

IV. OPERATION INSTRUCTION:

**1. DC Voltage Measurement V(DCV):**

- 1.1 Connect RED test lead to “V mA” jack, BLACK test lead to “COM” jack.
- 1.2 Set the FUNCTION switch to the desired V(DCV) position. If not sure, set to the highest range.
- 1.3 Connect the test leads across the source or load under measurement.

**2. DC Current Measurement A (DCA):**

- 2.1 Connect the RED test lead to “V mA” jack when the current is less than 200 mA and to “10A” jack when the current is larger than 200 mA. Connect the BLACK test lead to the “COM” jack. Set the FUNCTION switch to the desired DCA position. Connect the test leads across the source or load under measurement.

**3. AC Voltage Measurement V (ACV):**

- 3.1 Connect the RED test lead to “V mA” jack and BLACK test lead to the “COM” jack.
- 3.2 Set the FUNCTION switch to the desired ACV position.
- 3.3 Connect the test leads across the source or load under measurement.

**4. Resistance Measurement:**

- 4.1 Connect the RED test lead to “V mA” jack and BLACK test lead to “COM” jack.
- 4.2 Set the FUNCTION switch to the OHM position.
- 4.3 Connect the test leads across the resistor under measurement.
- 4.4 When measuring the resistance, the power should be turned off and in short circuit status by connecting the two test leads.

**5. Transistor hFE Measurement:**

- 5.1 Set the FUNCTION switch to the hFE position.
- 5.2 Insert the E.B.C. of the PNP or NPN transistor to the proper jack in the socket on the front panel.

**6. Diode and Audible Continuity Measurement**

- 6.1 Connect RED test lead to the “V mA” jack and BLACK test lead to the “COM” jack.
- 6.2 Set the FUNCTION switch to the  position and connect the RED test leads to the ANODE of diode and BLACK to CATHODE. The display will show the approx. Forward voltage of the diode. If connect the test leads on the other way round, the display will show an overrange status “1”
- 6.3 Buzzer sounds if the resistance between the two probes less than approximately 70.

**7. Battery Test:**

- 7.1 Connect RED test lead to the “VΩmA” jack and BLACK test lead to the “COM” jack.
- 7.2 Turn the FUNCTION switch to the BATT position. Connect the test lead across the battery under measurement. The display will show the voltage of the battery.

V. BATTERY AND FUSE REPLACEMENT:

When the voltage of the battery is low, the symbol  “BATT” will appear on the display. Then the battery should be replaced. You should check the fuse when no measurement could be taken for current using mA range.

# Digital Multimeter

## Operating Manual



### **WARNING**

To Prevent Serious Injury From Accidental Operation:  
Turn The Power Switch Of The Tool To Its “Off” Position  
And Remove The Test Leads Before Performing Any Inspection,  
Maintenance, Or Cleaning Procedures.

Thanks for buying our product. Please go through the instruction manual before starting to use the meter.

**Safety Instructions**

To avoid an electric shock or injury, read and follow the instructions. If at all unsure seek advice from a suitably competent and qualified person before use. Retain instructions for future reference.

- Check the meter and leads before use, if damaged do not use. Ensure insulation around leads and connectors are not damaged. This product has no serviceable parts
- Do not use in area where there is flammable vapour or gas
- Do not use above the marked voltages
- When measuring current, turn off the circuit before using the meter
- Keep fingers behind the fingers guards on the probes and remove probes before replacing the battery. Do not use without the battery cover. Replace battery when the low battery indicator appear
- Connect the common test lead before the live test lead, when disconnecting, disconnect the live lead first
- Caution when working above 30V AC, 42V peak or 60V DC as these pose a shock hazard. Do not measure voltages above 500V in category 1 installations

**I. INTRODUCTION:**

**1. Switch**

Our DMM adopt rotational switch which situated at the middle of the front case.

It is used for the selection of FUNCTION, RANGE AND POWER ON - OFF.

In order to save energy, please turn the switch to "OFF" position when not in use.

**2. Display**

3 12mm Height LCD Display.

**3. "COM" Jack**

Common Jack

**4. "VΩmA" Jack**

Voltage, resistance, no more than 200Ma, current and battery input test jack, 50Hz sine wave output jack.

**5. "10A" Jack**

For the input of more than 200mA current

**II. FEATURES:**

Display: 3 LCD With Maximum Display 1999.

Polarity: Auto Polarization

Overrange: Maximum Display "1"

Working Environment: Temp. 0 - 40°C Relative

Storing Environment: - 15 - 50°C

Battery: 9V

High Voltage Symbol: DC 1000V or AC 750V range will show high voltage symbol "HV"

Low Voltage Indication: Left side of LCD will show  $\rightarrow$  or BAT symbol.

Weight: 126g Not Include Battery

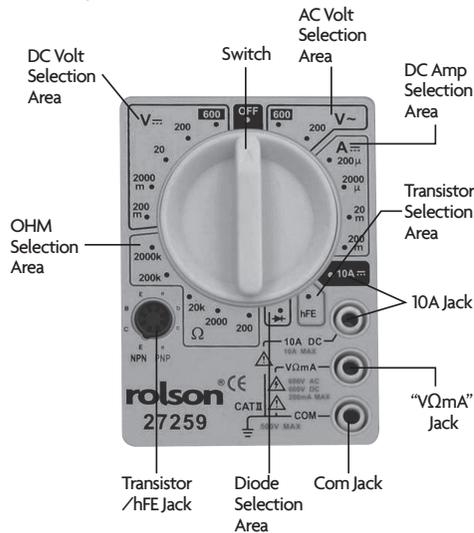
**III. TECHNICAL SPECIFICATION:**

Accuracy: +a% Reading + No. Of Digits

Guaranteed For 1 Year.

Environmental Temperature: 23°C + 5°C

Relative Humidity: <75%



**1. DC Voltage:**

Range	Resolution	Accuracy
200mv	100uv	±0.5% of Rdg ±2 Digit

2mV	1mV	
20mV	10mV	
200V	100mV	
1000V	1V	± 0.8% of rdg ±3 Digit

Input impedance: 1M

Overload protection: DC or AC peak value of 1000V.

**2. DC Current:**

RANGE	RESOLUTION	ACCURACY
200uA	100nA	±1% of rdg ±2D
2000uA	1uA	
20mA	10uA	
200mA	100uA	±1.2% of rdg ±2D
10A	10mA	±2% of rdg ±2D

Overload protection: 02A/250V fused 10 A range not fused.

**3. AC Voltage:**

RANGE	RESOLUTION	ACCURACY
200V	100mV	±1.2% of rdg ±10D
1000V	1V	

Frecuqcy range: 45Hz to 400Hz

Overload protection: AC 750V rms

Indication: Average value(rms of sine wave.)

**4. Resistance:**

RANGE	RESOLUTION	ACCURACY
200Ω	100mΩ	±0.8% of rdg ±20D
2000Ω	1Ω	
20KΩ	10Ω	
200KΩ	100Ω	
2000KΩ	1KΩ	

Overload protection: 250VDC or AC rms. Less than 10 sec.

Maximum open circuit voltage: 2.8V

**5. Transistor hFE:**

Vce approximately 2.8V, Ib approximately 10A.

Display show approximately hFE 0-1000.

**6. Diode and Audible Continuity:**

Diode: Testing voltage approx. 2.4V, current 1.5Ma. indicate forward diode approx. value.

Buzzer: Sounds when measure less than 70 fl 20.

**7. Battery Test:**

RANGE	CURRENT CONSUNED
1.5V	50mA
9V	5mA