





## General Specifications

- 1 Maximum Voltage between any Terminals and Grounding: 1000V.
- 1  Fused Protection for  $\mu\text{A}$  mA  $^{\circ}\text{C}$  Input Terminal: **Model DMM8060/8061** Glass fuse, 0.5A, 250V, fast type,  $\phi$  5x20mm.
- 1  Fused Protection for **10A** Input Terminal: **DMM8060/8061** Glass fuse, 10A, 250V, fast type,  $\phi$  5x20mm.
- 1 Maximum Display: Digital: 3999
- 1 Measurement Speed: Updates 3 times/second.
- 1 Temperature: Operating :  $0^{\circ}\text{C}$ ~ $40^{\circ}\text{C}$  ( $32^{\circ}\text{F}$  ~ $104^{\circ}\text{F}$ ).  
Storage :  $-10^{\circ}\text{C}$ ~ $50^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ~ $122^{\circ}\text{F}$ ).
- 1 Relative Humidity:  $\leq 75\%$  @  $0^{\circ}\text{C}$  -  $30^{\circ}\text{C}$ ;  $\leq 50\%$  @  $31^{\circ}\text{C}$  -  $40^{\circ}\text{C}$ ;
- 1 Altitude: Operating: 2000 m.  
Storage : 10000 m.
- 1 Battery Type: One piece of 9V (NEDA1604 or 6F22 or 006P).
- 1 Battery Deficiency: Display 
- 1 Dimensions (HxWxL): 177 x 85 x 40 mm.
- 1 Weight: Approximate 300g (battery included).
- 1 Safety/Compliances: IEC61010 CAT.III 1000V,  
CAT.IV 600V overvoltage and double insulation standard.
- 1 Certifications: , UL & CUL

## Accuracy Specifications (1)

Accuracy $\pm$  (a% reading + b digits), guarantee for 1 year.

Operating temperature: 23°C  $\pm$  5°C.

Relative humidity: < 75%.

Temperature coefficient: 0.1 x (specified accuracy)/1°C

### A. DC Voltage

Range	Resolution	Accuracy	Overload Protection
400mV	0.1mV	$\pm$ (0.8%+3)	1000V DC 750V AC rms continuous.
4V	1mV	$\pm$ (0.8%+1)	
40V	10mV		
400V	100mV		
1000V	1V	$\pm$ (1%+3)	

Remarks: Input impedance  $\geq$  10M $\Omega$ .

### B. AC Voltage

Range	Resolution	Accuracy	Overload Protection
4V	1mV	$\pm$ (1%+5)	1000V DC 750V AC rms continuous.
40V	10mV		
400V	100mV		
750V	1V	$\pm$ (1.2%+5)	

Remarks:

1 Input impedance  $\geq$  10M $\Omega$ .

1 **Model DMM8060:** displays effective value of sine wave (mean value response).

**Model DMM8061:** displays true rms value.

1 Frequency response 40Hz~400Hz.

### C. Resistance

Range	Resolution	Accuracy	Overload Protection
400 $\Omega$	0.1 $\Omega$	Measure at REL mode $\pm$ (1.2%+2)	1000Vp
4k $\Omega$	1 $\Omega$	$\pm$ (1%+2)	
40k $\Omega$	10 $\Omega$		
400k $\Omega$	100 $\Omega$		
4M $\Omega$	1k $\Omega$	$\pm$ (1.2%+2)	
40M $\Omega$	10k $\Omega$	$\pm$ (1.5%+2)	

Remarks Open circuit voltage approximate 0.45V.

## Accuracy Specifications (2)

### D Continuity Test

Range	Resolution	Accuracy	Overload Protection
400.0Ω	0.1Ω	Approximate $\leq 100\Omega$	1000Vp

#### Remarks:

- Buzzer beeps continuously.
- Open circuit voltage approximate 0.45V.

### E. Diode Test

Range	Resolution	Overload Protection
Diode	1mV	1000Vp

#### Remarks:

- Open circuit voltage approximate 1.48V.
- Displays approximate forward voltage drop reading 0.5V~0.8V.

### F. Capacitance

Range	Resolution	Accuracy	Overload Protection
40nF	10pF	Measure at REL mode $\pm(3\%+10)$	1000Vp
400nF	100pF	$\pm(3\%+5)$	
4μF	1nF		
40μF	10nF		
100μF	100nF	$\pm(4\%+5)$	

### G. Frequency & Duty Cycle

Range	Resolution	Accuracy	Overload Protection
10Hz~10MHz		$\pm(0.1\%+3)$	1000Vp
0.1%~99.9%	0.01%		

#### Remarks:

- 10Hz~10MHz Range:**
  - $\leq 1\text{MHz}$ : 300mV rms  $\leq$  input sensitivity  $\leq 30\text{V rms}$ ;
  - $> 1\text{MHz}$ : 600mV rms  $\leq$  input sensitivity  $\leq 30\text{V rms}$ .

- 0.1%~99.9%:**  
Reading is only for reference purpose.

## Accuracy Specifications (3)

### H. Temperature (Model DMM8060/8061)

Range	Resolution	Accuracy	
-40°C~ 1000°C	1°C	-40°C ~0°C	±(3%+4)
		0°C ~400°C	±(1%+3)
		400°C ~1000°C	±(2%+10)

#### Overload Protection:

Glass fuse 0.5A, 250V, fast type,  $\phi$  5x20mm.

### I. DC Current

Range	Resolution	Accuracy	Overload Protection
400 $\mu$ A	0.1 $\mu$ A	±(1%+2)	0.5A, 250V, fast type Glass fuse, $\phi$ 5x20 mm.
4000 $\mu$ A	1 $\mu$ A		
40mA	0.01mA		
400mA	0.1mA		
4A	0.001A	±(1.5%+5)	10A, 250V, fast type Glass fuse, $\phi$ 5x20 mm.
10A	0.01A		

#### Remarks:

##### 1 4A & 10A Range:

For continuous measurement  $\leq$ 10 seconds and interval not less than 15 minutes.

## Accuracy Specifications (4)

### J. AC Current

Range	Resolution	Accuracy	Overload Protection
400 $\mu$ A	0.1 $\mu$ A	$\pm(1.5\%+5)$	0.5A, 250V, fast type Glass fuse, $\phi 5 \times 20$ mm.
4000 $\mu$ A	1 $\mu$ A		
40mA	0.01mA	$\pm(2\%+5)$	
400mA	0.1mA		
4A	0.001A	$\pm(2.5\%+5)$	10A, 250V, fast type Glass fuse, $\phi 5 \times 20$ mm.
10A	0.01A		

#### Remarks:

Frequency response 40Hz ~ 400Hz.

**Model DMM8060** : displays effective value of sine wave (mean value response).

**Model DMM8061**: displays true rms value.

#### 1 4A & 10A Range:

For continuous measurement  $\leq 10$  seconds  
and interval not less than 15 minutes.

## MAINTENANCE

This section provides basic maintenance information including battery and fuse replacement instruction.

### **Warning**

**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.**

**To avoid electrical shock or damage to the Meter, do not get water inside the case.**

### **A. General Service**

- 1 Periodically wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.
- 1 To clean the terminals with cotton bar with detergent, as dirt or moisture in the terminals can affect readings.
- 1 Turn off the power of the Meter when it is not in use and take out the battery when not using for a long time.
- 1 Take out the battery when it is using for a long time.
- 1 Do not use or store the Meter in a place of humidity, high temperature, explosive, inflammable and strong magnetic field.



### **B. Testing the Fuses**

#### **Warning**

**To avoid electrical shock or personal injury, remove the test leads and any input signals before replacing the battery or fuse.**

**To prevent damage or injury, install ONLY replacement fuses with identical amperage, voltage, and speed ratings.**

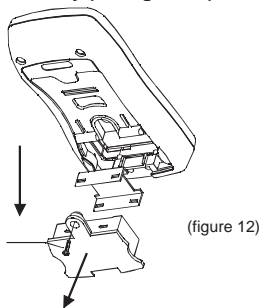
To test the fuse:

1. **Model DMM8060:** Set the rotary switch to  $\Omega$   and press **BLUE** button to select  $\bullet$  .
2. Plug a test lead into the terminal **H<sub>Z</sub>V**  $\Omega$  and touch the probe to the **10A** terminal.


- 1 If the Meter beeps, the fuse is good.
- 1 If the display shows **OL**, replace the fuse and test again.
- 1 If the display shows any other value, have the Meter serviced and contact your dealer immediately.

If the Meter does not work while the fuse is all right, send it to your dealer for repair.

### C. Replacing the Battery (see figure 12)



#### **⚠ Warning**

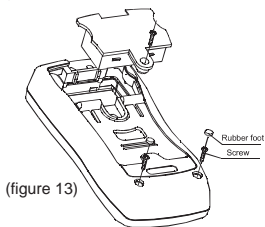
To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the battery indicator “” appears.

**Make sure the test leads are disconnected from the circuit being tested before opening the case bottom.**

To replace the battery:

1. Press the **POWER** to turn the Meter off and remove all connections from the terminals.
2. Remove the screw from the battery compartment, and separate the battery compartment from the case bottom.
3. Remove the battery from the battery compartment.
4. Replace the battery with a new 9V battery (NEDA1604, 6F22 or 006P)
5. Rejoin the case bottom and battery compartment, and reinstall the screw.

## D. Replacing the Fuses (see figure 13)



### **⚠ Warning**

**To avoid electrical shock or arc blast, or personal injury or damage to the Meter, use specified fuses ONLY in accordance with the following procedure.**

To replace the Meter's fuse:

1. Press the **POWER** to turn the Meter off and remove all connections from the terminals.
2. Remove the screw from the battery compartment, and separate the battery compartment from the case bottom.
3. Remove the 2 rubber feet and 2 screws from the case bottom, and separate the case top from the case bottom.
4. Remove the fuse by gently prying one end loose, then take out the fuse from its bracket.
5. Install **ONLY** replacement fuses with the identical type and specification as follows and make sure the fuse is fixed firmly in the bracket.

Fuse 1: Glass fuse 0.5A, 250V, fast type,  $\phi$ 5x20mm.

Fuse 2: Glass fuse 10A, 250V, fast type,  $\phi$  5x20mm.



6. Rejoin the battery compartment and the case top, and reinstall the screw.
7. Rejoin the case bottom and case top, and reinstall the 2 screws and 2 rubber feet.

Replacement of the fuses is seldom required. Burning of a fuse always results from improper operation.

## RS232C Serial Port (Model DMM8061)

### A.RS232C Port Cable

The Meter	Computer		
	D-sub 9 Pin Female	D-sub 25 Pin Female	Pin Name
2	2	3	RX
3	3	2	TX
4	4	20	DTR
5	5	7	GND
6	6	6	DSR
7	7	4	RTS
8	8	5	CTS

### B.Setting of RS232C Serial Ports

Default of RS232C serial port for communication is set as:

Baud Rate 2400

Start bit 1 (always 0)

Stop bit 1 (always 1)

Data bits 7

Parity Odd

### C.System Requirements for Installing the DMM8061

#### Interface Program

To use **DMM8061 Interface Program**, you need the following hardware and software:

- 1 An IBM PC or equivalent computer with 80486 or higher processor and 640 x 480 pixel or better monitor.
- 1 Microsoft Windows 95 or above.
- 1 At least 8MB of RAM.
- 1 At least 8MB free space in hard drive.
- 1 Can access to a local or a network CD-ROM.
- 1 A free serial port.
- 1 A mouse or other pointing device supported by Windows.

Please refer to the included CD-ROM "**Installation Guide & Computer Interface Software**" for installing and operating instructions of the **DMM8061 Interface Program**.

~ END ~

This operating manual is subject to change without notice.