

Mastech MS8332C

MASTECH MS8332C Digital Multimeter User Manual

Model: MS8332C | Brand: Mastech

1. INTRODUCTION

Thank you for choosing the MASTECH MS8332C Digital Multimeter. This high-quality, easy-to-use instrument is designed for accurate and reliable measurement of various electrical parameters. It is an essential tool for electricians, technicians, hobbyists, and anyone working with electrical circuits.

This manual provides detailed instructions for the safe and effective operation, maintenance, and troubleshooting of your MS8332C Digital Multimeter. Please read this manual thoroughly before using the device and keep it for future reference.

2. SAFETY INFORMATION

To ensure safe operation and service of the meter, follow these safety precautions:

- Always adhere to local and national safety codes.
- Do not use the meter if it appears damaged or if the test leads are damaged.
- Do not apply more than the rated voltage, as marked on the meter, between terminals or between any terminal and earth ground. The MS8332C is rated for **600V CAT III**.
- Use extreme caution when working with voltages above 60V DC or 30V AC RMS. Such voltages pose a shock hazard.
- Always disconnect power to the circuit and discharge all high-voltage capacitors before performing resistance, continuity, or diode tests.
- Remove the test leads from the meter before opening the battery cover.
- Replace the battery immediately when the low battery indicator appears to ensure accurate readings.
- Do not operate the meter in explosive gas, vapor, or dust environments.
- Always use the correct function and range for measurements.

Category III (CAT III) is for measurements performed in the building installation at the distribution level. Examples are measurements on distribution boards, circuit breakers, wiring, including cables, bus-bars, junction boxes, switches, socket outlets in the fixed installation, and equipment for industrial use and some

other equipment, e.g., stationary motors with permanent connection to the fixed installation.

3. PRODUCT OVERVIEW

The MASTECH MS8332C is a compact digital multimeter featuring a clear LCD display, a rotary function switch, and input jacks for test leads. It offers various measurement capabilities including voltage, current, resistance, frequency, diode, continuity, and battery testing.



Figure 3.1: Front view of the MASTECH MS8332C Digital Multimeter showing the display, function dial, and test lead inputs. The device is green and black with red and black test leads.



Figure 3.2: Angled view of the MASTECH MS8332C Digital Multimeter, displaying the device and its connected test leads with their coiled cable.

4. SETUP

4.1 Battery Installation

The MASTECH MS8332C requires two (2) AAA batteries for operation, which are included with the product. To install or replace the batteries:

1. Ensure the multimeter is turned OFF and disconnect any test leads from the input jacks.
2. Locate the battery compartment cover on the back of the meter.
3. Use a screwdriver to loosen the screw(s) on the battery cover and remove the cover.
4. Insert the two AAA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
5. Replace the battery cover and secure it with the screw(s).

4.2 Connecting Test Leads

The multimeter comes with a pair of red and black test leads. To connect them:

- Insert the **black** test lead into the "COM" (Common) input jack.
- Insert the **red** test lead into the "VΩmA" input jack for voltage, resistance, frequency, diode, continuity, and milliampere current measurements.
- For current measurements up to 10A, insert the **red** test lead into the "10A" input jack.

Always ensure test leads are fully inserted before taking measurements.

5. OPERATING INSTRUCTIONS

The MS8332C features a rotary switch to select the desired measurement function. It has 4000 counts display, autoranging capability, and an auto power-off feature to conserve battery life.

5.1 Function Selection

Turn the rotary switch to the desired function. The meter will automatically select the appropriate range (autoranging) for most measurements. Press the "FUNC" button to toggle between different modes within a single rotary switch position (e.g., AC/DC voltage, diode/continuity).

5.2 Measurement Procedures

- **DC Voltage (V-) Measurement:**

Set the rotary switch to V-. Connect the red test lead to the positive side of the circuit and the black test lead to the negative side. Read the voltage value on the display.

- **AC Voltage (V~) Measurement:**

Set the rotary switch to V~. Connect the test leads across the AC voltage source. Read the voltage value on the display.

- **DC Current (mA / A) Measurement:**

Set the rotary switch to mA or A depending on the expected current. For currents up to 400mA, use the mA range and the VΩmA input jack. For currents up to 10A, use the A range and the 10A input jack. Connect the meter in series with the circuit. Read the current value on the display.

- **Resistance (Ω) Measurement:**

Set the rotary switch to Ω. Ensure the circuit is de-energized. Connect the test leads across the component to be measured. Read the resistance value on the display.

- **Continuity Test:**

Set the rotary switch to the continuity/diode symbol. Press FUNC to select continuity. Connect the test leads across the circuit or component. If continuity exists (resistance below approx. 50Ω), the meter will emit an audible beep.

- **Diode Test:**

Set the rotary switch to the continuity/diode symbol. Press FUNC to select diode test. Connect the red test lead to the anode and the black test lead to the cathode of the diode. The display will show the forward voltage drop. Reverse the leads to check for open circuit (OL) for a good diode.

- **Frequency (Hz%) Measurement:**

Set the rotary switch to Hz%. Connect the test leads across the signal source. The display will show the frequency in Hertz (Hz) or duty cycle (%).

- **Battery Test (1.5V / 9V):**

Set the rotary switch to 1.5V or 9V. Connect the red test lead to the positive terminal of the battery and the black test lead to the negative terminal. The display will show the battery voltage. This function is designed for quick checks of common 1.5V (AA, AAA, C, D) and 9V batteries.

Always turn the rotary switch to "OFF" when the meter is not in use to conserve battery life. The auto power-off

feature will also turn off the meter after a period of inactivity.

6. MAINTENANCE

6.1 Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the input terminals free of dirt and moisture.

6.2 Battery Replacement

When the battery symbol appears on the display, the batteries are low and should be replaced immediately to ensure accurate readings. Refer to Section 4.1 for battery installation instructions.

6.3 Test Lead Inspection

Regularly inspect the test leads for any signs of damage, such as cracked insulation or exposed metal. Replace damaged leads immediately to prevent electric shock hazards.

7. TROUBLESHOOTING

- **No Display / Meter Does Not Turn On:**
 - Check if the batteries are correctly installed and have sufficient charge. Replace if necessary.
 - Ensure the rotary switch is not in the "OFF" position.
- **"OL" (Overload) Displayed:**
 - The measured value exceeds the selected range. Switch to a higher range if available, or ensure the correct function is selected.
 - For resistance or continuity, "OL" may indicate an open circuit.
- **Inaccurate Readings:**
 - Check battery level; low batteries can affect accuracy.
 - Ensure test leads are fully inserted and not damaged.
 - Verify the correct function and range are selected for the measurement.
 - Ensure proper connection to the circuit (series for current, parallel for voltage).

8. SPECIFICATIONS

Feature	Specification
Model Number	MS8332C
Brand	Mastech
Measurement Type	Digital Multimeter
Display Counts	4000 Counts
Ranging	Autoranging

Feature	Specification
Safety Rating	CAT III 600V
Power Source	2 x AAA Batteries (included)
Max. DC Current	10A
Max. AC/DC Voltage	600V
Auto Power Off	Yes
Color	Black and Green
Package Dimensions	20.4 x 11.6 x 6.2 cm
Item Weight	0.15 grams
International Article Code	08435394761855

9. WARRANTY AND SUPPORT

Mastech products are manufactured to high-quality standards. For information regarding warranty coverage, technical support, or spare parts availability, please contact your local Mastech distributor or refer to the official Mastech website.

Please retain your proof of purchase for any warranty claims.

Related Documents

	Mastech MS8233A Digital Multimeter Quick Start Guide A quick start guide for the Mastech MS8233A Digital Multimeter, providing essential safety information and specifications for various measurements including voltage, current, and resistance.
	MASTECH MY64 Digital Multimeter Quick Start Guide Concise guide to the MASTECH MY64 Digital Multimeter, covering safety precautions, specifications, and basic operation for accurate electrical measurements.
	MASTECH MS8212A Pen-type Digital Multimeter User Manual Comprehensive user manual for the MASTECH MS8212A pen-type digital multimeter, covering safety information, specifications, operation, maintenance, and accessories.
	Mastech M838 Digital Multimeter Quick Start Guide Concise guide to using the Mastech M838 digital multimeter, covering safety, specifications, and basic measurement procedures for voltage, current, resistance, and temperature.



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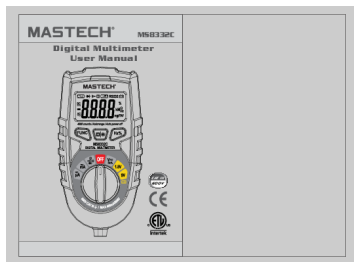
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MASTECH FAST SELECTION CHARTS DIGITAL MULTIMETERS CLAMP METERS LINE SPLITTERS

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MASTECH®		FAST SELECTION CHARTS									
DIGITAL MULTIMETERS MANUAL RANGING											
Model	MS8301	MS8302	MS8303	MS8304	MS8305	MS8306	MS8307	MS8308	MS8309	MS8310	MS8311
Range	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V
Accuracy	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Auto Ranging	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DC Voltage	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V
AC Voltage	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V	200V
DC Current	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A
AC Current	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A
Resistance	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ
Capacitance	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Diode Test	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Relative Humidity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Non-Contact Voltage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Low Battery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto Hold	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Backlight	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Load	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A
Max. Power	100W	100W	100W	100W	100W	100W	100W	100W	100W	100W	100W
Max. Voltage	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V
Max. Current	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A
Max. Resistance	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ	20MΩ
Max. Capacitance	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF	2000μF
Max. Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max. Diode Test	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Temperature	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Relative Humidity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Non-Contact Voltage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Low Battery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Auto Hold	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. Backlight	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Виталий Железнов ms8332c datasheet Auto Manual Power Off 2 7V 500 Low Battery Display 2x1 5V
AAA Batteries 122mmx61mm mx41mm 4 8 x2 X1 6 1838 41b CE ETL CAT III 600V rcscomponents kiev ua
datasheets MS8332C VOLTAG AC DC 8808 Specifications CURRENT 400mA Voltage DIGITAL
MULTIMETER Accuracy 8% 3 1 0% 5 Mastech 600VMS8332C 5Specifications Intertek ROHS
PATENTED AUTO RangeMASTECH RS232 E 888 %% KMH 4000 counts Autorange Autio power off
OFF V Hz% 9V VOLTAGE 600V7 set 2024 — 4V 40V 400V FUNC 5% Current 400uA 4mA 40mA
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