M830A

DIGITAL MULTIMETER

OPERATING MANUAL

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

I. INTRODUCTION:

1. SWITCH

Our DMM adopt rotary 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 using the device.

2. DISPLAY

3 1/2, 12mm height LCD display.

3. "COM" terminal

Common terminal

4. "VΩmA" terminal

Voltage, resistance, current (200 mA maximum), and battery input test jack, 50Hz sine wave output.

II. FEATURES:

Display: 3 1/2 LCD with maximum display 1999.
Polarity: Auto polarization
Overrange: Maximum display "1"
Operating conditions: temperature: 0~40 ℃
relative humidity: <80%
Storage conditions: -15~50℃
Battery: 9V 6F22
High voltage symbol: DC/AC 500V range will show

high voltage symbol “HV”.

Low battery indication: Left side of LCD will show “BAT” symbol.

Size: 125mm ×70mm ×27mm

Weight: 126g not include battery

III. TECHNICAL SPECIFICATION:

Accuracy: +a% reading + No. of digits

Guaranteed for 1 year.

Environmental temperature: 23℃±5℃

Relative Humidity: < 80%

1. DC Voltage:

RANGE	RESOLUTION	ACCURACY
200mV	100uV	±0.5% of rdg ±2digit
2V	1mV	
20V	10mV	
200V	100mV	
500V	1V	±0.8% of rdg ±2digit

Input impedance: 1 MΩ

Overload protection: DC or AC RMS of 500V.

2. DC Current:

RANGE	RESOLUTION	ACCURACY
2mA	1uA	±1.0% of rdg ±2digit
20mA	10uA	
200mA	100uA	±1.5% of rdg ±2digit

Overload protection: 250mA/600V fused.

3. AC Voltage

RANGE	RESOLUTION	ACCURACY
200V	100mV	±1.2% of rdg
500V	1V	±10digit

Frequency range: 45Hz to 400 Hz
Overload protection: AC 500V rms
Indication: Average value (rms of sine wave.)

4. Resistance:

RANGE	RESOLUTIO	ACCURACY
200Ω	0.1Ω	±0.8% of rdg ±5digit
2000Ω	1Ω	
20KΩ	10Ω	
200KΩ	100Ω	
2000KΩ	1KΩ	±1.0% of rdg ±2digit

Overload protection: 250VDC or AC rms. Less than 10 sec.
Maximum open circuit voltage: 2.8V

5. Diode:

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

6. Sine Wave Output:

Output sine wave 50Hz, output current approx.: 3Vp-p

7. Battery Test:

RANGE	CURRENT CONSUMED
1.5V	50mA
9V	5mA

IV. OPERATION INSTRUCTION:

1. DC Voltage Measurement:

1.1 Put the rotary switch on the V⎓ position. If you are not sure, use the highest range.

1.2 Connect the test leads across the source or load under measurement.

1.3 Read the displayed value. The polarity of red test lead connection will be indicated when making a DCV measurement.

2. DC Current Measurement:

2.1 Connect the red test lead to “VΩmA” jack when the current is less than 200mA and

Set the function switch to the desired DCA position. Connect the test leads across the source or load under measurement.

3.AC Voltage Measurement:

3.1 Put the rotary switch on the V~ position. If you are not sure, use the highest range.

3.2 Connect the test leads across the source or load under measurement.

3.3 Read the displayed value.

4. Resistance Measurement:

4.1 Connect the RED test lead to “VΩmA” jack and BLACK test lead to “COM” jack.

4.2 Set the FUNCTION switch o the Ω 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 statues by connecting the two test leads.

5. Diode Measurement:

5.1 Connect RED test lead to the “VΩmA” jack and BLACK test lead to the “COM” jack.

5.2 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 then show the approx. forward voltage of this diode. If connect the test leads on the other way round, the display will show an overrange status “1”

6. 50Hz Sine wave Output:

6.1 Connect RED test lead to the “VΩmA” jack and BLACK test lead to the “COM” jack.

6.2 Turn the FUCTION switch to position and the RED and BLACK test leads being the output jack.

Attention:

This function being the output message so don’t use for measuring voltage.

The circuit being protected by short circuit device.

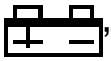
The voltage cannot exceed 40Vp-p.

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.

MAINTENANCE:

Do not attempt to repair or service your Meter unless you are qualified to do so and have the relevant calibration, performance test, and service information.

Clean:

Detergent WD-40 solution can be used for clean the surface.

Test lead specification:

Electric Rating CAT III 500V 1A.