OVERVIEW

MIE0141/MIE0142 multimeter is a hand-held 3 1/2 digital display digital multimeters with advanced design, multiple entire functions, novel figurations and reliable performance. This meter is fully capable to measure voltage both AC and DC, DC current, resistance, inductance, temperature and forward voltage drop of diode, transistor, hFE and continuity test etc. Please use multi-purpose socket to measure SMT as well. This operating manual covers information on safety and cautions to fulfill CE mark standard. Please read the relevant information carefully and observe all the warnings and notes strictly.

Warning: To avoid electric shock or personal injury, read the "Safety information" and „Rules for Safe Operation" carefully before using the meter.

RULES FOR SAFE OPERATION


Warning

To avoid possible electric shock or personal injury, and to avoid possible damage to the Meter or to the equipment under test, adhere to the following rules:

● Before using the Meter inspect the case. Do not use the Meter if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.

● Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity. Replace damaged test leads with identical model number or electrical specifications before using the Meter.

EN

EN

THE METER STRUCTURE

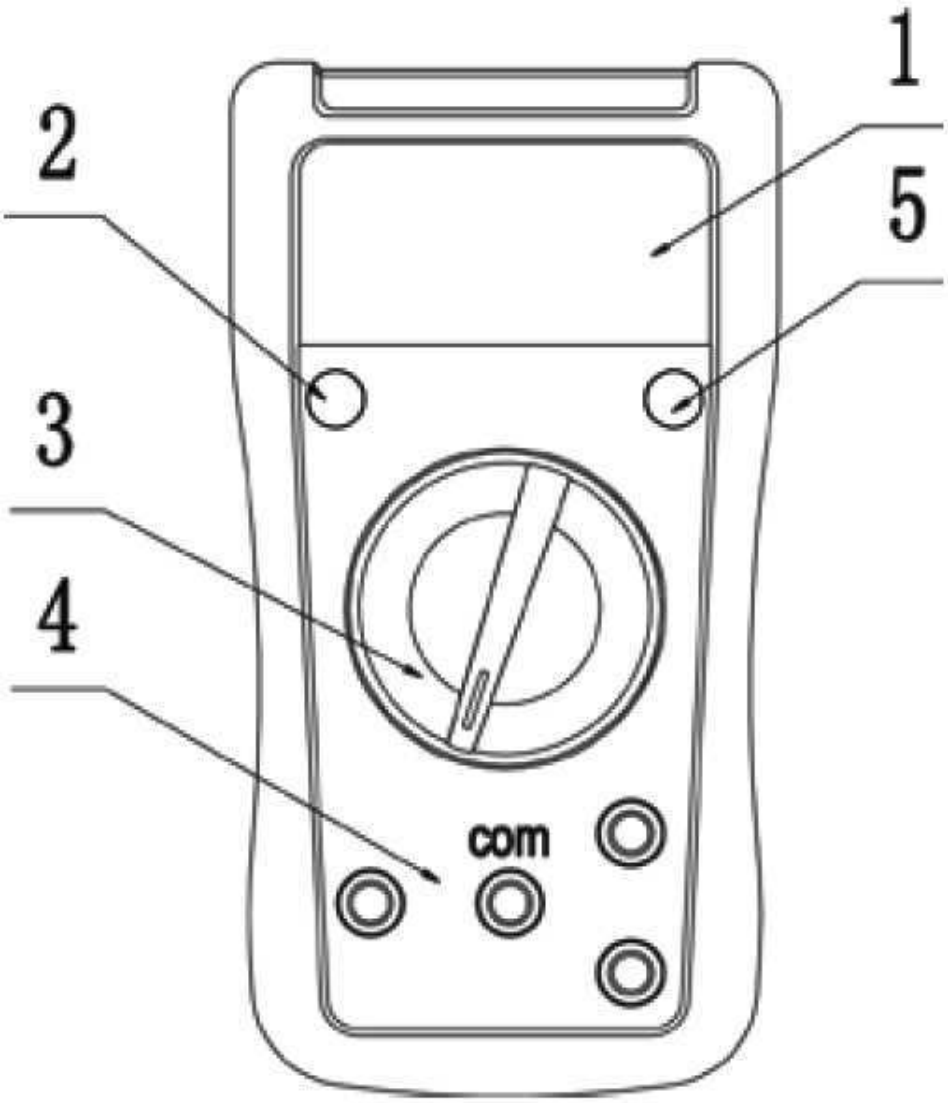

Diagram 1

1. LCD display
2. Power button
3. Rotary switch
4. Input terminals
5. Hold button

EN

MEASUREMENT OPERATION

First check on 9V battery, then turn rotary switch to the measuring position. If the low battery, sign will be displayed on LCD panel. Nearly to ⚠ sign on the meter front panel terminal input which alarm not exceed the testing voltage and current input value limitation.

I. DC or AC voltage measurement (see diagram 2)

1) Turn rotary switch to **V~** or **V⎓** voltage measurement.
2) Insert the red test lead into the "V" terminal and the black test lead into the "COM" terminal, connect the lest leads across with the object being measured. The measured value shows on the display AC voltage measurement shows on true root mean square value stability period.
3) In each range, the meter has an input impedance of 10MΩ. V~ input impedance is about 4.5MΩ. This loading effect can cause measurement errors in high impedance circuits. If the circuit impedance is less than or equal to 10kΩ, the error is negligible (0.1% or less).

⚠ **Warning:**
• To avoid possibly damages to the meter, please do not attempt to input higher than 600V.
• To avoid electrical shock, please pay attention during the high voltage measurement.

EN

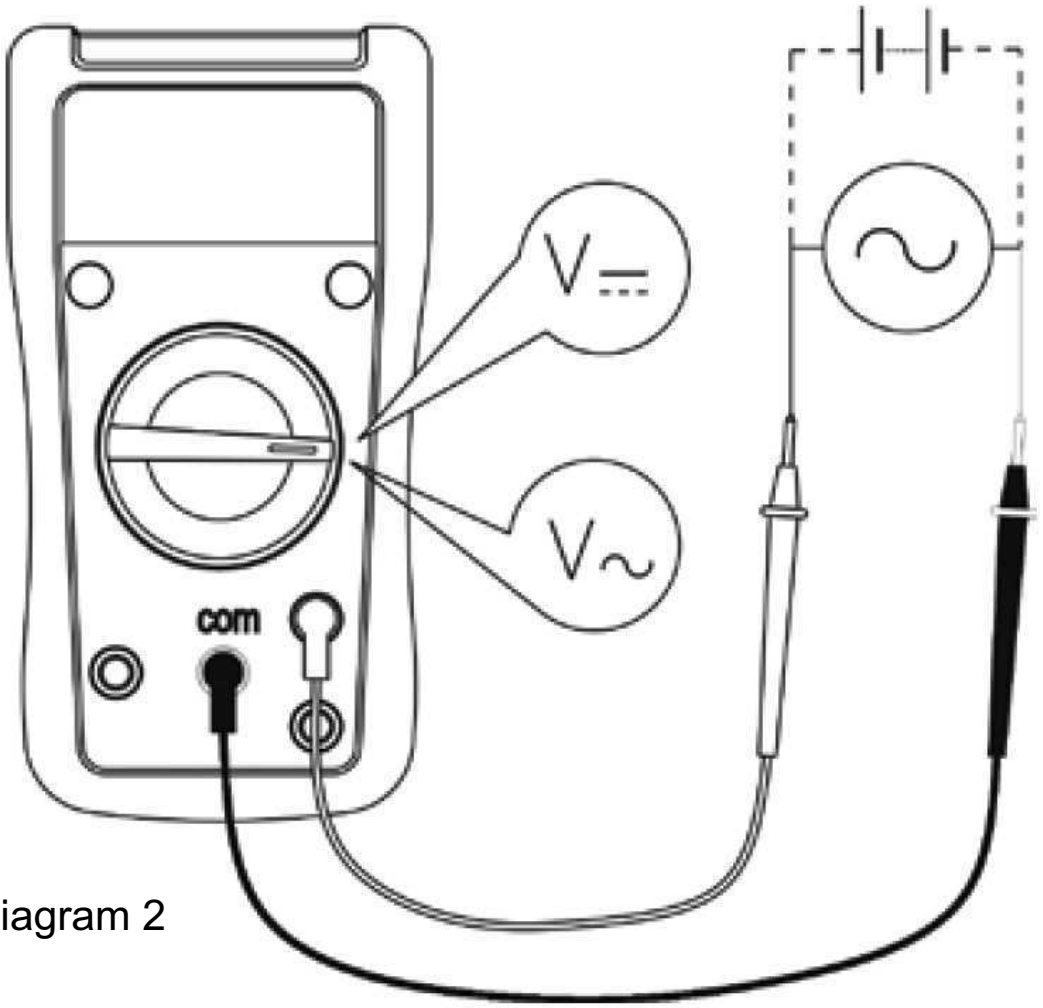

Diagram 2

II. DC current measurement (see diagram 3)

1) Turn rotary switch to A⎓ current measurement.
2) Insert the red test lead into the „ mA" or "10A" terminal, and the black test lead into the „COM" terminal, Connect the test leads across with the object being measured. The measured value shows on the display.

⚠ Warning:

• Pre-requisites: Turn off power to the circuit before the connection between the test leads across with the object being measured.

• Selecting the correct terminal input and turn the rotary switch to select the measuring function. In case of no any idea on the value input of the current, just simply test from the high value to low one.

EN

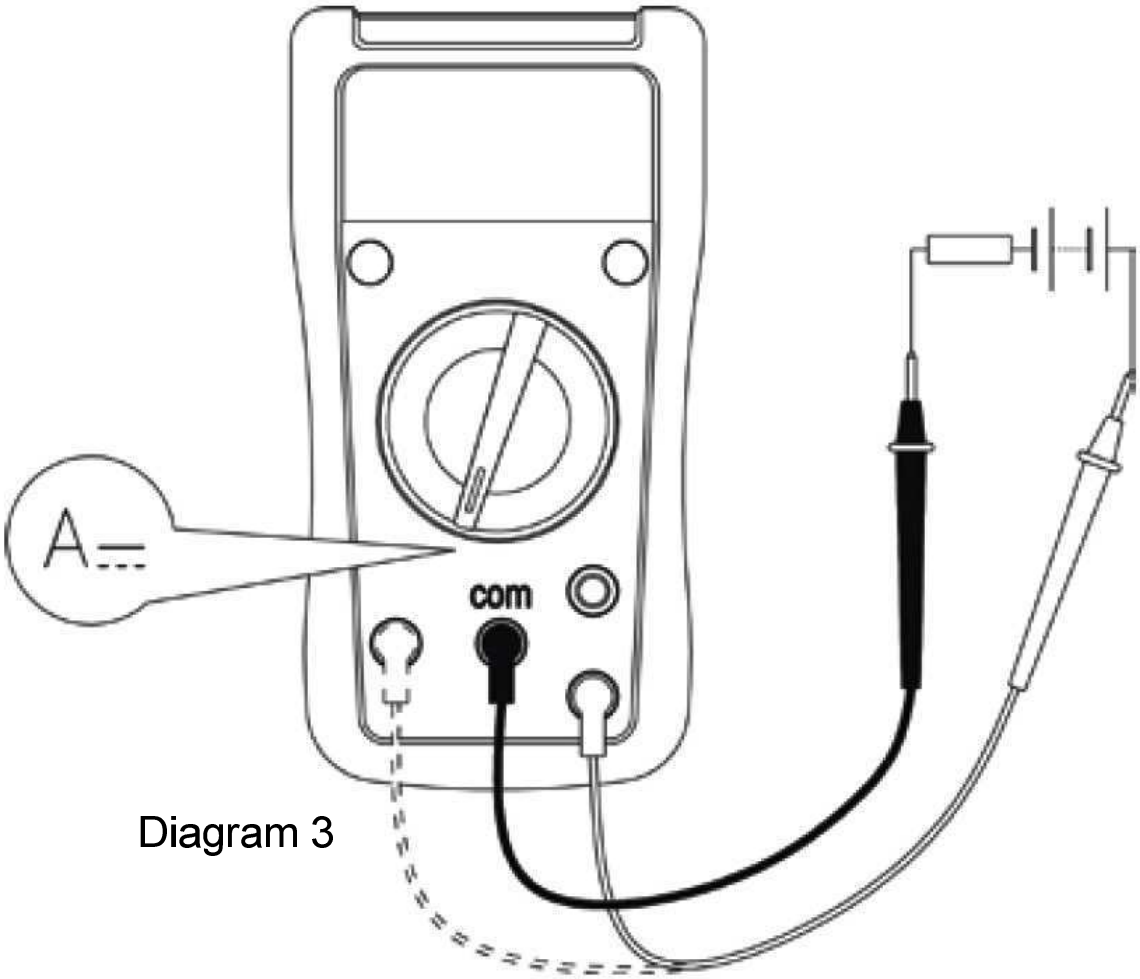

Diagram 3

EN

III. Resistance measurement (see diagram 4)

1)Turn rotary switch to "Ω" ohm measurement.
2) Insert the red test lead into the "Ω" terminal and the black test lead into the "COM" terminal. Connect the test leads across with the object being measured. The measured value shows on the display.

⚠ Warning:
• The LCD displays „1" indicating open-circuit for the tested resistor or the resistor value is higher than the maximum range of the meter.
• To maintain the resistance measurement accuracy, discount circuit power and discharge all the high voltage capacitors during the measuring resistance.
• For high-resistance measurement greater than 1MΩ, it is normal to take several seconds to obtain a stable reading with short test leads for measurement.
• Do not input higher than DC 60V and AC 30V voltage to prevent any damage and accident.

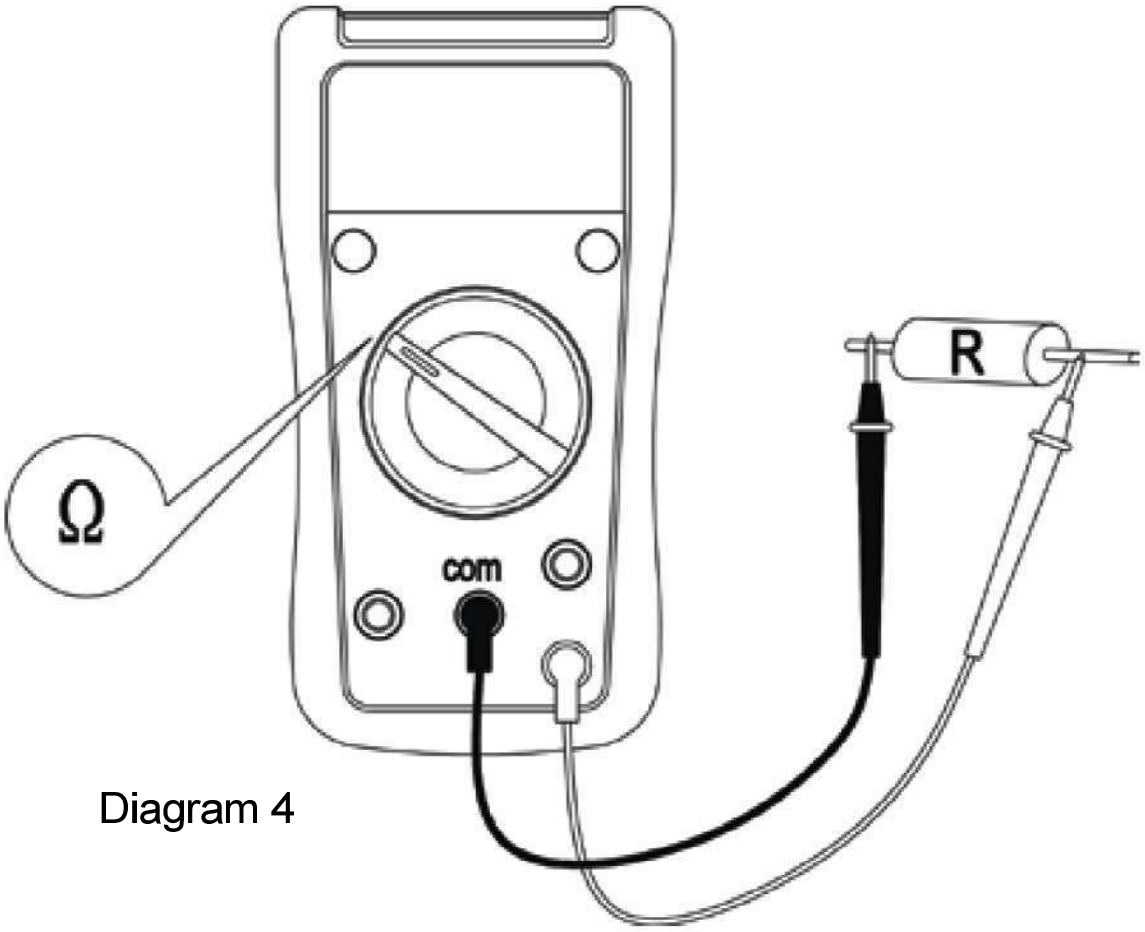

Diagram 4

IV. Diodes measurement (see diagram 5)

1)Turn rotary switch to →|•))).
2) Insert the red test lead into the →| terminal and the black test lead into the "COM" terminal. Red test lead is "+" Black test lead is "-".
3) In a circuit, a good diode should still produce a forward voltage drop reading of 500~800mV. However, the reverse voltage drop reading can vary depending on the resistance of other pathways between the probe tips.

EN

⚠ Warning:

• The LCD displays "1" indicating open-circuit for the tested diodes or the testing the diodes with polarity.

• To maintain the diodes measurement accuracy disconnect circuit power and discharge all the high voltage capacitors during the measuring resistance.

• Do not input higher than DC 60V and AC 30V voltage to prevent any damage and accident.

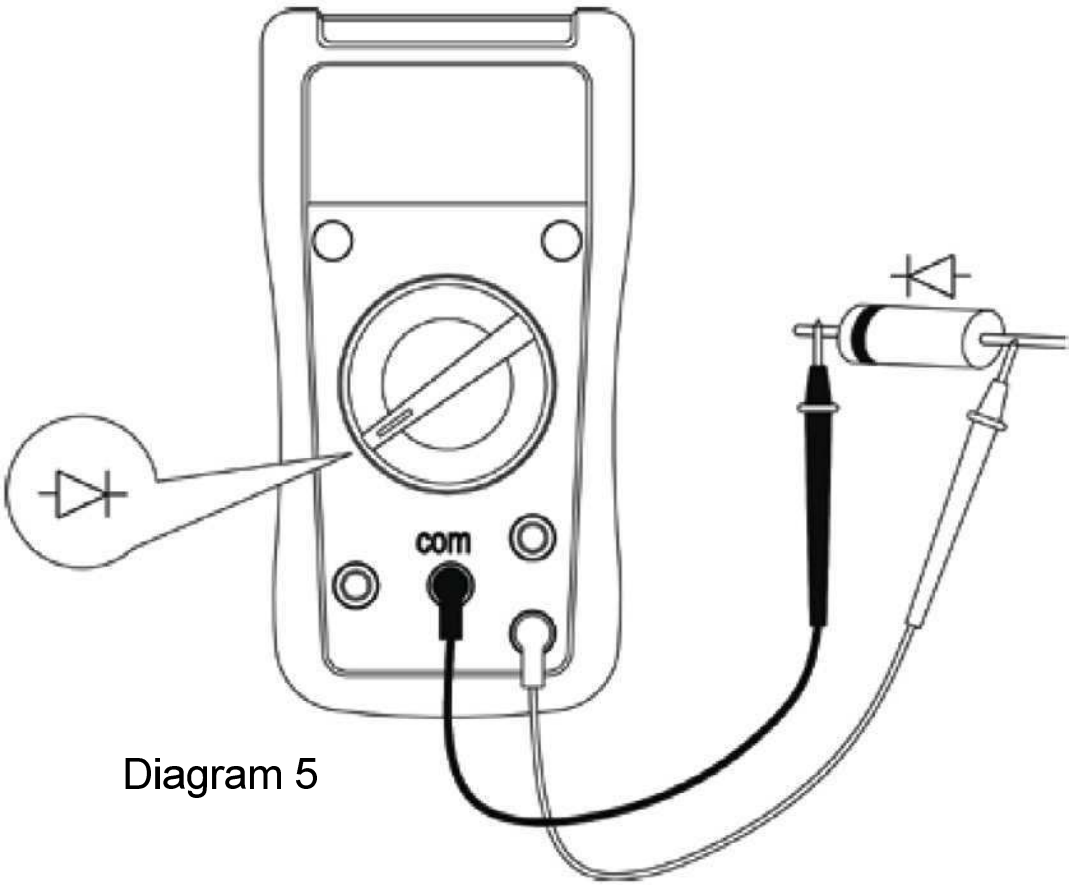

Diagram 5

EN

.

2) Insert the red test lead into the terminal and the black test lead into the "COM" terminal. If between both terminals show resistance >70Ω, it is a short-circuit,no buzzer, but if between both terminals show resistances 10Ω, it is a good connection with continually buzzer. Resistance value on tested circuit display on LCD (Unit is Ω).

⚠ Warning:

• To maintain the diodes measurement accuracy disconnect circuit power and discharge all the high voltage capacitors during the measuring resistance.

• Do not input higher than DC 60V and AC 30V voltage to prevent any damage and accident.

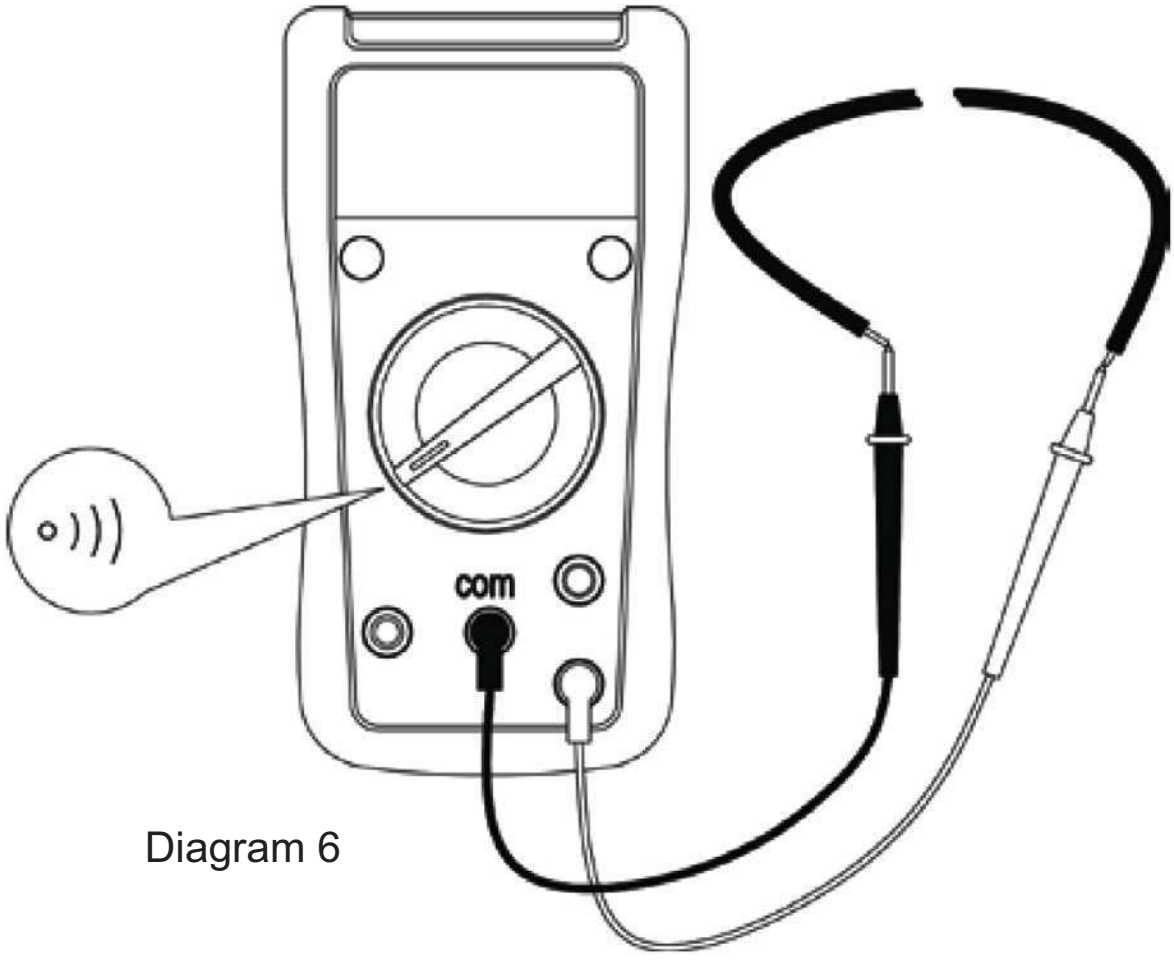

Diagram 6

EN

⚠ **Warning:**

• To avoid damages to the Meter or to the devices under test, do not input any current over 60V DC or 30V AC.

• Take off the multi-purpose socket after the measurement.

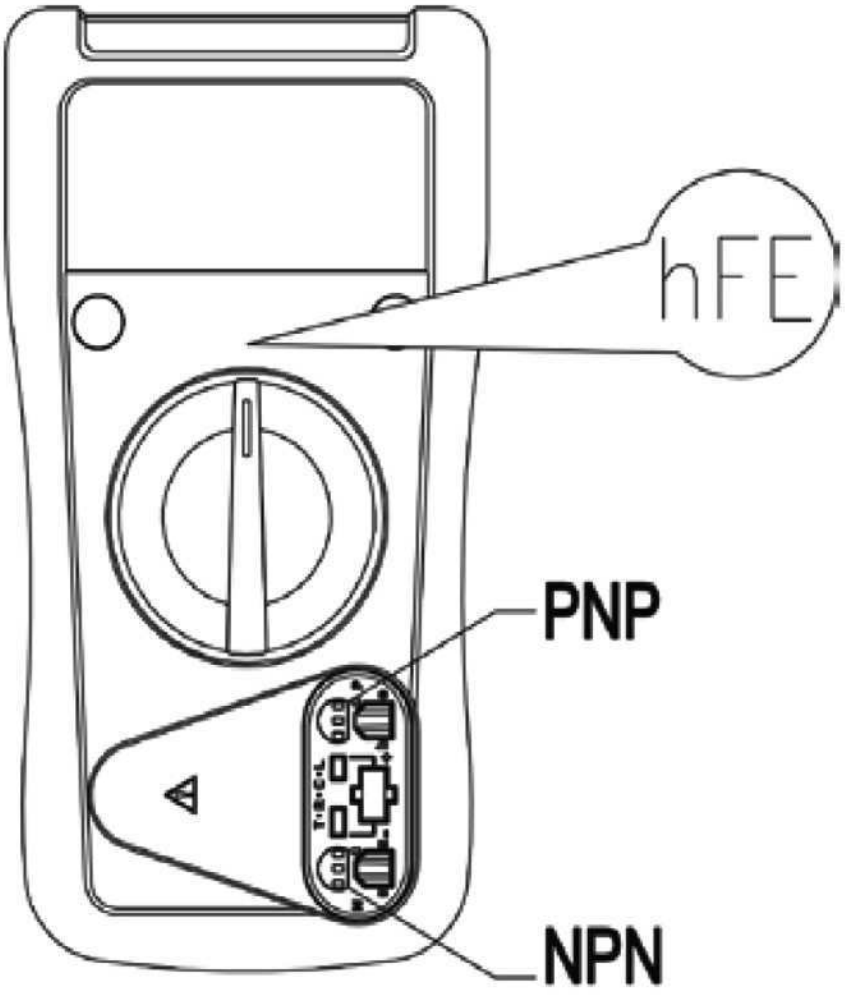

Diagram 7

EN

⚠ **Warning:**

• Maintain clean the point contact temperature probe and do not let the probe contact point to have any serious influence.

• Take off and well keep the point contact temperature after the measurement.

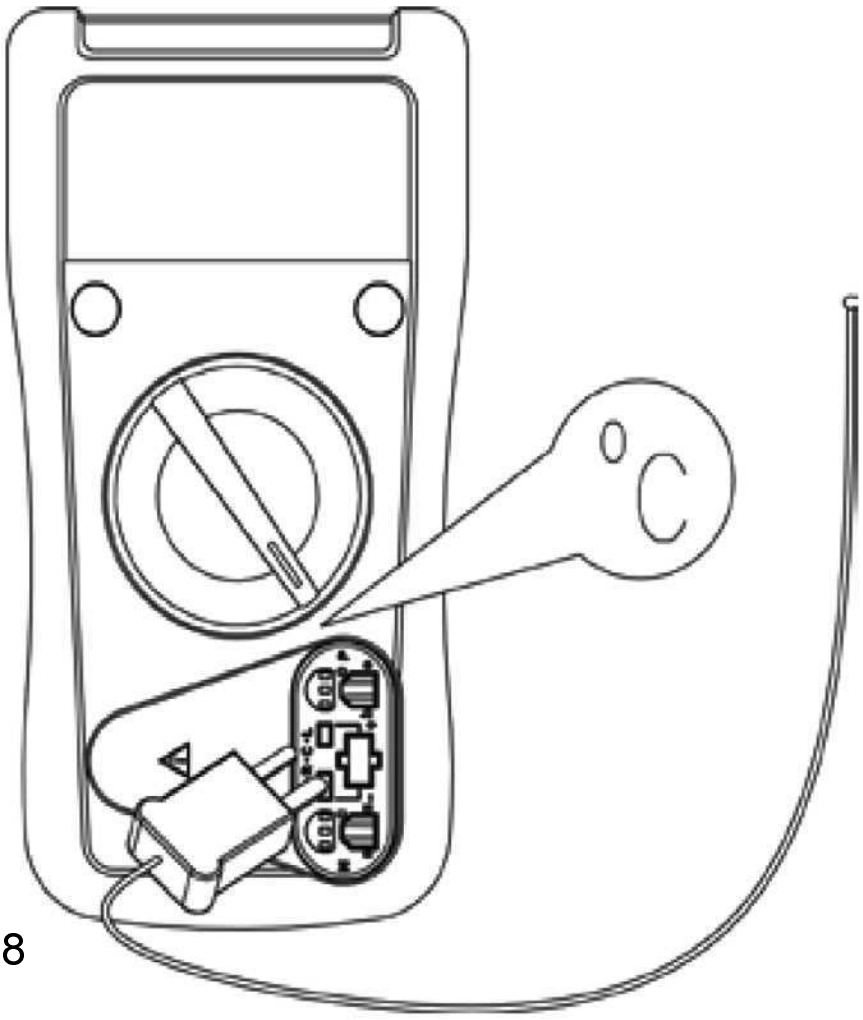

Diagram 8

EN

⊣⊢ terminal and the black test lead into the "COM" terminal. Red test lead is "+", black test lead is "-". Connect the test leads across with the battery being measured ensuring the polarity is correct. The measured value shows on the display, which is the voltage between the cathode and anode of the battery.

3) 1.5V usage ≤1.5V dry cell battery test, resistance load is approximately for 15Ω; 9V is only suitable for ≤15V dry cell battery test, resistance load is approximately for 1kΩ.

⚠ **Warning:**

• Refuse to keep a long time connection battery in the measuring process, it avoids to loss the battery energy, to reduce battery's life.

• Refuses to use in over the specification of the battery or the current test, in order to avoid damages the measuring appliance and endangers the personal safety!

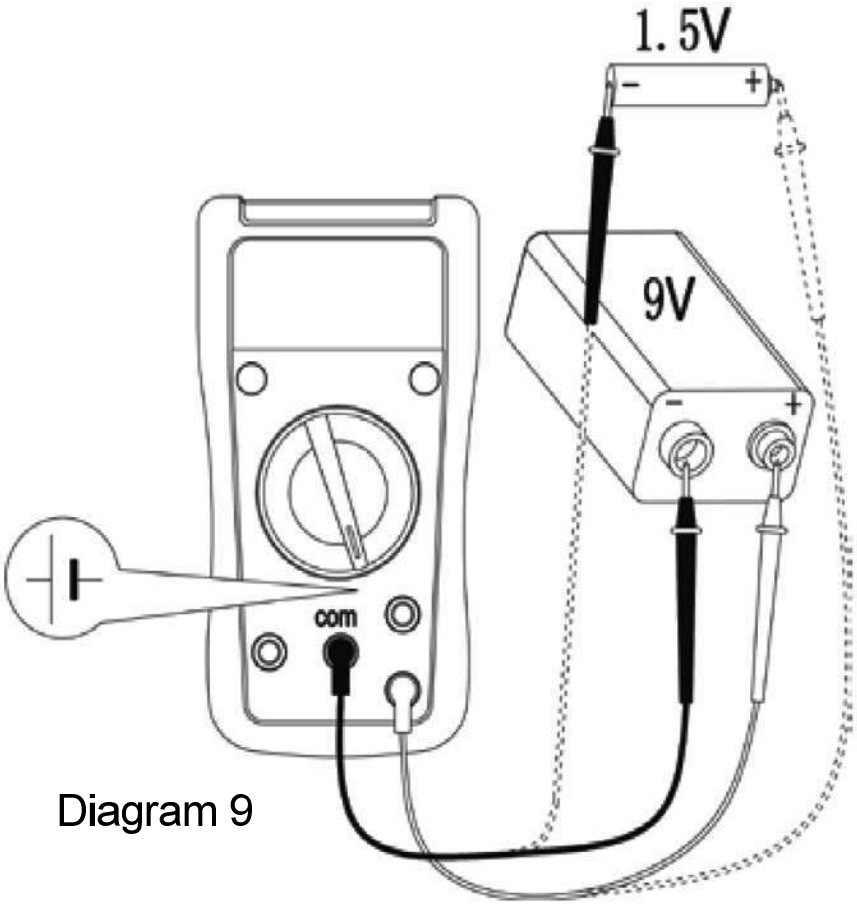

Diagram 9

EN

ACCURACY SPECIFICATION

Accuracy: ± (a% reading + b digits) guarantee for 1 year
Operating temperature: 23^0C ±5^0C
Relative humidity: <75%

1. DC voltage

Range	Resolution	Accuracy
200mV	0.1mV	±(0.5% + 2)
2V	1mV	
20V	10mV	
200V	100mV	
600V	1V	±(0.8% + 2)

- Input impedance: 10MΩ
- Maximum input voltage: 600V DC

2. AC voltage

Range	Resolution	Accuracy
200V	0.1mV	±(1.2% + 3)
600V	1mV	

EN

- Input impedance: about 4.5MΩ
- Frequency: 45Hz ~ 400Hz
- Display: effective value of sine wave (average value) each measurement is applicable from 5% of range as reference.
- Maximum input voltage: 600V AC.

⚠ **Warning:**
When ≤5A continuous measurement is allowed.
When > 5A continuous measurement less than 10 seconds at an interval more than 15 minutes.

4. Resistance

Range	Resolution	Accuracy
200Ω	0.1Ω	±(0.8% + 5)
2kΩ	1Ω	
20kΩ	10Ω	
200kΩ	100Ω	
2MΩ	1kΩ	
20MΩ	10kΩ	±(1% + 5)

EN

● Overload protection: 250V AC or DC

		1mV	Display positive voltage decline
Transistor	hFE	1β	
Continuity test		1Ω	<1Ω buzzer beep continuously

EN

- Overload protection: 250V AC or DC.

MAINTENANCE AND SERVICE

⚠ Warning: Make sure the test leads take off the terminal and the circuit as well as power off the meter if want to open the meter cover.

1. General service and maintenance
• Periodically wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.
• Any abnormal on the meter, stop use the meter and return to service center.
• When need to have calibration on the meter, please allow certified engineer or specific service center for the service maintenance.

2. Replacing the battery and fuse, see diagram 9.

⚠ Warning: LCD display  sign indicating battery will be run out and need to replace a new battery, if fail to do that. It causes the variance of the measuring result.

Battery specification: 9V BF22 or NEDA 1604 or 006P

Operating steps:
(1) Turn the power in "off" situation, then remove the test lead out of the meter.
(2) Use screwdriver to take off the screw on the battery cover. Then you can take off old battery for replacing.
(3) User screwdriver to take off two pieces of screws, then you can replacing the burned fuse(s) as replacement. Fuse specification:
- F1 fuse φ6x25mm, F 10A H 250V
- F2 fuse φ6x25mm, F 1A H 250V

EN

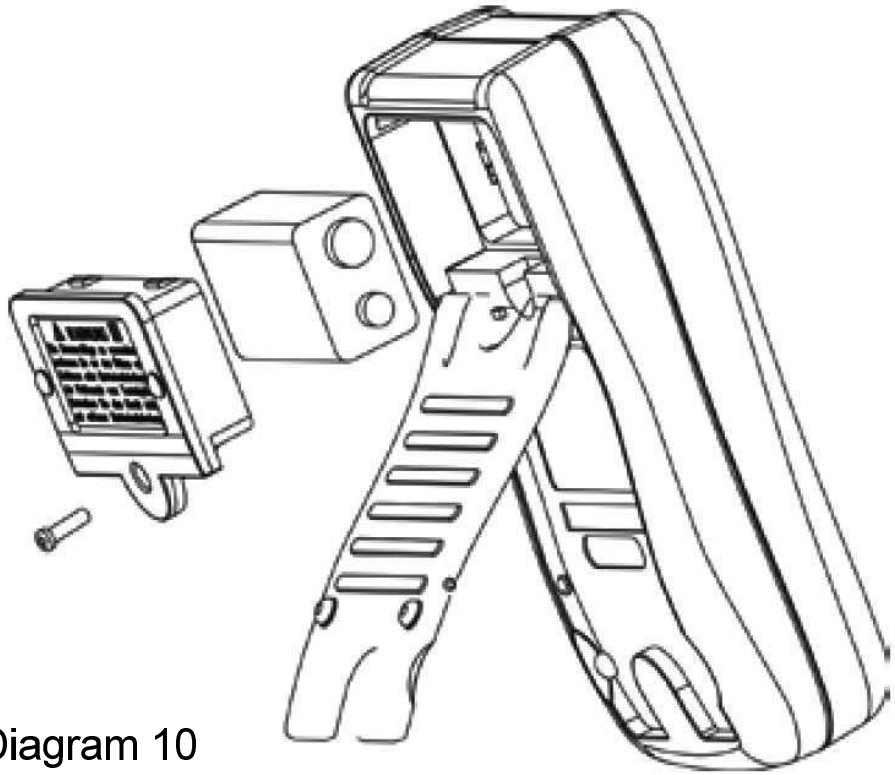

Diagram 10

Specifications are subject to change without notice.

English

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and othor European countries with separate collection systems)

This marking shown on the product or Its literature, indicates that It should not be disposed with other household wastes at the end of its working life. To prevent possible harm lo the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract

This product should not be mixed with other commercial wastes for disposal

EN

Made in China for LECHPOL Zbigniew Leszek, Miętne, 1 Garwolińska Street 08-400 Garwolin.

CE RoHS