

## MASTECH®

### Introduction

The Voltage Tester provides a simple and fast method of testing AC and DC voltage up to 400 volts. The different indicating signals of the Voltage Tester are not to be used for measuring purposes, it only means a voltage range, not the exact value. For example, when the indicator lamp of 120V lit, it is said that the measure voltage is in 120V, not necessarily the 120V.

### ⚠ Warnings

- Read, understand and follow the Safety Rules and Operating Instructions in this manual before using this instrument.
- The Voltage Tester is designed to be used by the skilled persons and in accordance with safe methods of work.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Unauthorized persons are not to be allowed to disassemble the tester.
- Keep fingers away from the metal probe tips when taking measurements.
- Comply with all safety codes. Use approved personal protective equipment when working near live electrical circuits.
- Use caution on live circuits. Voltages above 30V AC RMS, 42V AC peak, or 60V DC pose a shock hazard.
- Do not use if the instrument or test leads appear damaged.
- Measure known voltage with the tester to verify that the tester is working properly. If the tester is working

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abnormally, stop using it immediately. A protective device may be damaged. If there is any doubt, please have the tester inspected by a qualified technician.

- Do not use the tester in wet or damp environments or during electrical storms.
- Do not use the tester near explosive vapors, dust or gasses.
- Do not use the tester if it operates incorrectly. Protection may be compromised.
- Do not apply voltage that exceeds the tester's maximum rated input limits.

### Input Limits

Function	Maximum Input
Voltage DC, Voltage AC	400V

### International Safety Symbols

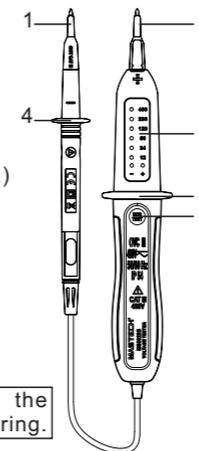
	Caution, risk of danger
	Caution, risk of electric shock
	Equipment protected throughout by double insulation or reinforced insulation.
	Suitable for live working
	Both direct and alternating current
	Conforms to UL STD. 61010-1, 61010-2-030 and 61010-031; Certified to CSA STD C22.2 NO. 61010-1, 61010-2-030 and 61010-031
	Conforms to relevant European Union directives

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CAT III	MEASUREMENT CATEGORY III is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.
OVC III	OVERVOLTAGE CATEGORY III is for equipment intended to form part of a building wiring installation.
IP54	Representing the level of protection from specified external conditions. 5: Dust-protected; 4: Protected against splashing water

### Voltage Tester Description

1. External test probe (-)
2. Instrument test probe (+)
3. LEDs for voltage display
4. Protection ring
5. RCD Test button (GFCI Test button for MS8922E)



Keep your fingers behind the protection ring when measuring.

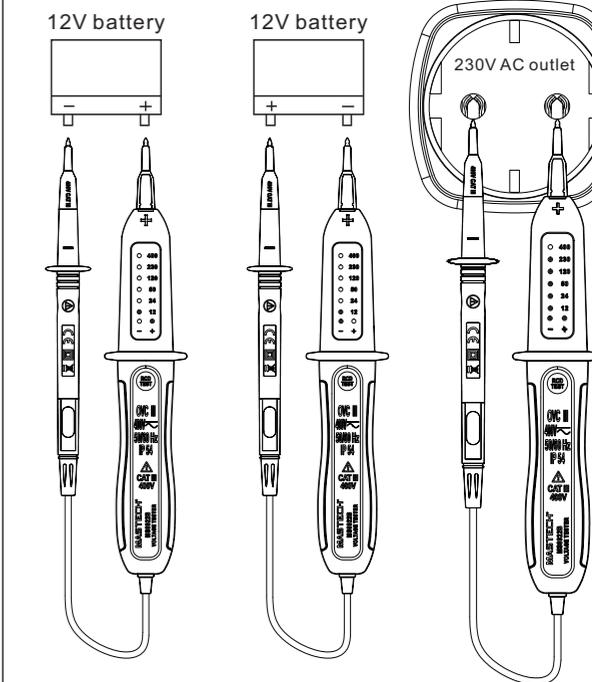
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### AC/DC Voltage Measurements

#### ⚠ Warnings

- Observe all safety precautions when working on live voltages.
1. Touch the test probes across the circuit being measured.
  2. The tester will turn on automatically if the voltage exceeds 12 volts.
  3. The LEDs will indicate the voltage.
  4. For AC voltage, the "+" and "-" LEDs will illuminate.
  5. For DC voltage, the "+" LED will illuminate if the instrument test probe is touching the positive side of the circuit. The "-" LED will illuminate if the instrument test probe is touching the negative side of the circuit.

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### RCD Test(This function just for MS8922B)

#### ⚠ Warnings

Observe all safety precautions when working on live voltages. The RCD test function can only be used on 230 volt AC receptacles with RCD protection.

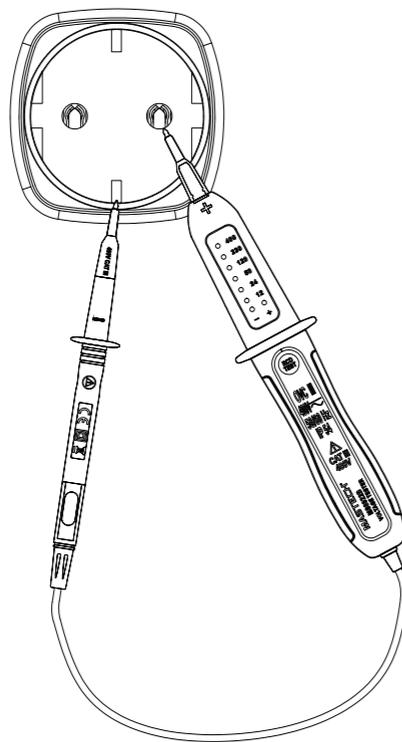
1. Check the instructions on the specific RCD device you are testing before proceeding.
2. Press the RCD button on the RCD receptacle. The RCD should trip. If not, do not use the receptacle and consult a qualified electrician. If it does trip, press the reset button on the RCD receptacle.
3. Insert one test probe into hot side of the outlet being tested.
4. Insert the other test probe into the ground of the outlet being tested.
5. The tester should indicate 230VAC if the outlet is powered and wired properly.
6. Press the RCD test button.
7. The indicator lights should turn off indicating the RCD has tripped.
8. If the RCD does not trip, either the receptacle is mis-wired or the RCD is defective. Do not use the receptacle and consult a qualified electrician.

#### Note:

The tester cannot test RCD operation on 2-wire (non-grounded) outlets.

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### GFCI Test(This function just for MS8922E)

#### ⚠ Warnings

Observe all safety precautions when working on live voltages. The GFCI test function can only be used on 230 volt AC receptacles with GFCI protection.

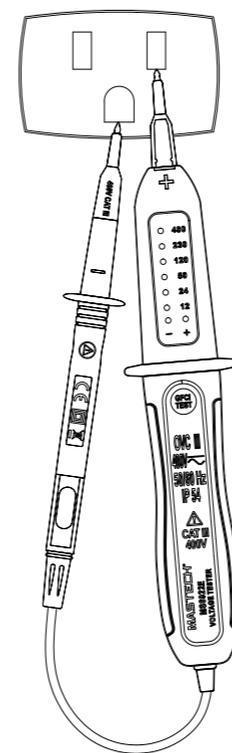
1. Check the instructions on the specific GFCI device you are testing before proceeding.
2. Press the GFCI button on the GFCI receptacle. The GFCI should trip. If not, do not use the receptacle and consult a qualified electrician. If it does trip, press the reset button on the GFCI receptacle.
3. Insert one test probe into hot side of the outlet being tested.
4. Insert the other test probe into the ground of the outlet being tested.
5. The tester should indicate 230VAC if the outlet is powered and wired properly.
6. Press the GFCI test button.
7. The indicator lights should turn off indicating the GFCI has tripped.
8. If the GFCI does not trip, either the receptacle is mis-wired or the GFCI is defective. Do not use the receptacle and consult a qualified electrician.

#### Note:

The tester cannot test GFCI operation on 2-wire (non-grounded) outlets.

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### Specifications

Voltage LED steps	±12,24,50,120,230,400V
Accuracy	-30% to 0% of indication
Response time	<0.1s
AC frequency range	50/60Hz
Operation time	30s maximum
Recovery time	10 minutes after maximum operation time has been reached
Operating Temperature	5°F to 113°F (-15°C to 45°C)
Storage temperature	5°F to 122°F (-15°C to 50°C)
Relative Humidity	80% maximum
Altitude	7000ft(2000m)
Safety	CAT III 400V, OVC III 400V ~
Weight	102g
Dimension	223x40x32 mm

### Maintenance

1. KEEP THE TESTER DRY. If it gets wet, wipe it off.
2. USE AND STORE THE TESTER IN NORMAL TEMPERATURES. Temperature extremes can shorten the life of the electronic parts and distort or melt plastic parts.
3. HANDLE THE TESTER GENTLY AND CAREFULLY. Dropping it can damage the electronic parts or the case.
4. KEEP THE TESTER CLEAN. Wipe the case occasionally with a damp cloth. DO NOT use chemicals, cleaning solvents, or detergents.

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