MAXWELL 25700 AUTOMATIC MULTIMETER NON-CONTACT VOLTAGE DETECTION User Manual

Contents

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Function

The advantage of a fully automatic multimeter is that during the measurement the device automatically detects which function is needed and performs the measurement in. You can use the sensor on the top of the device to detect voltage without breaking the wiring. It is characterized by an ergonomic housing, compact size and easy handling. The practical carrying case protects the product during transport.

- Automatic measurement function setting
- Option of manual adjustment (Voltage detection, capacitance measurement, frequency measurement)
- Continuity test
- Resistance measurement
- Frequency measurement
- Large display with backlight
- Flashlight function
- Sound signaling
- LED feedback
- Data retention
- Supporting legs
- Accessories: Instrument cord, carrying case, battery (2 x AAA 1.5 V)

Display	4 digits, 42 x 23 mm
DC V	1 V – 600 V
AC V	1 V – 600 V
AC A	100 mA – 10 A
Resistance	0.1 Ω – 60 MΩ
Frequency	10 Hz – 20 MHz
Capacity	0 nF to 60 mF
Power supply	2 x 1.5V AAA batteries
Dimensions	121 x 60 x 36 mm
Weight	~120 g

safety information

This multimeter complies with IEC-61010 electronic standard CAT III 600 V.

safety warnings

- To reduce the risk of electric shock or personal injury, follow these instructions:
- Never use the instrument if it is damaged. Check the integrity of the cover before use. Pay special attention to the insulation of the contacts.
- Check the insulation of the test leads or that they do not come into contact with metal. Replace the test leads if they are damaged.
- Do not use the instrument if it operates abnormally. If in doubt about the usage of the device, take it to a service center.
- Do not use the device in the presence of flammable,explosive gases, vapors and dusts.
- Never measure more than the maximum permissible measuring range.
- Check the operation of the padlock on a known circuit before use.
- When repairing the device, always use the parts recommended by the manufacturer.
- Measure with extreme caution at 30 V AC RMS, 42 V peak, or 60 V DC, as it could easily cause severe electric shock.
- If you use an additional probe, make sure that your fingers are behind the metal part of the probe in the insulated area during the measurement.
- Connect the secondary test lead (black) first to the object to be measured, then to the primary (red). When the measurement is completed, disconnect the primary from the circuit first and then the secondary.
- Always remove the test leads before opening the battery cover.
- Never use the instrument with the battery cover open or the housing damaged.
- To avoid errors in measurement results or possible personal injury („leaking current”), replace the battery in the device as soon as possible if the icon appears on the display.
- When using the padlock portion of the instrument, remove the test leads.
- Remove the padlock jaws from the circuit before opening the battery cover.
- CATIII – Contact protection measurement category III – can be used for indoor measurements, such as

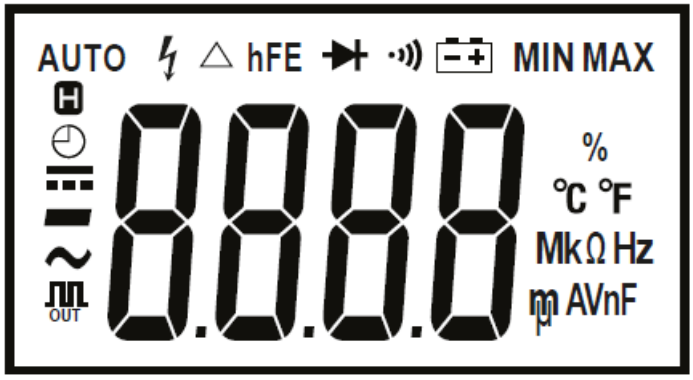
distribution cabinets, circuit breakers, wires, busbars, junction boxes, switches, sockets in a fixed design and for other

- industrial applications, such as fixed connection of installed motors. Do not use the instrument for CAT IV measurements!

ATTENTION

- To avoid damage to the device, always follow the instructions below:
- Turn off the power source or discharge the high capacity capacitors before measuring resistance, diode or continuity.
- Only perform measurements within the measuring range of the device.
- Do not connect to the circuit or object to be measured when turning the function selector knob.

parts of display



- AUTO – Automatic measuring
- High voltage warning
- Dangerous voltage warning
- hFE – Transistor testing
- Diode test
- Continuity test
- Battery charge
- MIN / MAX – Measurement range
- Data hold
- DC current sign
- AC current sign
- Rectangular impulse

Unit of measurement (%,°C, °F, MK, Ohm, Hz, m, AV, nF)

general tecHnical paraMeters

Display	4 digits, LCD
Maximum characteristic	6000
Range	Automatic
Sampling	About 3x in one second
Low power indication	
True RMS	
Data hold	
Backlight	
Flashlight	
Automatic shutdown	
Operating temperature	0 ºC – 40 ºC, <75% humidity
Storage temperature	-20 ºC – 60 ºC, <85% humidity
Dimensions	187 x 66 x 32 mm

Continuity	
NCV	

specification

Accuracy measurements were measured one year after calibration at a temperature between 18 ºC and 28 ºC and a relative humidity of <75%. Format: ± (% measured value + digit value)

ac voltage

	Measuring range	Resolution	Accuracy
	6 V	0.001 V	± (1%+5d)
	60 V	0.01 V	± (1%+5d)
	600 V	0.1 V	± (1%+8d)
	Frekvencia	40 Hz ~ 1 kHz	
	Note: The device malfunctions, burning of not measure voltages above 600 V in order to pre vent!		

	Measuring range	Resolution	Accuracy
	1 A	1 mA	± (1.2%+6d)
	10 A	10 mA	± (1.2%+6d)
	Frequency range	40 Hz ~ 1 kHz	

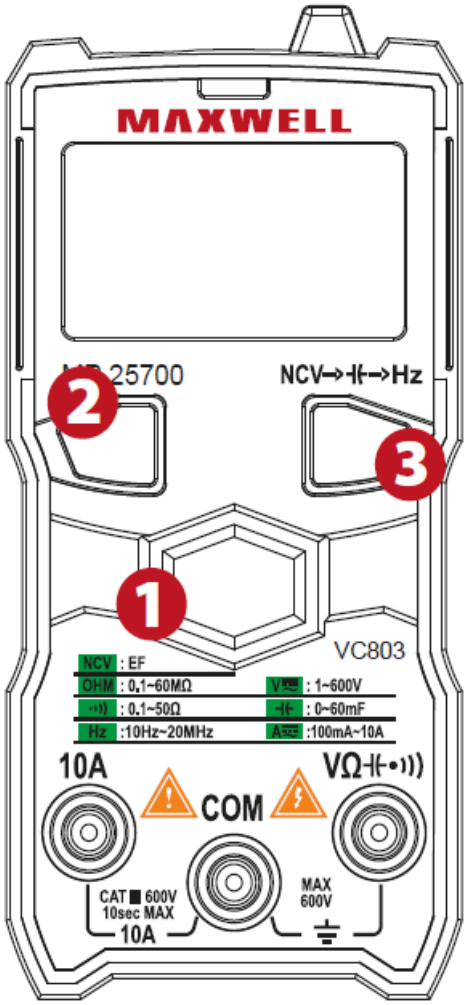
	Measuring range	Resolution	Accuracy
	1 A	1 mA	± (1.0%+5d)
	10 A	10 mA	± (1.0%+5d)
	Frequency range	40 Hz ~ 1 kHz	

	Measuring range	Resolution	Accuracy
	600 Ω	0.1 Ω	±(1,3% + 5d)
	6 kΩ	1 Ω	±(1,3% + 5d)
	60 kΩ	10 Ω	±(1,0% + 5d)
	600 kΩ	100 Ω	±(1,0% + 5d)
	6 MΩ	1 kΩ	±(1,0% + 5d)
	60 MΩ	10 kΩ	±(1,5% + 5d)

	Measuring range	Resolution	Accuracy
	6 nF	1 pF	± (3.0% + 5d)
	60 nF	10 pF	± (3.0% + 5d)
	600 nF	100 pF	± (3.0% + 5d)
	6 µF	1 nF	± (3.0% + 5d)
	60 µF	10 nF	± (3.0% + 5d)
	600 µF	100 nF	± (3.5% + 5d)
	6 mF	1 µF	± (5.0% + 6d)
	60 mF	10 µF	± (10.0% + 8d)

	Measuring range	Accuracy
	10 Hz ~ 100 kHz	± (1.0%+5d)
	1 MHz	± (3.0%+5d)
	20 MHz	± (4.0%+10d)

controls



- 1 Power button: Briefly press this button to turn on and the device will automatically start in voltage/resistance auto-detection mode. (Voltage, resistance, or current can
- H" button: Press once to keep the current value VC803 on the display. „H" appears on the display. To clear the value, press the button again. Backlight / Flashlight: Press and hold for at least 2 seconds to backlight the display and turn on the flashlight function. To deactivate these functions, press and hold the button again. 3 Function toggle button: Briefly press the button once and select (NCV) or (CAP) or (Hz). Press and hold this button for approx.
- seconds to exit the function mode and enter the voltage / resistance auto detection mode. Using tHe MUltiMeter

DC / AC voltage measurement (> 1 V)

1. Measurement is only possible if the voltage is greater than 1 V.
2. Connect the red instrument cable to the appropriate socket, then connect the black instrument cable to the „COM" socket.
3. DC or AC voltage measurement is automatic.
4. Touch the probes to the appropriate point on the test circuit to measure the voltage.
5. Read the measured voltage from the display.

Resistance measurement

1. Connect the red wire to the appropriate socket, then connect the black instrument cable to the „COM” socket.
2. The resistance is measured automatically.
3. Touch the probes to the appropriate point on the test circuit to measure the resistance of the circuit.
4. Read the measured resistance from the display.

Continuity test

1. Connect the red instrument cable to the appropriate socket, then connect the black instrument cable to the „COM” socket.
2. The continuity test measurement is performed automatically.
3. Touch the probes to the appropriate point on the test circuit to measure the continuity of the circuit.
4. The built-in buzzer beeps, the LED above the display lights up red when the resistance is lower than 50 Ω, ie in the short-circuit state.

NCV test

1. Briefly press the „SELECT” button once to activate the „NCV” mode.
2. „EF” appears on the display, the device is ready to search for AC voltage. Hold the multimeter in your hand and bring the top of the device closer to the area to be examined.
3. The built-in beeper indicates the presence of voltage with an increasingly dense beep and beep.

Capacity test

1. Connect the black test lead to the „COM” terminal and the red instrument cable to the appropriate socket.
2. Press the „SELECT” button twice to activate the function. NF appears in the lower right corner.

Capacity measurement:

1. Connect the red probe to the (+) side of the anode and the black probe to the (-) side of the capacitor to be tested. Discharge the electrolyte capacitors before measuring.
2. Read the measured capacity value when the measurement has stabilized.

Current measurement

1. Connect the black test lead to „COM”and the red test lead to the socket marked „10 A”.
2. The current measurement function is activated and the measurement is performed automatically (in AUTO mode).
3. Connect the probes in series to the current under test to measure the current.
4. Read the measured value from the display.
5. If you measure a current above 2A, the test time should be less than 3 seconds!

Frequency measurement

1. Connect the black test lead to the COM terminal and the red instrument cable to the appropriate socket.

2. Press the „SELECT” button three times to select the function. „Hz” appears in the lower right corner of the display.
3. Touch the probes to the frequency you want to test to measure the frequency.
4. The measured frequency values are displayed on the screen.

Documents / Resources

	MAXWELL 25700 AUTOMATIC MULTIMETER NON-CONTACT VOLTAGE DETECTION [pdf] User Manual 25700 AUTOMATIC MULTIMETER NON-CONTACT VOLTAGE DETECTION, AUTOMATIC MULTIMETER NON-CONTACT VOLTAGE DETECTION, NON-CONTACT VOLTAGE DETECTION, VOLTAGE DETECTION