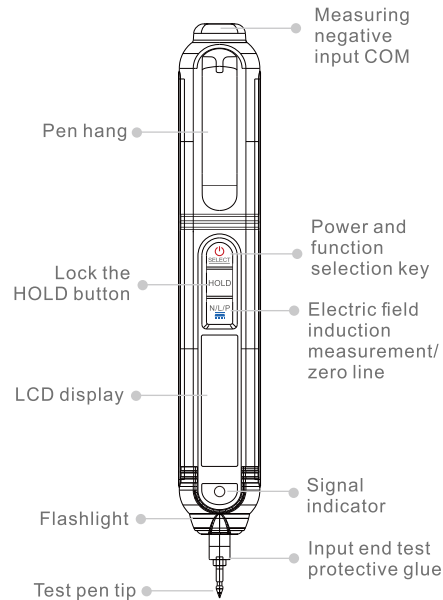


# Smart Pen Multimeter

## NF-620



**⚠ Read the precautions before your operation**

- When measuring voltage, do not input a limit voltage exceeding the effective value of 1000V DC and 700V AC.
- The voltage at the current range of 36V is a safe voltage.
- When changing functions and ranges, the test leads should leave the test point first.
- Choose the correct function and range and beware of incorrect operations.

### Overview

NF-620 pen type multimeter is a pocket-sized 3 5/6digit true RMS pen type smart multimeter. Based on the input voltage/resistance, the meter will automatically identify and measure DC voltage/AC voltage/resistance. It can also be manually switched to measure capacitance, diodes, continuity testing, as well as induction pen, zero live line judgment, phase sequence measurement and other functions.

NF-620 is popular among users due to its easy portability, stable performance, high precision, high reliability, clear readings, overload protection and other functions.

### Product Usage

#### 1. DC voltage/AC voltage automatic scanning test (DCV/ACV)

Range	Accuracy	NF-620	Resolution
DC/AC6V	± (0.5%+4)		0.001V
DC/AC60V			0.01V
DC600/AC600V			0.1V
DC1000V/AC700V	± (0.8%+10)		1V

**Input impedance:** 10MΩ;

**Overload protection:** true RMS measurement, frequency response is 50Hz-800Hz, DC1000 or 700V AC peak value.

**The specific operation is as follows:**

- Press and hold POWER for more than 2S, and it will display in automatic scanning state "AUTO".
- Insert the black test lead into the "COM" tail jack, and the positive electrode is the tip of the front end; the tip of the test pen is in reliable contact with the measured point.
- When the measured voltage between the input port "COM" and the "pen tip" is greater than 0.8V, regardless of the AC voltage or the DC voltage, the meter will compare the DC component and the AC component, take the larger component signal, and then according to the measured value The size is automatically switched between DC6V/60V/600V/1000V, AC6V/60V/600V/700V and then the measured value is displayed on the LCD.

**Notice:**

- The input voltage must not exceed DC1000VORAC700V. If it exceeds, there is a risk of damaging the meter circuit; when high-voltage circuits, pay special attention to avoid electric shock.
- After completing all measurement operations, disconnect the test leads from the circuit under test.

#### 2. Resistance(Ω)

Range	Accuracy	NF-620	Resolution
600Ω	± (0.8%+3)		0.1Ω
6kΩ			1Ω
60kΩ			10Ω
600kΩ			100Ω
6MΩ			1kΩ
60MΩ	± (2.5%+3)		10kΩ

**Input impedance:** 10MΩ;

**Overload protection:** DC1000, AC 700V peak value.

**The specific operation is as follows:**

- The boot display is automatic scanning state "AUTO".
- Insert the black test lead into the "COM" tail jack, and the positive electrode is the tip of the front end; the tip of the test pen is in reliable contact with the measured point.
- If the measured resistance at both ends of the test lead is less than 50Ω, the buzzer will emit a continuous beep, and quick buzzer measurement is required, please press the power key to enter the buzzer quick measurement.
- If you are measuring closed loop resistance, you must discharge the resistance at both ends of the resistance to be measured. Otherwise, if the voltage in the loop is greater than 0.8V, the meter will mistake it for voltage measurement and enter the voltage measurement mode.
- Enter the resistance measurement value between the input port "COM" and "pen tip", the meter will automatically switch between 600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ according to the resistance measurement value, and then the measured value will be displayed on the LCD.

**Notice:**

- When measuring low resistance, the test leads will bring internal resistance. In order to obtain accurate readings, you can record the short circuit value of the test leads first, and subtract the value when the test leads are short circuited from the measurement readings.
- When measuring online resistance, all power supplies of the circuit under test must be turned off and all capacitors must be completely discharged to ensure the correct measurement value.

### 3. Fast continuity test/diode/capacitor

Range	Display value	Test condition
"AUTO"	Diode forward voltage drop	The forward DC current is about 1mA, the open circuit voltage is about 3V
	The buzzer sounds for a long time, and the resistance of the two test points is less than (50±20)	Open circuit voltage is about 0.4V, press "power" to switch between two functions

### 4. Capacitance(C)

Range	Accuracy	NF-620	Resolution
10nF	± (3.5%+20)		10pF
100nF			100pF
1uF			1nF
10uF			10nF
100uF			100nF
1mF			1uF
10mF	± (5%+3)		10uF
60mF			100uF

**Overload protection:** DC1000, AC 700V peak value.

- The power-on display shows the automatic scanning state "AUTO"
- Insert the black test lead into the "COM" tail jack, and the positive electrode is the tip of the front end; the tip of the test pen is in reliable contact with the measured point.

③ If you need fast continuity test/diode/capacitance measurement, constantly trigger the "power" switch, enter the fast continuity test/diode/capacitance measurement in one cycle, and select the corresponding function measurement according to the measurement requirements. When measuring the capacitance, the measured capacitance The size will automatically select different ranges, and the measured value will be displayed on the LCD. The capacitance measurement range is 10nF/100nF/1uF/10uF/100uF/1mF/10mF/60mF.

**Notice:**

① When measuring capacitance in the 10nF range, there may be residual readings in the value displayed on the screen. This number is the distributed capacitance of the test leads and is an accurate reading. You can subtract this value after the measurement.

② When the large capacitance file is measuring serious leakage or breakdown capacitance, some values will be displayed and unstable; when measuring large capacitance, the reading will take a few seconds to stabilize, which is normal when measuring large capacitance.

③ Please fully discharge the capacitor before testing the capacitance, otherwise it will enter the voltage measurement mode.

④ Unit: 1F=1000mF 1mF=1000uF 1uF =1000nF 1nF=1000pF.

**5. NCV/LIVE/phase sequence measurement**

**The operation is as follows :**

① Power-on state is automatic scanning state.

② Trigger the "NCV/LIVE/P" key; enter the electric field measurement EF/zero fire/measure LIVE/phase sequence measurement P respectively,and switch between auto/EF/LIVE/P in turn.

**NCV measurement:** trigger the "NCV/LIVE/P" key; enter the EF measurement, the LCD displays "EF", when the pen tip is close to the power test point (the measured frequency is 50Hz/60Hz), the LCD will display different according to the signal strength The buzzer will make different sounds, and the indicator will also emit different lights according to the strength of the signal, green light when weak, and red light when strong.

**LIVE measurement:** Trigger the "NCV/LIVE/P" key twice; enter the LIVE measurement, the LCD will display "LIVE". When the pen tip reliably touches the live wire test point, the LCD will display OL, and the buzzer will emit a continuous beep and indicate at the same time The lamp glows red.

**Non-Contact PHASE measurement:** Front end positive electrode of a test lead for phase measurement close to the test.

Trigger the "NCV/LIVE/P" key three times; enter the phase sequence measurement, the LCD displays PA, the display screen A keeps flashing, and the sensor tip is pressed tightly to the first; The first phase wire, wait for a beep; display the blinking B symbol, close the meter pen tip to the second phase wire, wait for a beep, display the flashing C symbol, place the meter pen tip close to the second phase wire, and wait for the beep After the test is completed, the display screen will display the test result on the screen.

**Notice:**

① Please stick the pen tip to the phase line.

② The shielded wire/cable and the thickness of the insulation material will affect the measurement results. If the cable shielding affects the measurement, you can measure near the exposed port.

③ When the pen tip is close to the measurement, try to be close to the phase line vertically, separate the phases as much as possible, and do not cross between several phase lines, which will cause mutual interference.

④ "  " The symbol means left-handed.

⑤ "  " Symbol means right hand.

⑥ Please complete the three phase sequence test within 1 minute, otherwise an error will occur; if an error occurs during measurement, please trigger the "NCV/LIVE/P" key to re-measure ,

**6. Temperature measurement (°C/°F)**

Range \ Accuracy	NF-620	Resolution
(-20-50)°C	± (1.0%+5) <50°C	1°C
(0-122 )°F	± (0.75%+5) <122°F	1°F

**Overload protection:** DC1000, AC 700V peak value.

① The boot display is automatic scanning state "AUTO".

② Trigger the power button, you can manually switch to: DC voltage (automatic measurement without threshold voltage) → AC voltage (automatic measurement without threshold voltage) → diode → fast buzzer →capacitance → temperature measurement (°C/°F), cycle in turn.

③ Only show room temperature.

**7. Auto-Off**

When the meter is out of use for about 5 minutes, the meter will automatically power off and enter the dormant state; if you want to restart the power, press and hold the "power" button for more than 2 seconds, the LCD will display automatic scanning "AUTO", and there will be an automatic shutdown symbol "APO".

① When the user is operating and measuring, it will not shut down.

② The base number of the capacitor file is within 100 characters, and the ACV is within 5 characters, it will automatically shut down. When the display value of the capacitor file is greater than 100 characters, the ACV is greater than the displayed value and greater than 5 characters,it won't shut down during using.

③ Automatically shut down in 5 minutes during electric field measurement/fire wire measurement/phase sequence measurement.

**Specification**

Model No.	NF-620
Display	FNST with color
Max display	5999(3/5/6)automatic polarity display
Testing method	Double integral A/D conversion
Sampling rate	3 times/s
Over range display	"OL"
Working enviroment	0~40°C, H<80%
Working voltage	DCV/ACV
Resistor/Capacitor/Diode	√
Continuity test	√
Non-contact phase sequence measurement	√
RMS	√
NCV	√
Backlight	√
Unit of Temp	°C/°F
Flashlight	√
Power supply	AAA1.5V battery
Product size	171×24×21mm

**Packing list**

Multimeter	1pc	Testing pens	1pc
Manual	1pc	Warranty card	1pc
Color box	1pc		



精明鼠®

# 深圳市诺方舟电子有限公司

编号	201	202	301	302	303	304	305	比例:	1:1	品号:	304-M1401-0001
类目	塑胶件	五金类	镜片	PVC贴纸	不干胶贴	说明书	包装盒	单位:	mm		
选择						√		设计	CZG	品名:	NF-620说明书折页英文-V1 20240122
306	307	308	309	310	311	312	313	核准			
彩卡	吸塑	工具包	PE袋	纸箱	宣传单	合格证	打印标签	标准:	√	文件类型:	做货文件
								定制:			
制作日期	2024.01.22		样式	5折页		印刷材质		128g双铜纸			
印刷要求	单色		页码			变更记录					
尺寸大小	350×120mm		版本	V1							