

VC60B/VC60D

**3 1/2 digits digital display
AC Voltage/Insulation tester**

User manual

Design and Manufacture by

Zhuhai E-one science and technology Co., Ltd



Digital intelligent insulation meter

Features:

1. Adopt 6*1.5V batteries, more durable.
2. Big screen design with big font display and LED backlight, which makes the viewing more direct and clear.
3. Voltage: 250V/500V/1000V (VC60) 500V/1000V/2500V (VC60D)
4. Press lock function in measuring
5. Protection optimized, enable to bearing surge of short-circuit and residual voltage

Summarize :

VC60B/VC60D AC voltage/Insulation tester adopts DC voltage changer which is low consume, carried high voltage ratio and inductance power stored. It transits the 9V voltage into 250V/1000V/2500V and process the insulation test with analog/digital circuit. Widely use in solving problems of electrical equipments and system.

Technique features:

1. General feature :

Display: 80X52mm LCD display, LED back light, Max. display "1999"
 Over range indicate : LCD shows "1" when it's over-range
 Supply : 6*1.5V batteries or outer DC9V/1A power adapter.
(Caution: Batteries and adapter can't be use simultaneously)
 Low voltage indicate: Symbol shows
 static consume: About 10mA
 Max. Current: About 280mA
 Using condition: Temperature 0°C~40°C, Humidity 30%RH~80%RH
 Storage condition: -10°C~ +50°C, Relative humidity <85%RH
 Dimension: 185*115*65mm
 Weight: About 500g (Including batteries)
 Accessory: 1*User manual, 1*test pen, 1*test clamp

2. Specification

2-1 Insulation test

Model	Voltage	Gear	Measuring range	Resolution	Medium resistance	Accuracy	
B型	250V	200MΩ	5M~200M	0.1M	10M	±(4%+8d)	
		2GΩ	50M~2G	1M	20M		
	500V	200MΩ	5M~200M	0.1M	10M		
		2GΩ	50M~2G	1M	20M		
	1000V	200M	5M~200M	0.1M	20M		±(10%+5d)
		2GΩ	50M~2G	1M	200M		
D型	500V	2000MΩ	10M~2000M	1M	10M	±(4%+5d)	
		20GΩ	200M~20G	10M	20M		
	1000V	2000MΩ	50M~2000M	1M	50M		
		20GΩ	500M~20G	10M	50M		
	2500V	2000MΩ	100M~2000M	1M	100M		±(15%+5d)
		20GΩ	1000M~20G	10M	500M		

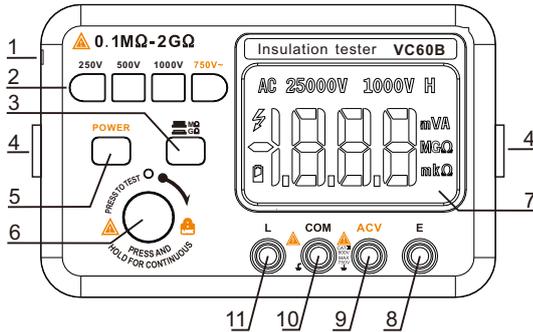
Note:

Medium resistance is a measuring lower value which indicates and ensures that when operating the voltage won't be lower than 90% of the tested voltage.

2-2 AC Voltage measuring:

Range	Resolution	Accuracy
750V	1V	±(1.0%+3d)

AC frequency response: 40Hz~400Hz
 Display: Sine-wave RMS (Average)

illustration :


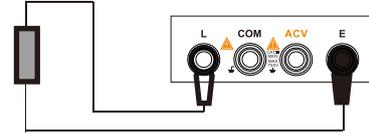
1. Outer DC power socket.
2. Gear selected key-press.
3. Measuring range key-press.
4. Hand-strap position.
5. Power key-press.
6. Test key-press, spin to lock.
7. Display screen.
8. Measurand ground terminal connected socket.
9. Voltage input terminal.
10. Ground terminal, connecting to protect the ring electrode when testing for the cable.
11. Tested terminal socket.

Operation :

Turn on the instrument by pressing the power key-press. Please replace the batteries timely when the low power symbol displayed.

5-1 Insulation testing:

1. Connect the measurand ground terminal with the input wire E, and connect the tested terminal to L. (Make the L terminal connection hand in the air as much as possible. Please connect to the COM terminal when testing for the cable.)



2. According to the detecting mission, select the proper gear, then LCD will display the corresponding voltage; if the tested voltage is unclear, try from the low gear, when it show as "1", change to the higher gear to continue.
3. Select the proper measuring range, press the **TEST** key, then the **L** and **E** terminal will have high voltage output, LCD display symbol , the high voltage indicate light will light up.
4. Press **down** the **TEST** key to progress the measuring, readout the value when it display stable. Release the **TEST** key when finished, the LCD will display "1".
(If the TEST press-key down but the LCD still display "1", it's possibly cause by:
A: The tested resistance has over the selected range or over the Max. measuring range.
B: The wire maybe not being well connected or disconnected.

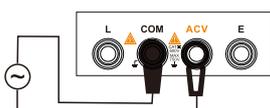
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5. Press the TEST key and spin clockwise to lock and measuring continuously.
6. Caution: It's prohibit from pushing/pulling the connecting wire or touching the tested resistance when the TEST key is being press down cause the L and E terminals will have high voltage output.
If the readout bing unstable all the time, it's possible because:
A: The connecting wire is too long.
B: The humidity of the testing environment may be a little high.
C: The outer layer of the tested resistance need to be connected to the COM.
D: The tested resistance is unstable, lies in critical state.
7. When progressing the insulation test, please use the conductor to protect around the measurand's appearance between the two tested terminals in order to eliminate the measuring inaccuracy which generated from the current's leakage of the measurand's appearance. Plus, the protected conductor should be connected to the COM terminal with the wire.

5-2 AC Voltage measuring

1. Press the gear of **750V~**, connect the **ACV** terminal with the red test pen, and the **COM** terminal with the black one.
2. Full contact two tested terminals and parallel to the electric power with the testing probe. The readout on the LCD screen is the measuring result
3. If the LCD displayed as "000", it indicates that the tested voltage is zero or the connected wire may be disconnected.


Maintenance:

1. This instrument is a precision measuring instrument, please avoid using under bad environment, it's not allow to change the circuit, replace the component and calibrate and repair the meter without obtaining the authorization of the Product Service Center of our company.
2. If there is no display on the LCD even when there is power left, then please check the connecting condition of the batteries.
3. The batteries should be replaced when the low power symbol displayed. Make sure the measuring circuit is cut off. Loose the screw of the battery box, take out the batteries and install the new one, please pay attention to the polarity, after that, put back the cover and fasten with screw.
4. If you don't use the meter for a long period, please take out the batteries to prevent the electrolyte leakage which may affect the usage of the meter or even damage the meter.

Further service:

Please full read this user manual carefully before using. If you have any further question during your usage, please feel free to contact us.

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