

SAFETY INFORMATION

- Read the following safety information carefully before attempting to operate or service the meter.
- To avoid damaging the instrument, do not apply signals which exceed the maximum limits shown in the technical specifications tables.
- Do not use the meter or test leads if they look damaged. Use extreme caution when working around bare conductors or bus bars.
- Accidental contact with the conductor could result in electric shock.
- Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.
- Read the operating instructions before use and follow all safety information.
- Caution when working with voltages above 60V DC or 30V AC RMS. Such voltages pose a shock hazard.
- Before taking resistance measurements or testing acoustic continuity, disconnect circuit from main power supply and all loads from the circuit.

Safety symbols:



Caution refer to this manual before using the meter.



Dangerous voltages.



Meter is protected throughout by double insulation or reinforced insulation.

When servicing, use only specified replacement parts.

CE Comply with EN-61010-1

1. SPECIFICATIONS

1-1 General Information

Environment conditions:

- ① Installation Categories II
- ② Pollution Degree 2
- ③ Altitude up to 2000 meters
- ④ Indoor use only
- ⑤ Relatively humidity 80% max.
- ⑥ Operation Ambient 0~40°C

Maintenance & Clearing:

- ① Repairs or servicing not covered in this manual should only be performed by qualified personnel.
- ② Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.

Display:

Large LCD with dual display

Measurement Range:

200 Ω , 200k Ω , 200M Ω /250V, 200M Ω /500V,
2000M Ω /1000V, 750V/ACV, 1000V/DCV.

Sampling Rate:

2.5 times per second.

Zero Adjustment:

Automatic adjustment.

Over Range Indicator:

Number 1 of highest digit is displayed.

Low Battery Indication:

The “” symbol is displayed when the battery voltage becomes too low.

Operating Temperature:

0°C to 40°C (32°F to 104°F)



Operating Humidity below 80% RH
 Storage Temperature: -10°C to 60°C (14°F to 140°F)
 and Humidity below 70% RH
 Power source: DC9V (6x1.5V Size "AA" battery or Equivalent)
 Dimensions: 200(L) x 92(W) x 50(H) mm
 Weight: Approx 700g include battery
 Accessories: Test leads ,6pcs battery, Carrying case, manual.

1-2 Electrical Specifications

Accuracies are specified in the way:

± (...% of reading +...digits) at 23°C ± 5°C, below 80% RH.

OHMS

Range	Resolution	Accuracy	Max. open Circuit Voltage	Overload Protection
200Ω	0.1 Ω	±(1%+2)	4.5V	250Vrms
200kΩ	0.1k Ω		3.0V	

Continuity Beeper

Range	Resolution	Operation Resistance	Max.open Circuit Voltage	Overload Protection
·)))	0.1 Ω	Resistance ≤40Ω	4.5V	250Vrms
Short circuit current		≤200mA		

DC Voltage

Range	Resolution	Accuracy	Input Impedance	Overload Protection
1000V	1V	+_(0.8%+3)	10MΩ	1000Vrms

AC Voltage (40Hz~400Hz)

Range	Resolution	Accuracy	Input Impedance	Overload Protection
750V	1V	+_(1.2%+10)	10MΩ	750Vrms

Meg OHMS

Range	Resolution	Accuracy	Terminal Voltage
200MΩ /250V	0.1M Ω	±(3%+5)	250V +10%~-0%
200MΩ /500V	0.1M Ω		500V +10%~-0%
0~1000MΩ /1000V	1MΩ	±(5%+5)	1000V +10%~-0%
1000~2000MΩ /1000V			

Range	Test Current		Short circuit current
200MΩ /250V	1mA	250K Ω (load)	≤1mA
200MΩ /500V		500 K Ω (load)	
0~1000MΩ /1000V		1MΩ	
1000~2000MΩ /1000V			



indicating that the charging process is complete.

Note: The charge stored in the insulation will be discharged automatically when the test button is released. Be careful not to turn the range switch knob while the test button is pressed, or the instrument will be damaged.

b). Measurements at 2000M Ω /1000V

Some specifications require testing at 1000V. This voltage must also be selected where the supply voltage of the installation is between 500V and 1000V. First, set the range switch to 1000V and then proceed as indicated in an above 500V test. The above note also applies to testing at 1000V. In addition the following applies.

Note: Make sure that the circuit under test does not include components which will be damaged by the applied 1000V. Many normal components of an installation are likely to be damaged if tested at 1000V. Examples are power factor correction capacitors, low voltage mineral insulated cables, electronic light dimmers, electronic ballasts and starters for fluorescent lamps etc...

c). Lock power on Feature

For hands free operation a lock power on feature is incorporated on the press to test button. Set the LOCK button to lock test voltage. Pressing it again will switch the LOCK function off.

5. LOW RESISTANCE (CONTINUITY) MEASUREMENTS

a). Set the range switch to the 200 Ω position.

b). Connect the red test lead to the $\vee \Omega$ terminal and black to the COM terminal.

c). Connect the tips of the test leads to both ends of the circuit under test. Read resistance in Ω on the LCD.

d). When the resistance on the circuit is below approximately 40 Ω , it will be indicated by a continuous beep.

6. AC/DC VOLTAGE MEASUREMENTS

a). Set the range switch to ACV or DCV position

b). Connect red test lead to " $\vee \Omega$ " terminal and black test lead to terminal "COM".

b) Connect test prods of test leads IN PARALLEL to the circuit being measured.

c) Read the voltage value on LCD.

7. POWER TOOLS AND SMALL APPLIANCES

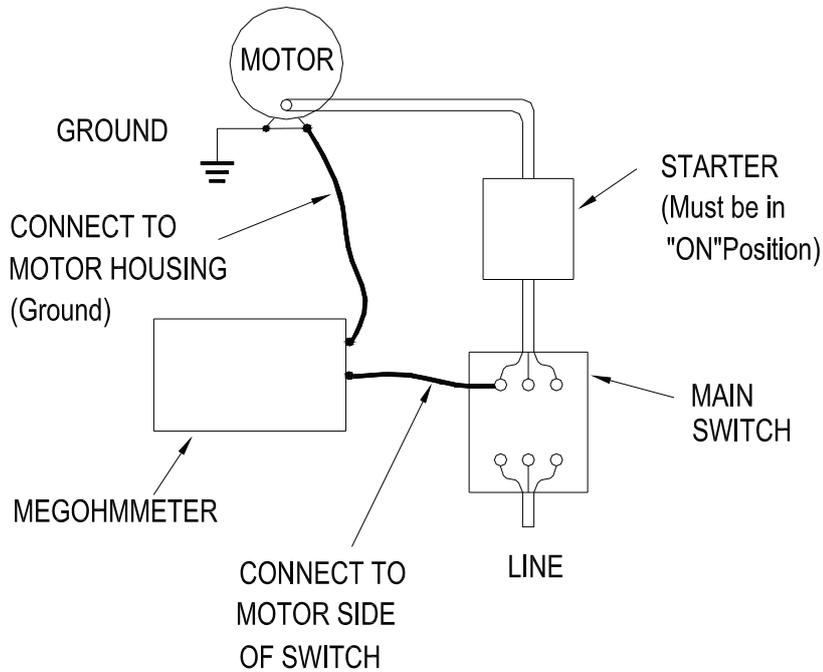
This test would also apply to other similar equipment that has a line cord. For double insulated power tools, the megohmmeter lead shown connected to the housing would be connected to some metal part of the tool (e.g. chuck, blade).

Note: The switch of the device must be in the "ON" position and the main power should be disconnected.

MOTORS

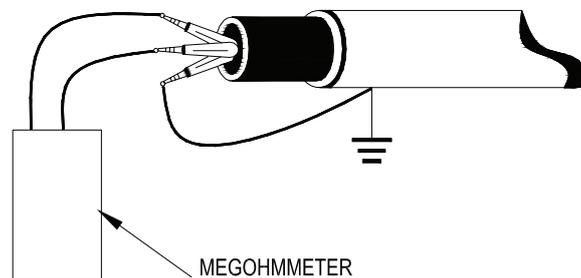
AC - Disconnect the motor from the line by disconnecting the wires at the motor terminals or by opening the main switch. If the main switch is used and the motor also has a starter then the starter must be held, by some means, in the "ON" position. In the latter case, the measured resistance will include the resistance of the motor, wire and all other components between the motor and the main switch. If a weakness is indicated, the motor and other components should be checked individually. If the motor is disconnected at the motor terminals, connect one megohmmeter lead to the grounded motor housing and the other lead to one of the motor leads.

DC - Disconnect the motor from the line. To test the brush rigging, field coils and armature - connect one megohmmeter lead to the grounded motor housing and the other lead to the brush on the commutator. If the resistance measurement indicates a weakness, raise the brushes off the commutator and separately test the armature, field coils and brush rigging by connecting one megohmmeter lead to each of them individually, leaving the other connected to the grounded motor housing. The above also applies to DC Generators.



CABLES

Disconnect the cable from the line. Also disconnect opposite end to avoid errors due to leakage from other equipment. Check each conductor to ground and /or lead sheath by connecting one megohmmeter lead to a ground and /or lead sheath and the other megohmmeter lead to each of the conductors in turn. Check insulation resistance between conductors by connecting megohmmeter leads to conductors in pairs.



For after sale service, please send to:

Electronic Specialties, Inc.
139 Elizabeth Ln.
Genoa City, WI 53128

Phone 262-279-1400
Fax 262-279-1300

For more quality test instruments, please check our web site

www.esitest.com

www.OLCT.co 

Order Online
www.olct.co

Email Order
info@olct.co

Phone Order
0466 909 653

Fax Order
07 3041 3232

