



DMC-100

Intelligent colour screen clamp digital multimeter
User manual



Read this manual carefully before first use, especially the safety instructions in chapter 1.

Manufacturer: Shenzhen FNIRSI Technology Co., LTD. · Importer: Rotorama, s.r.o.

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1. Safety instructions

- This manual provides detailed instructions on how to use the product, along with important precautions and relevant matters. Please read it thoroughly before using the product to ensure optimal performance.
- Do not use the instrument in flammable or explosive environments.
- Used batteries and discarded instruments must not be disposed of with household waste – see chapter 8.3.
- If you encounter any quality issues or have questions about use, contact the seller or FNIRSI customer service.

COM and INPUT terminals: category CAT III 1000V, max. 1000V DC / 750V AC. Clamp: category CAT III 600V, max. 600A. The values correspond to the markings on the instrument.

1.1 Precautions

- Before using the product, check whether the insulation of the casing and around the terminals is damaged.
- Hold the test probes behind their protective guards.
- Do not touch any of the input terminals when measuring a circuit.
- Disconnect the test probes from the circuit before changing the measurement range.
- When measuring DC voltages above 36V or AC voltages above 25V, exercise caution to avoid electric shock.
- Select the correct range to avoid damaging the instrument. The screen displays "OL" when the measurement exceeds the range.
- When the battery level is critically low, a popup alert appears. Charge the battery promptly to avoid affecting measurement performance.
- Do not use the device while it is charging.

2. Product introduction

Fnirsi DMC-100 is an intelligent clamp digital multimeter with **10,000 counts**. Its wider measurement range and higher resolution help you achieve more accurate measurements. It measures AC/DC voltage and AC/DC current and tests continuity, capacitance, frequency, resistance, diodes and temperature. It also offers non-contact voltage detection (NCV) and live wire detection. It is suitable for engineering, laboratories, vehicle maintenance and household electrical repairs.

The instrument has a **2.0" full-colour TFT display** with a resolution of 240×320. The new user interface with data curves, data storage and power measurement mode makes reading and operation easier in various scenarios.

2.1 Package contents

- 1x Fnirsi DMC-100 clamp multimeter
- 1x Pair of test probes
- 1x Temperature probe
- 1x USB-C cable
- 1x Storage case (newer batches)
- 1x User manual

2.2 Power supply and charging

The instrument is powered by a built-in 3.7V lithium battery. It is charged via the **USB-C** port (5V/1A), which is also used for data transfer during firmware upgrades. Do not use the device while it is charging.

2.3 Manufacturer

Manufacturer	Shenzhen FNIRSI Technology Co., LTD.
Address	West of Building C, Weida Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong, China
E-mail	business@fnirsi.com (business) service@fnirsi.com (equipment service)
Phone	0755-28020752
Web	www.fnirsi.cn

3. Panel introduction



Controls and connectors

- ① NCV probe
- ② Clamp head
- ③ Flashlight
- ④ Screen
- ⑤ Clamp trigger
- ⑥ Flashlight button
- ⑦ MODE button (confirm / switch)

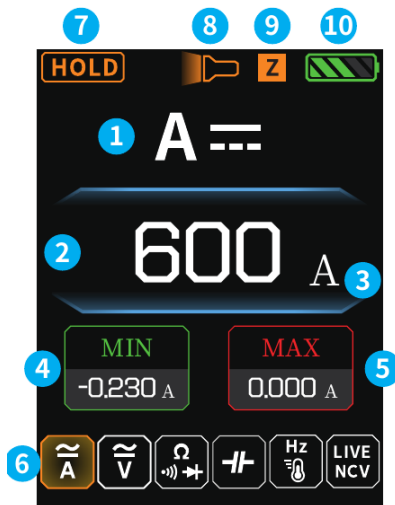
- ⑧ USB-C charging and data transfer port
- ⑨ Left button (◀ HOLD)
- ⑩ Right button (▶ V-A)
- (11) SAVE/MENU button (settings)
- (12) Power on/off button
- (13) Black probe input (COM)
- (14) Red probe input (INPUT)

3.1 Button functions

Button	Press	Function
Power	short	Data reset (DC current only)
	long	Power on / off
SAVE/MENU	short	Main interface: save data Settings: return to the previous menu
	long	Enter / exit settings
◀ HOLD	short	Main interface: switch range to the left Settings: select left / up
	long	Main interface: data hold
MODE	short	Main interface: switch test function Settings: confirm selection
	long	Main interface: enter / exit waveform display
▶ V-A	short	Main interface: switch range to the right Settings: select right / down
	long	Main interface: enter / exit power measurement
Flashlight button	long	Turn flashlight on / off

4. Operating instructions

4.1 Main interface

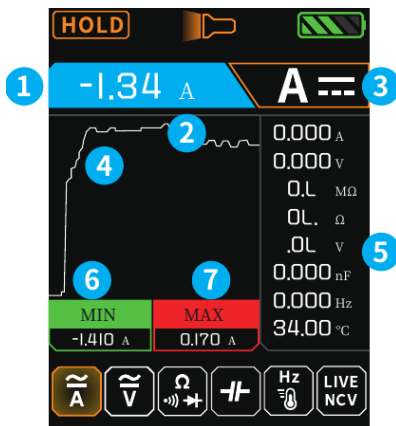


Main interface

- ① Measurement range
- ② Measured value
- ③ Unit
- ④ Minimum value
- ⑤ Maximum value
- ⑥ Range switching: short press ◀ HOLD and ▶ V-A to switch measurement ranges – DC current, DC voltage, resistance, capacitance, frequency and live/neutral line detection. Short press MODE to switch between other test functions within the current range, e.g. DC current / AC current.
- ⑦ Data hold: long press ◀ HOLD to hold the current reading. When the data is held, the HOLD symbol is highlighted; otherwise it is dimmed.
- ⑧ Flashlight: long press the flashlight button to turn the flashlight on or off. When it is on, its symbol is highlighted.
- ⑨ Data reset: for DC current measurements only – short press the power button to reset the reading; the Z symbol is displayed.
- ⑩ Battery level: full battery – green symbol, low battery – red symbol. When the level becomes critically low, a popup alert appears and the device starts a countdown to automatic shutdown.

4.2 Waveform display

Long press the MODE button to enter the waveform display.

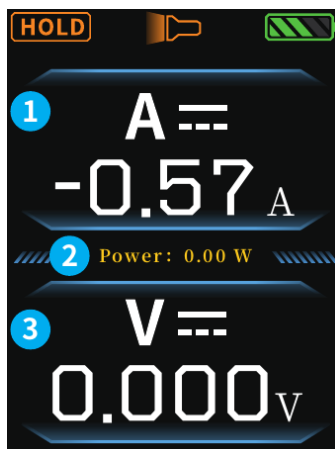


Waveform display

- ① Measured value
- ② Unit
- ③ Measurement range
- ④ Waveform – shows how the measured value changes
- ⑤ Data saving: short press SAVE/MENU to save the data. This column stores up to 8 sets of data; for more, check the history records in the settings.
- ⑥ Minimum value
- ⑦ Maximum value

4.3 Power measurement

Long press the ► V-A button to enter power measurement. In this mode, AC and DC are recognised automatically.



Power measurement

- ① Current
- ② Calculated power
- ③ Voltage

5. Settings

Long press the SAVE/MENU button to enter the settings.



Settings

- ① Settings options: history records, system settings, factory reset, about.
- ② Details of the selected option (see table).

Option	Content
History records	Short press SAVE/MENU during measurement to save data. Up to 30 sets of data can be stored.
System settings	Language: Simplified Chinese / English Brightness: 10 levels Temperature unit: °C / °F Auto power off: OFF / 5 / 15 / 30 min
Factory reset	Restore factory settings
About	Brand information, firmware version

6. Specifications

6.1 Ranges and accuracy

Function	Range	Accuracy
DC voltage	9.999 V / 99.99 V / 999.9 V	$\pm(0.5 \% + 3)$
AC voltage	9.999 V / 99.99 V / 750.0 V	$\pm(1 \% + 3)$
DC current	99.99 A / 600.0 A	$\pm(2.5 \% + 10)$
AC current		
Resistance	999.9 Ω / 9.999 k Ω / 99.99 k Ω / 999.9 k Ω / 9.999 M Ω	$\pm(1.5 \% + 3)$
	99.99 M Ω	$\pm(1.5 \% + 3)$
Capacitance	9.999 nF / 99.99 nF / 999.9 nF / 9.999 μ F / 99.99 μ F / 999.9 μ F	$\pm(2.0 \% + 5)$
	9.999 mF / 99.99 mF	$\pm(5.0 \% + 20)$
Frequency	9.999 Hz / 99.99 Hz / 999.9 Hz / 9.999 kHz / 99.99 kHz / 999.9 kHz / 9.999 MHz	$\pm(0.1 \% + 2)$
Temperature	-55-1300 $^{\circ}$ C / -67-2372 $^{\circ}$ F	$\pm(2.5 \% + 5)$
Diode test	yes	
Continuity	yes	
NCV	yes	
LIVE	yes	

※ Accuracy is given as $\pm(\%$ of reading + number of digits).

6.2 Main specifications

Parameter	Value
Model	DMC-100
Display	2.0" colour TFT, 240×320
Power supply	3.7 V lithium battery
Charging	USB-C, 5 V / 1 A
Maximum jaw opening	25 mm
Dimensions	193×74×32 mm
Weight	194 g

7. Firmware upgrade

Firmware and other downloads are available at **www.fnirsi.cn**.

- ① With the device powered off, press and hold the ◀ HOLD and SAVE/MENU buttons, then press the power button. The screen displays "Firmware Upgrade".
- ② Connect the device to a computer using a data cable. The computer detects a disk named **BOOT**.
- ③ Copy the firmware file or startup image to the disk.
- ④ Press the SAVE/MENU button to start the upgrade.

8. Information for the EU and Czech Market

The information in chapters 8 and 9 describes the situation in the Czech Republic, where the product was purchased. If you use the product in another country, also follow the regulations of the country in which you operate it – in particular regarding the take-back and disposal of electrical waste.

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorاما.cz.
- **Product identification:** the type designation (DMC-100) and the serial or batch number are given on the product or on its packaging. The firmware version is shown in the About menu of the settings.

8.3 Disposal of electrical equipment and batteries



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The product contains a built-in rechargeable battery. Where possible, hand it over together with the device – do not dispose of the battery in mixed waste or in fire.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also <https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu>.

9. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection. Any warranty terms of the manufacturer **do not in any way limit** the buyer's rights arising from these regulations.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.