



说明书材质要求： 105g 有光铜版纸		说明书成品尺寸： 105*143mm	
■ Black（单色印刷）			
折叠方式： 风琴折		备注：	
特别注意： 此页内容不印刷			

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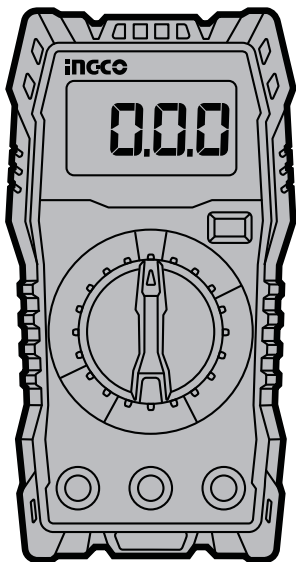
更改记录	1.更新说明书				
	0424.V02	2024.4.10	QX		
	版本号	日期	设计师		

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**PRODUCT
MANUAL**

DIGITAL MULTIMETER



DM2002



GENERAL POWER TOOL SAFETY WARNINGS

Statement

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Safety statement

CAUTION!

mark refers to the condition and operation which may cause damage to the instrument or equipment.

It requires that you must be careful during the execution of the operation. If incorrectly perform the operation or do not follow the procedure, it may damage the instrument or equipment. In the circumstances that such conditions are not met or not fully understood, please do not continue to perform any operation indicated by the caution mark.

WARNING

mark indicates the condition and operation which may cause danger to users.

It requires that you must pay attention during the execution of this operation. If incorrectly perform the operation or do not follow the procedure, it may result in personal injury or casualties. In the circumstances that such conditions are not met or not fully understood, please do not continue to perform any operation indicated by the warning mark.

Safety instructions

The instrument is designed according to the requirements of the international electrical safety standard IEC61010-1 for the safety requirements of the electronic testing instruments. The design and manufacture of instruments strictly comply with the requirements of IEC61010-1 CAT.III 600V over voltage safety standards and pollution level 2.

Safety operation specifications

WARNING

In order to avoid possible electric shock or personal injury and other safety accidents, please abide by the following specifications:

- Please read this manual carefully before using the instrument, and pay special attention to safety warning information.
- Strictly observe the operation of this manual and use this instrument. Otherwise, the protection function of the instrument may be damaged or weakened.
- Please be careful if the measurement exceeds 30V AC true RMS, 42V AC peak or 60V DC. There may be danger of electric shock at this kind of voltage
- By measuring the known voltage to check whether the meter work is normal, if it is not normal or damaged, do not use it again.
- Before using the instrument, please check whether there is any crack or plastic damage in the instrument case. If you do, do not use it again.
- Before using the instrument, please check whether the probe is cracked or damaged. If so, please replace the same type and the same electrical specifications.
- The instrument shall be used in accordance with the specified measurement category, voltage or current rating.
- Please comply with local and national safety code. Wear personal protection equipment (such as approved rubber gloves, masks and flame-retardant clothes, etc.) to prevent being damaged by electric shock and electric arc due to exposed hazardous live conductor
- When it shows low battery indicator, please replace the battery in time in case of any measurement error.
- Do not use the instrument around explosive gas, steam or in wet environment.
- When using the probe, please put your fingers behind the finger protector of the probe.
- When measuring, please connect the zero line or the ground line firstly, then connect the live wire; but when disconnecting, please disconnect the live wire firstly, then disconnect the zero line and ground line.
- Before opening the outer cabinet or battery cover, please remove the probe on the instrument. Do not use the instrument in the circumstances that the instrument is taken apart or battery cover is opened.

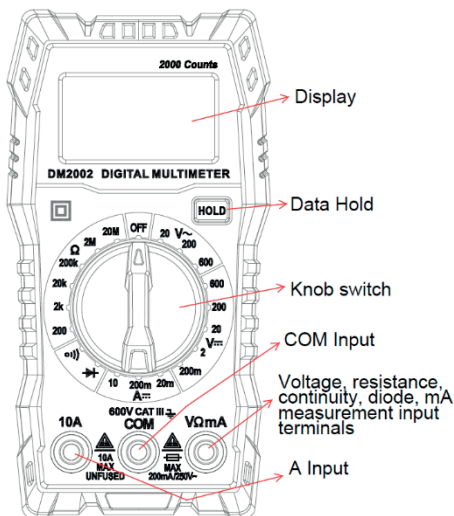
- It only meets the safety standards when the instrument is used together with the supplied probe. If the probe is damaged and needs to replace, the probe with same model number and same electrical specifications must be used for replacement.

THE SYMBOLS IN INSTRUCTION MANUAL

	High voltage warning
	AC (Alternating current)
	DC (Direct current)
	AC or DC
	Warning, important safety signs
	Ground
	Fuse
	Equipment with double insulation/reinforced insulation protection
	Battery under voltage
	Product complies with all relevant European laws
	The additional product label shows that do not discard this electrical/electronic product into household garbage.
CAT. II	Class II measurements are suitable for testing and measuring circuits directly connected to power points (sockets and similarities) of low voltage power installations.
CAT. III	Class III measurement is suitable for testing and measuring circuits connected to the distribution part of low voltage power supply devices in buildings.
CAT. IV	Class IV measurements are suitable for testing and measuring circuits connected to the power supply of low voltage power installations in buildings.

SPECIFICATIONS

Instrument panel



Technical specifications

- Environment condition of using:
 - CAT.III 600V
 - Pollution level: 2
 - Altitude < 2000m
 - Working environment temperature and humidity:
 - 0~40°C (<80% RH, <10°C non condensing).
 - Storage environment temperature and humidity:
 - 10~60°C (<70% RH, remove the battery).
- Temperature coefficient: 0.1× accuracy/°C (<18°C or >28°C).
- MAX. Voltage between terminals and earth ground: 600V
- Fuse protection: mA: F200mA/250V fuse; 10A: no fuse
- Sampling rate: about 3 times/second.
- Display: 2000counts.
- Over range indication: it displays “OL”.
- Low battery indication: “” will be displayed.
- Input polarity indication: automatically display “-”.
- Power requirement: 2 x 1.5V AAA batteries.

Accuracy specifications

The accuracy applies within one year after the calibration.

Reference condition: the environment temperature 18°C to 28°C, the relative humidity is no more than 80%,

accuracy: $\pm$ (% reading + word)

DC Voltage

Range	Resolution	Accuracy
200mV	0.1mV	$\pm(1.0\% \text{ reading}+5)$
2V	0.001V	
20V	0.01V	
200V	0.1V	
600V	1V	

Overload protection: 600V; Maximum input voltage: 600V

AC Voltage

Range	Resolution	Accuracy
20V	0.01V	$\pm(1.0\% \text{ reading}+5)$
200V	0.1V	
600V	1V	

Overload protection: 600V; Maximum input voltage: 600V

Frequency Response: 40Hz ~ 400Hz

DC Current

Range	Resolution	Accuracy
20mA	0.01mA	$\pm(1.5\% \text{ reading}+5)$
200mA	0.1mA	
10A	0.01A	

Overload protection:

mA: F200mA/250V fuse

A: No fuse

Maximum input current: mA: 200mA; A: 10A

When measuring large current, continuous measurement should be no longer than 15 seconds

Resistance

Range	Resolution	Accuracy
200Ω	0.1Ω	±(1.2% reading+5)
2kΩ	0.001kΩ	
20kΩ	0.01kΩ	
200kΩ	0.1kΩ	
2MΩ	0.001MΩ	
20MΩ	0.01MΩ	

Overload protection: 250V

Continuity&Diode

	The resistance is <50, the buzzer will sound	Open circuit voltage is about 2V Overload protection:250V
	Displays the approximate forward voltage of the diode.	Reverse DC voltage is about 2V Overload protection:250V

OPERATION

Measurement operation

WARNING!

- Do not measure power supply or circuit greater than 600V.
- Pay attention to safety when measuring high voltage to avoid electric shock or personal injury.
- Measure the known voltage or current before use to ensure that the instrument functions well.

Data Hold

Press  key, enter data hold mode/cancel data hold mode.

Auto power off

- If there is no operation within 15 minutes, the meter will auto power off. Press key or turn the knob, and the meter will return to working state.
- Press and hold the  key and turn on the power supply of the meter to cancel auto power off function.

DC/AC voltage measurement

- 1) Turn the knob to DC voltage or AC voltage shift and select the appropriate range.
- 2) Insert the red probe in "**VΩmA**" socket, insert the black probe in "COM" socket.
- 3) Contact the probe to the measured circuit (connect to the measured power supply or circuit in parallel), measure the voltage.
- 4) Read the measurement result on display.

DC current measurement

- 1) Turn the knob to DC current shift and select the appropriate range.

- 2) Insert the red probe in "**VΩmA**" socket or 10A Socket, insert the black probe in "COM" socket.
- 3) Disconnect the power of the tested circuit; connect the meter to the circuit under test, then turn on the circuit power supply.
- 4) Read the measurement result on display.

Resistance measurement

- 1) Turn the knob to resistance shift and select the appropriate range.
- 2) Insert the red probe in "**VΩmA**" socket, insert the black probe in "COM" socket.
- 3) Contact the probe to the measured circuit, measure the resistance.
- 4) Read the measurement result on display.

Continuity measurement

- 1) Turn the knob to  shift.
- 2) Insert the red probe in "**VΩmA**" socket, insert the black probe in "COM" socket.
- 3) Contact the probe to the measured circuit, measure the resistance.
- 4) If the resistance or circuit of the measured resistance is less than 50Ω, the buzzer will sound; the screen displays the resistance of the measured circuit.

Diode measurement

- 1) Turn the knob to  shift.
- 2) Insert the red probe in "**VΩmA**" socket, insert the black probe in "COM" socket.
- 3) Touch the diode anode with the red probe, the black probe contacts the diode cathode.

MAINTENANCE

Clean

If there is dust on the terminals OR the person is wet, it may produce incorrect measurements. Please clean the meter as follows:

- 1) Power off the meter and remove the test pen.
- 2) Turn the meter over and shake out any dust that has accumulated in the input jacks and wipe the case with a damp cloth or mild detergent, do not use abrasives or solvents. Wipe the contacts in each input jack with a clean cotton swab soaked in alcohol.

WARNING!

Always keep the inside of the meter clean and dry to prevent electric shock or damage to the meter.

Replacing the battery and fuse

Replace the batteries:

- 1) Turn off the power to the meter and remove the meter pen plugged into the meter.
- 2) Remove the battery cover by unscrewing the screw holding it in place with a screwdriver.
- 3) Remove the old battery and replace it with a new one of the same size, please pay attention to the battery polarity, there are positive and negative polarity marks for each battery in the battery box.
- 4) Install the battery cover back to its original position and secure the battery cover with screws to lock it tightly.

WARNING!

- To avoid incorrect readings that may result in electric shock or personal injury, replace the batteries immediately when they are low.
- Do not discharge the battery by short-circuiting it or reversing its polarity.
- To ensure safe operation and maintenance of the meter, remove the battery when not in use for a long period of time to prevent damage to the product from battery leakage.

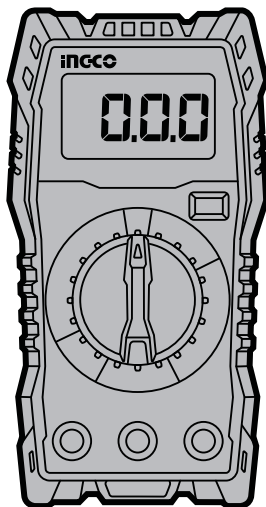
Replace the fuse:

- 1) Turn off the power to the meter and remove the meter pen inserted in the meter.

- 2) Use a screwdriver to unscrew the screws holding the back cover and remove the back cover.
- 3) Remove the burnt fuse and replace it with a new fuse of the same size, and make sure the fuse is installed in the fuse clip and clamped tightly.
- 4) Install the back cover, and use the screws to lock the back cover.

** WARNING!**

To prevent possible electric shock, personal injury or damage to the instrument, use a fuse of the same size or a specified size.



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MADE IN CHINA 0424.V02

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