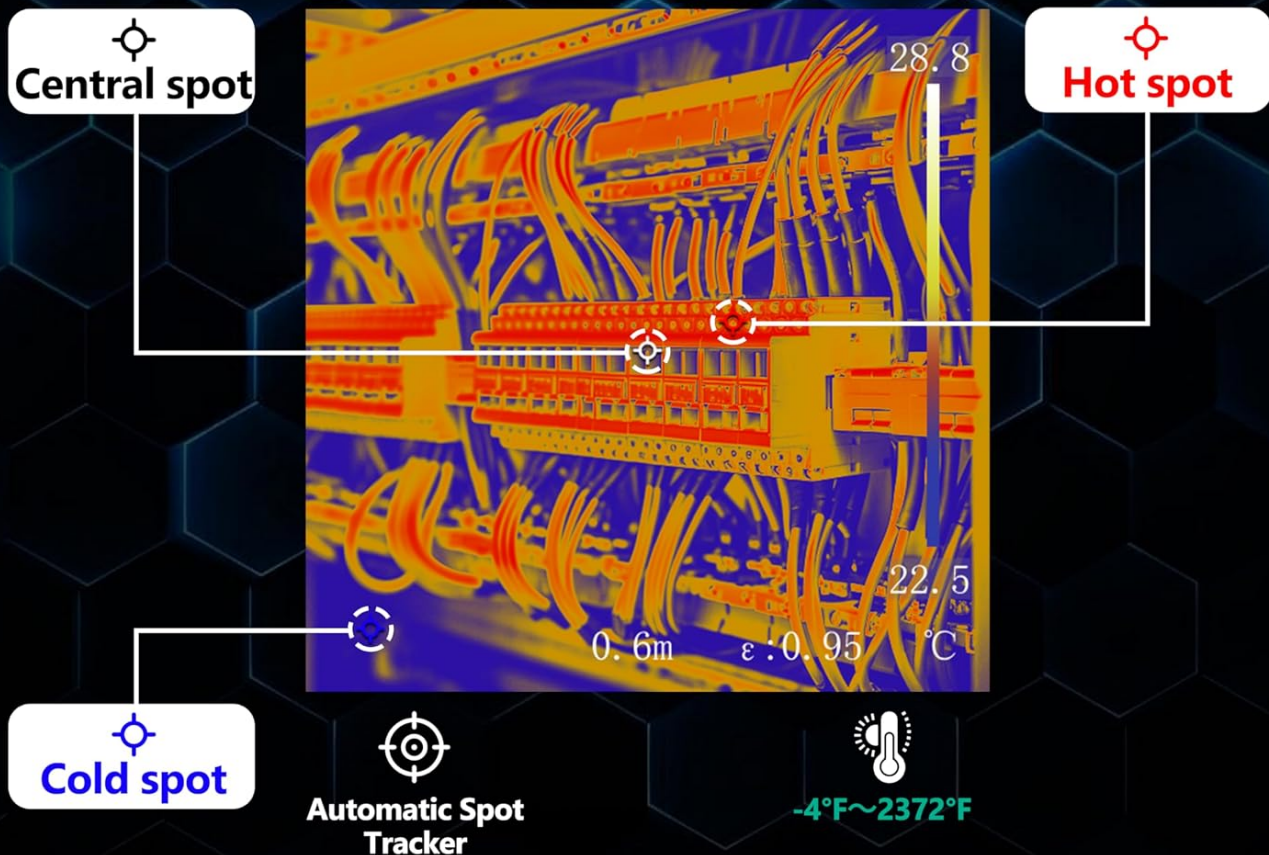


Image: A thermal image on the device screen highlighting the automatic detection and display of central, hot, and cold spots, along with temperature readings.

5.3 Using the Multimeter

The integrated multimeter provides precise electrical measurements with a 20,000-count display.

- **Measurement Functions:** The multimeter supports AC/DC voltage, resistance, capacitance, diode testing, continuity testing, frequency, and duty cycle measurements.
- **Voltage Limits:** Maximum DC input voltage is 1000V, and maximum AC input voltage is 750V.
- **Hold Function:** Press the 'HOLD' button to freeze the current reading on the display.
- **Range Measurement:** The device features auto-ranging capabilities, but manual range selection may be available for specific functions.
- **Waveform Recording:** Utilize the waveform recording function for detailed analysis of electrical signals.



Image: The Mastfuyi FY12DMM showing its dual functionality, with a thermal image on one side of the screen and multimeter readings (AC voltage, DC millivolts) on the other.

6. MAINTENANCE

6.1 Cleaning the Device

Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any power source before cleaning.

6.2 Battery Care

Recharge the internal battery regularly, especially if the device will not be used for an extended period. Avoid fully discharging the battery frequently to prolong its lifespan.

6.3 Storage

Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. Use the provided cloth bag for

protection during storage and transport.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on	Low battery; Device fault	Charge the device; Contact support if issue persists
Inaccurate multimeter readings	Incorrect probe connection; Damaged probes; Out of calibration	Verify probe connections; Replace damaged probes; Contact support for calibration
Thermal image is blurry or unclear	Lens dirty; Incorrect focus (if applicable); Environmental factors	Clean the lens carefully; Adjust focus; Ensure stable environment
Touch screen unresponsive	Software glitch; Physical damage	Restart the device; Contact support for repair

8. SPECIFICATIONS

Feature	Specification
Brand	Mastfuyi
Model	FY12DMM
Power Source	Battery Powered
Color	FY12DMM (Green)
Specification Met	ETL, NIST
Upper Temperature Rating	550 Degrees Celsius
Thermal Imager Resolution	320x320 pixels
Thermal Imager Frame Rate	25Hz
Thermal Sensitivity	50mk
Temperature Range	-20°C to 550°C (-4°F to 1022°F)
Multimeter Count	20,000 counts
Max DC Input Voltage	1000V
Max AC Input Voltage	750V

Feature	Specification
Display	3.98-inch Full-view Visual Touch LCD
Included Components	Thermal Imager Multimeter, Instruction Manual, USB Charging Cable, Multimeter Probe, Temperature Probe, Cloth Bag, Packaging Box

9. WARRANTY AND SUPPORT

Mastfuyi products are designed and manufactured to the highest quality standards. This product is covered by a limited warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Mastfuyi website.

For technical support, troubleshooting assistance, or service inquiries, please contact Mastfuyi customer service through the contact information provided in your product documentation or on the official Mastfuyi website. Please have your model number (FY12DMM) and purchase date available when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

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