Lexman

FR **Multimètre numérique calibrage automatique LX-M-2000.**
Manuel d'utilisation.

ES **Multímetro digital calibrado automático LX-M-2000.**
Manual de utilización.

PT **Multímetro digital de calibração automática LX-M-2000.**
Manual de utilização.

IT **Multimetro digitale auto-ranging LX-M-2000.**
Manuale per l'uso.

EL **Ψηφιακό πολύμετρο αυτόματη βαθμονόμηση LX-M-2000.**
Εγχειρίδιο χρήσης.

PL **Multimetr cyfrowy automatyczna kalibracja LX-M-2000.**
Instrukcja obsługi.

UA **Цифровий мультиметр з автоматичним калібруванням LX-M-2000.**
Керівництво з експлуатації.

RO **LX-M-2000 Multimetru digital cu calibrare automată.**
Manual de utilizare.

EN **Auto-calibration digital Multimeter LX-M-2000.**
User guide.

5 GUARANTEE YEARS*

EAN CODE : 3276007463705

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Introduction

LX-M-2000 is a palm size ultimeter with manual range. This CE certified multimetr is CAT III 600V which can withstand 6000KV surge voltage. The LX-M-2000 is designed with high voltage warning and over range alarm, making this series great for a wide range of measurement needs.

Features

- Smart appearance with comfy handle.
- Pass 2-meter drop test.
- Large LCD screen with 6000 counts display, true RMS measurement, fast ADC digital converter (3 times/s).
- Overload protection with alert.
- Extensive range for capacitance measurement, short response time. E.g. When measuring ⩽ 10mF, response time ⩽ 6s.
- Support NCV, frequency (LX-M-2000)

- Support up to 600V/10A AC/DC current and voltage measurement.
- Backlight installed for dim occasions.
- Energy saving.

Open box inspection

Open the package box and take out of the device. Please check whether the following items are deficient or damaged and contact your supplier immediately if they are.

- User manual ..... 1 pc
- Test leads ..... 1 pc
- K-type thermocouple ..... 1 pc

Safety instructions

Safety standards

- CE, EN 61326-1：2021; EN 61326-2-2: 2021
  EN 61010-1:2010/A1:2019 ;EN IEC 61010-2-033:2021/A11:2021
- CAT III 600V, double insulation standard, over voltage standard, over voltage standard, and RoHS, pollution grade II.

Safety instructions

1 - Do not use the device if the rear covered up or it will pose a shock hazard.
2 - Do not use the device if the device or test leads appear damaged or if you suspect that the device is not operating properly. Pay particular attention to the insulation layers.
3 - During measurement, keep your fingers behind the finger guard.
4 - Do not input over 600V voltage between the device and the grounding.
5 - Use caution to measure voltage > DC 60V or AC 30Vms.
6 - Never input voltage and current exceeding yhe value listed on the device.
7 - Functional dial should be switched to proper position.
8 - Do not switch the functional dial during measuring.
9 - Do not change the internal circuit of the device in order to avoid the damage to the device a,d users.

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10 - Replace the fuse with the specified model (to be done by a proffessional worker).
11 - To avoid false reading, replace the battery when the battery indicator appears.
12 - Do not use or store the device in high temperature, high humidity, flammable, explosive or strong magnetic field environments.
13 - Use damp cloth to clean the case; do not use detergent containing solvents or abradants.
14 - Before each use verify meter operation by measuring a known voltage or current. If the equipment is used in a manner not specifield by the manufacturer, the protection provided by the equipment may be impaired.

Symbols

Symbol	Description
	Low battery
	Caution, possibility of electric shock
	Alternating current
	Direct current
	Double insulation
	Grounding
	Warning
CE	Comply with European Union Standards
CAT III	It is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation

General specifications

1 - Max voltage between input terminal and earth grounding : 600Vrms.
2 - Fuse tye :
10A Jack : F 10A H 600V Fuse Φ 6x25mm (or Φ6x32mm).
mA/μA Jack : F 600mA H 600V Fuse Φ6x32mm.
3 - Display count : 6000
overload indication : OL, refresh 3 times/s.

Others :

1 - Range : Auto LX-M-2000.
2 - Backlight : Manual, shutdown after 30s.
3 - Polarity : - for negative pole
4 - Data hold indication : H
5 - Low power indication :
6 - Operating temperature : 0°C ~ 40°C (32°F ~104°F)
Storage temperature : -10°C ~ 50°C (14°F ~122°F)
Relative humidity : ⩽ 75% at 0°C ~ 30°C; ⩽ 50% at 30°C ~ 40°C.

7 - Operating altitude : 0 ~ 2000m
8 - Battery type : AAA 1.5Vx2
Dimension : 155mmx76.5mmx49mm
10 - Weight 255g (with batteries)
11 - Electromagnetic compatibility :
RF ≤1V/m, overall accuracy = specified accuracy + 5% of range

Structure (see figure 1)

Figure 1

Buttons

* .**SELECT** : cycle switch the functions through AC/DC mV range, frequency, resistance/diode/continuity, °C/°F.
* .**REL** : the voltage, current and capacitance mode, press this button to remove the base.
* .**HOLD/LIGHT** : press the button once to hold the reading. Press this button for 2 seconds to turn on/off the backlight.

Operation instructions

To avoid false reading, replace the battery if the battery low power symbol appears.
Also pay special attention to the warning sign ⚠ besides the test lead housing, indicating that the tested voltage or current must not exceed the value listed on the device.

1. AC/DC voltage measurement (see figure 2)

1 - Switch the dial to ACV position
2 - Insert the red test lead to VΩmA jack, black to COM jack.
3 - Connect test leads with the load in parallel.
4 - At mV position, press SELECT to enter frequency measurement (10Hz ~ 1MHz)
5 - Reading is displayed.

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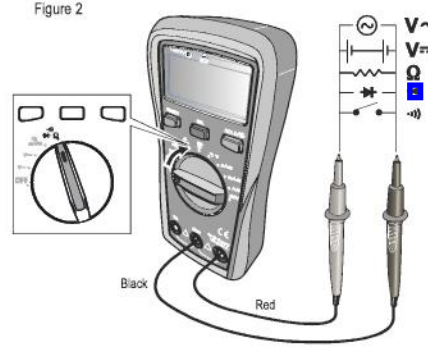
⚠ Warning :

- Do not input voltage over 600Vrms, or it may pose shock hazard
- Be cautious when measuring high voltage

⚠ Note :

- Before using the device, if the voltage is unknown, switch the dial to the maximum range position and reduce the range according to the practical reading.
- Test a known voltage to verify the device.
- When input impedance about 10MΩ,there may be errors when measurement high voltage. Input impedance ≥10kΩ, measurement errors can be ignored (≤0.1%).

Figure 2



2. Resistance measurement

1 - Switch the dial to resistance position.
2 - Insert the red test lead to VΩmA jack, black to COM jack.
3 - Connect test leads with the load in parallel.
4 - Reading is displayed.

⚠ Note :

- If the resistor is open or over the range, the «OL» symbol will be displayed on the screen.
- Before measuring resistance, switch off the power supply of the circuit, and fully discharge all capacitors.
- When measuring low resistance, the test leads will produce 0.1Ω ~ 0.2Ω measurement error. To obtain accurate measurement, short the test leads and use REL function.
- If the resistance when shorted is more than 0.5 Ωplease check if test leads are loosened or damaged.
- Resistance measurement can be used to inspect device's internal fuses (see figure 4b)
- Do not input over 60V DC or 30V AC or it will pose shock hazard.

3. Continuity measurement (see figure 2)

1 - Switch the dial to continuity position
2 - Insert the red test lead to VΩmA jack, black to COM jack.
3 - Connect test leads with the load in parallel.
4 - Reading is displayed. Measurement resistance ≤ 51Ω circuit is open status. Measurement resistance ≤ 10Ω, circuit is in good conduction status, buzzer will go off.

⚠ Warnings :

Switch off the power supply to the circuit, and fully discharge all capacitors.

4. Diode measurement (see figure 2)

1 - Switch the dial to diode position.
2 - Insert the red test lead to VΩmA jack, black to COM jack.
3 - Red test lead to positive pole, black to negative pole.
4 - Reading is displayed.
«OL» symbol appears when the diode is open polarity is reserved. For silicon PN junction, normal value : 500 ~ 800mV (0.5 ~ 0.8).

⚠ Notes :

Switch off the power supply to the circuit, and fully discharge all capacitors. Voltage for testing diode is about 4.0V/1.5mA.

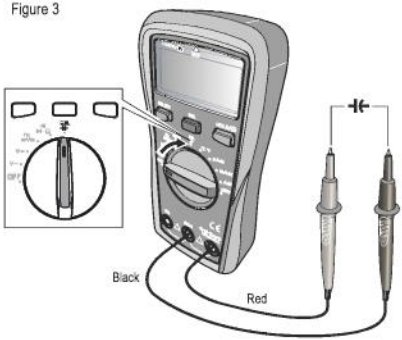
5. Capacitance measurement (see figure 3)

1 - Switch the dial to capacitance measurement.
2 - Insert the red test lead to VΩmA jack, black to COM jack.
3 - Red test lead to positive pole, black to negative pole.

⚠ Notes :

- Switch off the power supply to the circuit, and fully discharge all capacitors.
- Before measuring capacitors (especially for high voltage capacitors), please fully discharge them.
- If the tested capacitors is shorted or its capacity is over the specified range «OL» symbol will be displayed on the screen.
- When measuring large capacitors, it may take a few seconds to obtain steady readings.
- When there is no input, the device displays a fixed value (intrinsic capacitance).
- For small capacitance measurement, to ensure measurement accuracy, the measured value must be subtracted from intrinsic capacitance. Or users can measure small capacity capacitors with relative measurement function (REL) (the device will automatically subtrack the intrinsic capacitance).

Figure 3



6. AC/DC current measurement

1 - Switch the dial to AC/DC current position.
2 - According to the current being measured. Insert the red test lead to VΩmA jack or 10A jack, black to COM jack.
3 - Connect test leads with the circuit in series.
4 - Reading is displayed.

⚠ Notes :

- Before measuring, switch off the power supply of the circuit.
- If the range of the measured current is unknown, select the maximum range and then accordingly reduce.
- There are fuses inside VΩmA jack and jack. Do not connect the test leads with any circuits in parallel.
- If the tested current is about 10A, each measurement time is about 10 seconds (less than 30s) and the next test should be after 15 minutes.

Figure 4

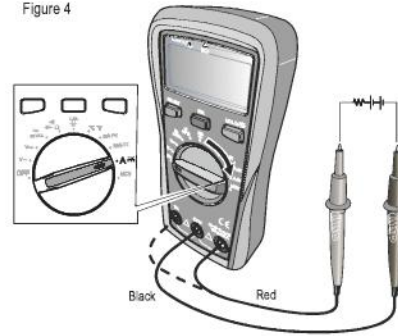


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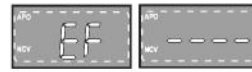
Figure 7

3 - Intensity of electric field.
  * "EF" : 0 ~ 50mV
  * "-" : 50 ~ 100mV
  * "--" : 100 ~ 150mV
  * "---" : 150 ~ 200mV
  * "----" : > 200mV



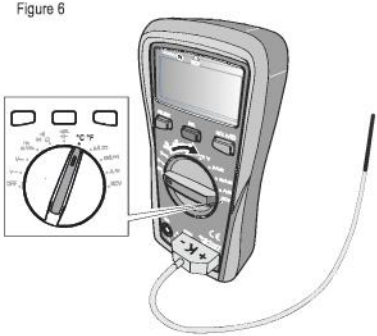
7. Temperature measurement

1 - Switch the dial to temperature position.
2 - Insert K-type thermocouple to the device and place the test probes on the object under measurement.
3 - Reading is displayed.

⚠ Note :

- Only K-type thermocouple is applicable.
- The measured temperature should be less than 250°C/482°F (°F = °C* 1.8+32).
- Turn on the device, after «OL» symbol appears, insert K-thermocouple into the device.

Figure 6



8. NCV

1 - Switch the dial to NCV position.
2 - Place the device near the measured object. «-» symbol indicates the intensity of the electric field. More «---» and the higher the buzzer frequency, the higher the electric field intensity.

9. Technical specifications

Accuracy : ± (% of reading + numerical value in least significant digit slot), 1 year warranty.
Ambient temperature : 23°C ± 5°C (73.4F ± 9°F).
Ambient humidity : ⩽75% RH

⚠ Note :

To ensure accuracy, operating temperature should be within 18°C ~ 28°C.
Temperature coefficient - 0.1* (specified accuracy)/°C (<18°C or >28°C)

1. DC voltage

Range Position	Model	Resolution	Accuracy
600.0mV	LX-M-2000	0.1mV	±(0.7%+3)
6.000V/6000mV	LX-M-2000	0.001V/1mV	±(0.5%+2)
60.00V	LX-M-2000	0.01V	±(0.7%+3)
600.0V	LX-M-2000	0.1V	±(0.7%+3)

⚠ Input impedance : About 10MΩ
Results might be unstable at mV range when no load is connected. the value becomes stable once the load is connected. Least signifiant digit ⩽±3.
Max input voltage : ± 600V, when the voltage ⩾ 610V, «OL» symbol appears and the buzzer goes off.
Overload protection : 600Vrms (AC/DC).

2. AC voltage

Range Position	Model	Resolution	Accuracy
600.0mV	LX-M-2000	0.1mV	±(1.0%+2)
6.000V	LX-M-2000	0.001V/1mV	±(0.7%+3)
60.00V	LX-M-2000	0.01V	±(1.0%+2)
600.0V	LX-M-2000	0.1V	±(1.2%+3)
10Hz ~ 1MHz	LX-M-2000	0.01VHz/0.001MHz	±(0.1%+5)

⚠ Input impedance : About 10MΩ
Display sine wave true RMS. Frequency response : 40Hz ~400Hz.
Max input voltage : 600Vrms. when the voltage ⩾ 610V, «OL» symbol appears and the buzzer goes off
Overload protection : 600Vrms (AC/DC)
Frequency sensitivity about 300mV.

3. Resistance measurement

Range Position	Model	Resolution	Accuracy
600.0Ω	LX-M-2000	0.1Ω	±(1.0%+2)
6.000kΩ/6000Ω	LX-M-2000	0.1kΩ/1Ω	±(0.8%+2)
60.00kΩ	LX-M-2000	0.01kΩ	±(0.8%+2)
600.0kΩ	LX-M-2000	0.1kΩ	±(0.8%+2)
60.00MΩ	LX-M-2000	0.01MΩ	±(2.0%+5)

⚠ Measurement result = reading of resistor - reading of shorted test leads overload protection : 600Vrms.

4. Continuity, Diode

Position	Resolution	Remark
•))	0.1Ω	**Set value** Open circuit : resistance >50Ω, no beep. Well-connected circuit : resistance ⩽10Ω continuous beeps.
▶|	0.001V	Open circuit voltage : 4V, test current: about 1.5mA

⚠ Overload protection : 600Vrms.

5. Capacitance

Range	Resolution	Accuracy
9.999nF	0.001nF	REL mode : ±(4%+10)
99.99nF	0.01nF	±(4%+5)
999.9nF	0.1nF	±(4%+5)
9.999μF	0.001μF	±(4%+5)
99.99μF	0.01μF	±(4%+5)
999.9μF	0.1μF	±(4%+5)
9.999MF	0.001MF	±10%

⚠ Overload protection : 600V-PTC
Test capacitance ⩽200nF, adapt REL mode.

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6. Temperature

Range			Resolution	Accuracy
°C	-40~1000°C	-40~40°	1°C	±4% °C
		> 40~500°C		±(1.0%+4)
		>500~1000°C		±(2.0%+4)
°F	-40~1832°F	-40~104°F	1°F	±5% °F
		>104~932°F		±(1.5%+5)
		>932~1832°F		±(2.5%+5)

⚠ Overload protection : 600V.
K-Type thermocouple is o,ly applicable for temperature less than 250°C/482°F.

7. DC Current

Range Position	Model	Resolution	Accuracy
600.0μA	LX-M-2000	0.1μA	±(1.0%+3)
6000μA	LX-M-2000	1μA	±(1.0%+3)
60.00mA	LX-M-2000	0.01mA	±(1.0%+3)
600.0mA	LX-M-2000	0.1mA	±(1.0%+3)
6A	LX-M-2000	0.001A	±(1.2%+5)
10.00A	LX-M-2000	0.01A	±(1.2%+5)

⚠ Overload protection : 600Vrms.
μA mA range : F1 Fuse Φ6x32mm F 600mA H 600V.
10A range : F2 Fuse Φ6x25mm (or Φ6x32mm) F 10A H 600V.
Input current ⩾10A, buzzer goes off; input current >10.10A «OL» symbol appears.

8. AC Current

Range Position	Model	Resolution	Accuracy
600.0μA	LX-M-2000	0.1μA	±(1.2%+3)
6000μA		1μA	
60.00mA		0.01mA	
600.0mA		0.1mA	
6A		0.001A	±(1.5%+5)
10.00A		0.01A	

Frequency response : 40~400Hz.
Display : true RMS.
Accuracy guarantee range : 5-100% of the range, shorted circuit allows least significant digit ⩽2.
Input current ⩾10A, buzzer goes off; input current >10.10A «OL» symbol appears.
⚠ Overload protection : (similar to DC current).

10. Maintenance

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Warnings :

To avoid electric shock, make sure the probes are disconnected from the measured circuit before removing the rear cover.
Make sure the rear cover is tightly screwed before using the instrument.

1. General maintenance

1 - Clean the case with a damp cloth and detergent. Do not use abradants or solvents.
2 - If there is any malfunction, stop using the device and send it to maintenance.
3 - The maintenance and service must be implemented by qualified professionals or designated departments.

2. Replacements

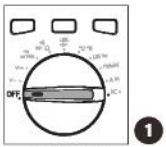
Battery replacement :
To avoid false reading, replace the battery when the battery indicator appears.
Battery specification : AAA 1.5V x 2.

1 - Switch the dial to «OFF» position and remove the test leads from the input terminal.
2 - Take off the protective case. Loosen the screw on battery cover; remove the cover to replace the batterie. Please identify the positive and negative pole.

Fuse replacement (this replacement must be done by a professional worker):

1 - Switch the dial to «OFF» position and remove the test leads from the input terminal.
2 - Loosen both screws on the rear cover, and then remove the rear cover to replace the fuse.

Fuse specification :
F1 Fuse Φ 6x32mm F 600mA H 600V.
F2 Fuse Φ 6x25mm (or Φ6x32mm) F 10A H 600V.



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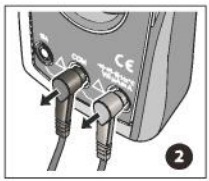
Position OFF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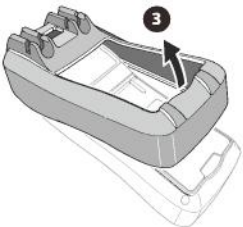
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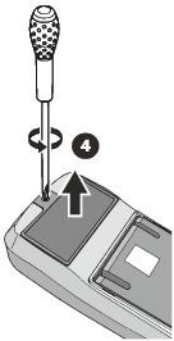
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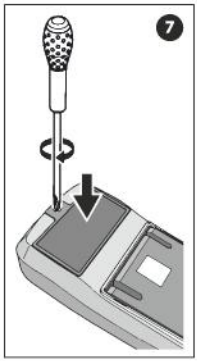
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8

The probe replacement: Lexman LX-M-1000-01
If insulation on probe is damaged, replace it.

Warnings :

If the test leads need to be replaced, you must use a new one which should meet EN 61010-031 standard, rated CAT III 600V, 10A or better.

About probes

Introduction

The LX-M-1000-01 probes are compatible with the following Lexman products: LX-M-2000, LX-M-1000, LX-M-2100, LX-M-1000-02.

Symbols

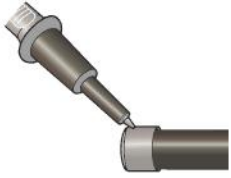
Symbol	Description
⚠	Warning
⧈	Double insulation
CE	Comply with European Union Standards

General specifications

Model	LX-M-1000-01
AC/DC current	10A
Electrical safety	CAT II 1000V CAT III 1000V CAT IV 600V

Operating instructions

For example, to check the continuity of a fuse, plug the black probe on the COM port and the red probe on the "V" port of the multimeter. Then follow the instructions of your multimeter to select the correct setting for the continuity test.



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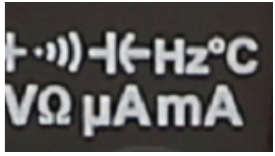
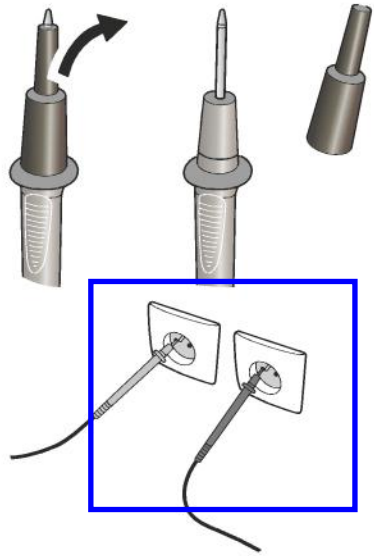


Operating instructions

⚠ Warning :

The probes are equipped with plastic caps to guarantee the highest level of security to the user during operations (CAT III / CAT IV). These caps can be removed to allow deeper penetration of the probes if needed (sockets voltage tests for example) but with a reduced level of security.



Lexman

PAP

*Garantie 5 ans
Garantía 5 años
Garantia 5 anos
Garanzia 5 anni
5 έτη εγγύηση
5 lata gwarancji
Гарантія 5 роки
5 ani garanție
5-Year warranty

Electrical products must not disposed of out with domestic waste. They must be taken to a communal collecting point for environmentally friendly disposal in accordance with local regulations. Contact your local authorities or stockist for advice on recycling. The packaging material is recyclable. Dispose of the packaging in an environmentally friendly manner and make it available for the recyclable material collection-service.
Don't throw batteries or out of order products with the household waste (garbage). The dangerous substances that they are likely to include may harm health or the environment. Make your retailer take back these products or use the selective collect of garbage proposed by your city.

FR ADEO Services -
135 Rue Sadi Carnot - CS 00001
59790 RONCHIN - France

UA ТОВ «Леруа Мерлен Україна»,
вул. Полярна 17а, м. Київ 04201,
Україна

CE

Made in CHINA