

# VICTOR 6012C/6012D

## 笔型智能多用表使用说明书

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## 一、概述

VICTOR 6012C/6012D 是一款袖珍型 3 5/6 位真有效值，笔型智能多用表，不需要转动拨盘去选择功能，根据输入的电压/电阻/的不同，仪表会进行自动识别测量，该机性能稳定、高精度、高可靠性、读数清晰、过载保护功能。用 1 只 AAA 1.5V 电池驱动，该仪表采用超大屏幕 LCD 显示器，采用升压供电，即使在 0.8V 低电池边缘也能保证背光及手电筒的超高亮度，该表携带方便，是一款广大用户极其喜欢的仪表，此系列仪表可用自动识别**直流电压和交流电压、电阻**、不需要任何切换，还可以手动切换去测量电容、二极管、通断测试、非接触电压测量，零火线测量，相序测量等参数，是一款性能优越的工具仪表，是实验室、工厂、无线电爱好者及家庭的理想工具。

## 二、安全事项

该系列仪表在设计上符合 IEC1010 条款（国际电工委员会颁布的安全标准），在使用之前，请先阅读安全注意事项。

- 1.测量电压时,请勿输入超过直流 1000V 交流 700V 有效值的极限电压;
- 2.电流档 36V 以下的电压为安全电压;
- 3.变换功能和量程时，表笔应离开测试点;
- 4.选择正确的功能和量程，谨防错误操作，该系列仪表虽然有全量程保护功能，但为了安全起见，仍请您多加注意;
6. 安全符号说明 “” 存在危险电压，“” 接地，“” 双绝缘，“” 操作者必须参阅说明书，

## 三、特性

### 1.一般特性

- 1-1.显示方式：液晶显示；
- 1-2.最大显示：5999（3 5/6）位自动极性显示；
- 1-3.测量方式：双积分式 A/D 转换；
- 1-4.采样速率：约每秒钟 3 次；
- 1-5.超量程显示：最高位显“OL”；
- 1-6.工作环境：(0~40)℃，相对湿度<80%；
- 1-7.电源：AAA 1\* 1.5V 电池；
- 1-8.体积(尺寸)：170×24×21mm(长×宽×高)；
- 1-9.重量：约 50g（包括 1.5V 电池）；
- 1-10.附件：使用说明书一本，合格证一张、外包装盒一个、表笔一根、，AAA1.5V 电池 1 只。

## 2.技术特性

2-1.准确度:±(读数的 a%+ 最低有效数位),保证准确度环境温度:(23±5)℃,相对湿度<75%,校准保证期出厂日起为一年。

2-2.性能(注“▲”表示该表有此功能)

|                |   |
|----------------|---|
| 功能             |   |
| 直流电压 DCV       | ▲ |
| 交流电压 ACV       | ▲ |
| 电阻/二极管/通断测试/电容 | ▲ |
| 非接触相序测量 D 型    | ▲ |
| 彩屏显示 D 型       | ▲ |
| 黑白显示 C 型       | ▲ |
| NCV            | ▲ |
| 零线/火线测试        | ▲ |
| 全单位符号          | ▲ |
| 背光手动/自动关闭      | ▲ |
| 真有效值测量         | ▲ |
| 温度(℃/°F) 常温显示  | ▲ |
| 手电筒照明          | ▲ |

#### 四. 操作面牌说明

1. 测试笔尖：电压，电阻，电容，频率，相序的正端测试点；
2. 输入端测试保护胶
3. 手电筒灯；
4. 信号指示灯；
5. LCD 显示；
6. 电源及功能选择键 SELECT（长按为电源的开启与关闭，短按分别为手动直流电压/交流电压/电阻/二极管，蜂鸣测量/电容/频率/温度测量）；
7. 锁存 HOLD 键；（如果显示 LCD 为黑白屏，则长按为背光灯的开启与关闭）
8. 电场感应测量/零火线测量/相序测量：  
该系列分有**相序测量**（彩屏显示）和**无相序测量**（黑白屏）两款型号；
9. 笔挂；
10. 测量负输入端 COM；

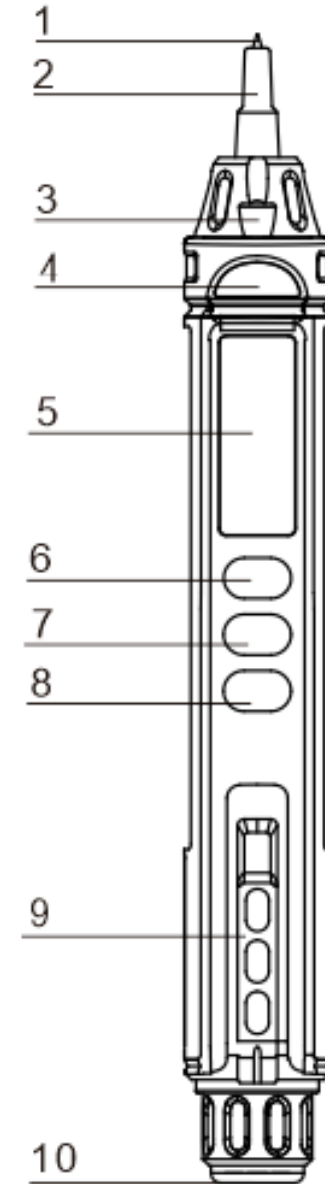


图 1

## 3. 技术指标

## 2-3-1. 直流电压/交流电压自动扫描测试(DCV/ACV)

| 准确度<br>量程      | VICTOR 6012C/6012D | 分辨力    |
|----------------|--------------------|--------|
| DC/AC6V        | ± (0.5%+4)         | 0.001V |
| DC/AC60V       |                    | 0.01V  |
| DC600/AC600V   |                    | 0.1V   |
| DC1000V/AC700V | ± (0.8%+10)        | 1V     |

输入阻抗：10M $\Omega$ ；过载保护：真有效值测量，频响在 50Hz-800Hz，DC1000V，AC700V 交流峰值。

具体操作如下：

1. 长按 POWER 大于 2S, 开机显示为自动扫描状态“**AUTO**”。
2. 将黑表笔插入“COM”尾部插孔，正极为前端笔尖；测试笔尖与被测点可靠接触。
3. 在输入端口“COM”和“笔尖”间测量电压大于 0.8V 时, 无论交流电压还是直流电压，仪表会根据直流分量和交流分量的大小进行比较，取其较大分量信号，再根据测量值的大小，直流在 6V/60V/600V/1000V 之间自动切换，交流在 6V/60V/600V/700V 之间自动切换然后将被测量值在 LCD 上显示出来。

注意：1) 输入电压切勿超过 DC1000V, AC700V 交流峰值，如超过则有损坏仪表电路的危险；高电压电路时，要特别注意避免触电；

2) 在完成所有的测量操作后，要断开表笔与被测电路的连接。

2-3-2. 电阻 ( $\Omega$ )

| 准确度<br>量程     | VICTOR 6012C/6012D | 分辨力          |
|---------------|--------------------|--------------|
| 600 $\Omega$  | ± (0.8%+3)         | 0.1 $\Omega$ |
| 6k $\Omega$   |                    | 1 $\Omega$   |
| 60k $\Omega$  |                    | 10 $\Omega$  |
| 600k $\Omega$ |                    | 100 $\Omega$ |
| 6M $\Omega$   |                    | 1k $\Omega$  |
| 60M $\Omega$  | ± (2.5%+3)         | 10k $\Omega$ |

输入阻抗：10M $\Omega$ ；过载保护：DC1000V, AC700V 交流峰值。

具体操作如下：

1. 开机显示为自动扫描状态“**AUTO**”。
2. 将黑表笔插入“**COM**”尾部插孔，正极为前端笔尖；测试笔尖与被测点可靠接触。
3. 如果表笔两端的测量电阻小于  $50\ \Omega$ ，蜂鸣会发出延续响声，需要快速的蜂鸣器测量，请按 **power** 键进入蜂鸣器快速测量。
4. 如果是测量闭合回路电阻，必须对待测电阻两端的电阻进行放电，否则如果回路中的电压大于  $0.8\text{V}$ ，仪表会误认为是电压测量而进入电压测量模式。
5. 在输入端口“**COM**”和“笔尖”间输入电阻测量值，仪表会根据电阻测量值的大小在  $600\ \Omega / 6\text{k}\ \Omega / 60\text{k}\ \Omega / 600\text{k}\ \Omega / 6\text{M}\ \Omega / 60\text{M}\ \Omega$  之间自动切换，然后将被测量值在 LCD 上显示出来。

注意：

- 1) 测量低阻时，表笔会带来内阻，为获得精确读数，可以先记录表笔短路值，在测量读数中减去表笔短路时的数值；
- 2) 测量在线电阻时，必须将被测电路所有电源关断且所有电容完全放电，才能保证测量值的正确；

#### 2-3-3. 快速通断测试/二极管/电容

| 量程              | 显示值                                    | 测试条件  |
|-----------------|--|---|
| “ <b>AUTO</b> ” | 二极管正向压降                                | 正向直流电流约 $1\text{mA}$ ，开路电压约 $3\text{V}$ ，     |
|                 | 蜂鸣器发声长响，测试两点阻值小于 $(50 \pm 20)\ \Omega$ | 开路电压约 $0.4\text{V}$ ，按“ <b>power</b> ”为两档功能切换 |

#### 2-3-4 频率测量(仅仅带彩屏 D 机型有频率测量功能)

| 准确度<br>量程 | VICTOR 6012D    | 分辨力    |
|-----------|-----------------|--------|
| 10Hz      | $\pm (0.1\%+3)$ | 0.01Hz |
| 100Hz     |                 | 0.1Hz  |
| 1kHz      |                 | 1Hz    |
| 10kHz     |                 | 10Hz   |
| 100kHz    |                 | 100Hz  |
| 1MHz      |                 | 1kHz   |
| 8MHz      |                 | 10kHz  |

输入灵敏度：1.5V 有效值；过载保护：550V 直流或交流峰值(不超过 10 秒)

频率测量

- 1.触发 power 键；切换到频率测量功能
- 2.黑表笔端为负，红表笔端为正，测试表笔可靠接触测试点
- 3.测量值将在 LCD 上显示出来

## 2-3-5.电容(C)

| 准确<br>量程 | VICTOR 6012C/6012D | 分辨力   |
|----------|--------------------|-------|
| 10nF     | ± (3.5%+20)        | 10pF  |
| 100nF    |                    | 100pF |
| 1uF      |                    | 1nF   |
| 10uF     |                    | 10nF  |
| 100uF    |                    | 100nF |
| 1mF      |                    | 1uF   |
| 10mF     |                    | 10uF  |
| 60mF     | ± (5%+3)           | 100uF |

过载保护：DC1000V, AC700V 交流峰值。

- 1.开机显示为自动扫描状态“**AUTO**”。
- 2.将黑表笔插入“**COM**”尾部插孔，正极为前端笔尖；测试笔尖与被测点可靠接触。
- 3.如需快速通断测试/二极管/电容测量，不断触发“**power**”开关，以次循环进入快速通断测试/二极管/电容测量，根据测量的需求选择相应功能的测量，测量电容时，被测量电容的大小会自动选择不同量程，将测量值在 LCD 上显示出来，电容测量档位有 10nF/100nF /1uF/10uF/100uF/1mF/10mF/60mF。

注意：

- 1) 用 10nF 档测量电容时，屏幕显示值可能有残留读数，此数为表笔的分布电容，为精确读数，可在测量后，减去此数值；
- 2) 大电容档测量严重漏电或击穿电容时，将显示一些数值且不稳定；测量大电容时，读数需要几秒钟时间才能稳定，这在测量大电容时是正常的；
- 3) 请在测试电容容量之前，对电容应充分地放电，否则会进入电压测量模式。
- 4) 单位：1F=1000mF 1mF=1000uF 1uF=1000nF 1nF=1000pF

2-3-6. NCV/LIVE/相序测量（该系列分有相序和无相序两个型号，有相序测量机型为 VICTOR 6012D，无相序测量为 VICTOR 6012C）；

操作如下：

1. 开机状态为自动扫描状态；

2. 触发“ NCV/LIVE/P ”键；分别进入电场测量 EF/零火/测量 LIVE/相序测量 P，依次循环在自动/EF/LIVE/P 之间切换；

**NCV 测量：**触发“ NCV/LIVE/P ”键；进入 EF 测量，LCD 显示为“EF”，当笔尖靠近电源测试点（被测频率为 50Hz/60Hz），根据信号的强弱，LCD 会显示不同的段----，蜂鸣器也会发出不同响声，同时指示灯也根据信号的强弱发出不同的灯光，弱时为绿光，强时为红光；

**LIVE 测量：**二次触发“ NCV/LIVE/P ”键；进入 LIVE 测量，LCD 显示为“LIVE”当笔尖可靠接触火线测试点时，LCD 会显示 OL，蜂鸣器会发出延续的响声，同时指示灯发出红色灯光。


**Non-Contact PHASE（非接触式相序）测量：**（相序测量只能用前端正极的一只笔尖靠近测试）


三次触发“ NCV/LIVE/P ”键；进入相序测量，LCD 显示为 PA，显示屏 A 不断闪烁，将感应笔尖贴紧第一根相线，等待蜂鸣嘀一声；显示闪烁 B 符号，将表笔尖紧贴第二根相线，等待蜂鸣嘀一声，显示闪烁 C 符号，将表笔尖紧贴第二根相线，等待蜂鸣嘀一声，测试完毕，显示屏将测试结果显示在屏幕上，

注意：1) 请将笔尖贴紧相线；

2) 屏蔽的电线/电缆，绝缘的材料厚度都会影响测量结果，如果线缆屏蔽影响测量，可以靠近裸露端口测量；

3) 笔尖靠近测量时尽量垂直贴紧相线，尽可能将相分开，不要横跨在几条相线之间，会造成相互干扰；

4) “” 符号表示左旋

5) “” 符号表示右旋；

6) 请在 1 分钟内完成三根相序测试，否则会产生错误；如果测量时产生错误，请触发“ NCV/LIVE/P ”键重新测量，

### 2-3-7 温度测量（ °C/°F ）

| 量程 \ 准确度    | VICTOR 6012C/6012D    | 分辨力  |
|-------------|-----------------------|------|
| (-20-50) °C | ± (1.0%+5) < 50 °C;   | 1 °C |
| (0-122) °F  | ± (0.75%+5) < 122 °F; | 1 °F |

过载保护：DC1000V，AC700V 交流峰值。

1. 开机显示为自动扫描状态“ AUTO”。



2. 触发电源键，可以手动切换为：直流电压（无门限电压状态自动测量）→交流电压（无门限电压状态自动测量）→二极管→快速蜂鸣器→电容→温度测量（℃/°F），依次循环。

3. 只显示室温；

### 五、自动开关机

当仪表停止使用约 5 分钟后,仪表便自动断电进入休眠状态；若要重新启动电源 ,长按“power”键大于 2 秒, LCD 上将显示为自动扫描“AUTO”，同时有自动关机符号“APO”；

- 1) 当用户在操作测量中，将不会关机，只有停止使用才能自动 5 分钟关机；
- 2) 电容档底数有 100 字内，ACV5 个字内，会自动关机，当电容档显示值大于 100 个字，ACV 大于显示值大于 5 个字用户在测量中也不会自动关机；
- 3) 电场测量/火线测量/相序测量时都会 5 分钟自动关机；

### 六、故障排除

如果您的仪表不能正常工作,下面的方法可以帮助您快速解决一般问题。如果故障仍排除不了,请与维修中心或经销商联系。

| 故障现象    | 检查部位及方法 |
|---------|---------|
| 没显示     | 电源未接通   |
|         | 更换电池    |
| 电阻显示误差大 | 表笔未接触好  |

本说明书如有改变，恕不通知；

本说明书的内容被认为是正确的，若用户发现有错误、遗漏等，请与生产厂家联系；

本公司不承担由于用户错误操作所引起事故和危害；

本说明书所讲述的功能，不作为将产品用做特殊用途的理由。

# VICTOR 6012C/6012D

## Mini Pen Multimeter User's Manual

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## I. Overview

VICTOR 6012C/6012D is a pocket type 3 5/6 digits true effective value, pen-type smart multimeter, no need to turn the dial to select the function, according to the input voltage / resistance / difference, the meter will automatically identify and measure, the performance of this machine Stable, high precision, high reliability, clear reading, overload protection function. Driven by a AAA 1.5V battery, this meter uses a large LCD display and a boost power supply. Even at the edge of a 0.8V low battery. This meter is easy to carry and is a meter that most users like very much. This series of meters can automatically identify DC voltage, AC voltage, resistance, without any switching, and can also be manually switched to measure capacitance, diode, continuity test, non-contact Voltage measurement, zero live line measurement, phase sequence measurement and other parameters, It is a tool meter with superior performance, an ideal tool for laboratories, factories, radio enthusiasts and families.

## II. Safety Precautions

This series of meters is designed to comply with IEC1010 (safety standards promulgated by the International Electrotechnical Commission). Please read the safety precautions before using it.

1. When measuring voltage, do not input a limit voltage that exceeds the effective value of DC1000V or AC 700V;
2. The voltage below 36V in the current file is a safe voltage;
3. When changing functions and ranges, the test leads should leave the test point;
4. Choose the correct function and range, and beware of wrong operation. Although this series of instruments has full range protection, for safety reasons, please pay more attention;
6. Safety symbol description “  ” Dangerous voltage exists, “  ” Grounded, “  ” Double insulation, “  ” The operator must refer to the manual

## III. Characteristic

1. General characteristics
  - 1-1. Display mode: liquid crystal display;
  - 1-2. Maximum display: 5999 (3 5/6) automatic polarity display;
  - 1-3. Measurement method: double integral A/D conversion;
  - 1-4. Sampling rate: about 3 times per second;
  - 1-5. Over-range display: the highest position displays "OL";
  - 1-6. Working environment: (0~40)°C, relative humidity <80%;
  - 1-7. Power supply: AAA 1\* 1.5V battery;

1-8. Volume (size): 170×24×21mm (length×width×height);

1-9. Weight: about 50g (including 1.5V battery);

1-10. Accessories: One manual, one certificate, one outer box, 1 pcs test lead, and one AAA1.5V battery。

## 2. Technical characteristics

2-1. Accuracy:  $\pm$ (a% of reading + least significant digit), guaranteed accuracy Ambient temperature:  $(23 \pm 5)^{\circ}\text{C}$ , relative humidity <75%, calibration guarantee period is one year from the factory date。

2-2. Performance (Note "▲" means the watch has this function)

| Features   |   |
|--|---|
| DC voltage DCV   | ▲ |
| AC voltage ACV   | ▲ |
| Resistance/diode/continuitytest/capacitance                                    | ▲ |
| Non-contact phase sequence measurement type D                                  | ▲ |
| Color screen display type D  | ▲ |
| Black and white display type C   | ▲ |
| NCV  | ▲ |
| Neutral/Fire Test  | ▲ |
| Full unit symbol   | ▲ |
| Backlight manual/automatic shutdown  | ▲ |
| True RMS measurement   | ▲ |
| Temperature ( $^{\circ}\text{C}/^{\circ}\text{F}$ ) normal temperature display | ▲ |
| Flashlight lighting  | ▲ |

#### IV. Operation panel instruction

1. Test pen tip: positive end test point of voltage, resistance, capacitance, frequency, phase sequence;
2. Input end test protective glue
3. Flashlight;
4. Signal indicator;
5. LCD display;
6. Power and function selection key SELECT (long press for power on and off, short press for manual DC voltage/AC voltage respectively/Resistance/diode, buzzer measurement/capacitance/frequency/temperature measurement);
7. Lock the HOLD button; (if the LCD display is black and white, long press is to turn on and off the backlight)
8. Electric field induction measurement/zero line measurement/phase sequence measurement:  
This series is divided into phase sequence measurement (color screen display) and non-phase sequence measurement (black and white screen) two models;
9. Pen hang;
10. Measuring negative input COM;

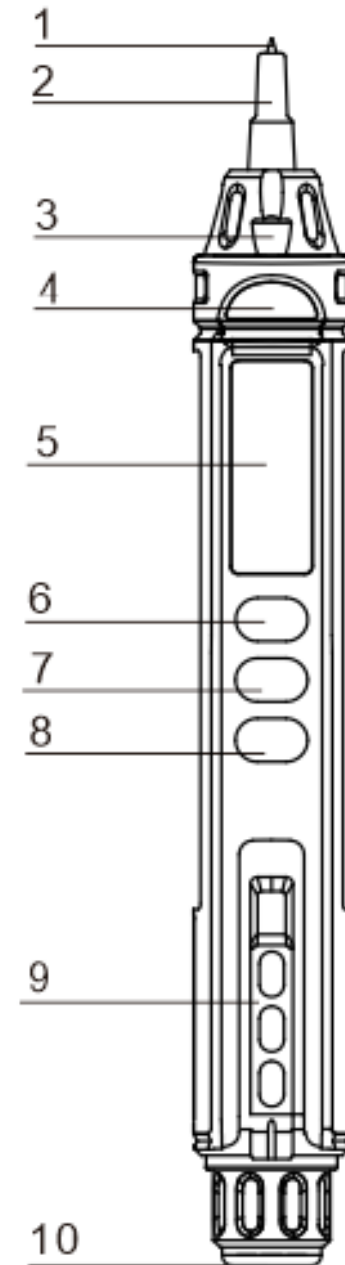


figure1

## 3. Technical index

## 2-3-1. DC voltage/AC voltage automatic scanning test (DCV/ACV)

| Accuracy<br>range | VICTOR 6012C/6012D | Resolution |
|-------------------|--------------------|------------|
| DC/AC6V           | $\pm (0.5\%+4)$    | 0.001V     |
| DC/AC60V          |                    | 0.01V      |
| DC600/AC600V      |                    | 0.1V       |
| DC1000V/AC700V    | $\pm (0.8\%+10)$   | 1V         |

Input impedance: 10M $\Omega$  ; Overload protection: true RMS measurement, frequency response is 50Hz-800Hz, DC1000 or 700V AC peak value.。

The specific operation is as follows:

- 1.Press and hold POWER for more than 2S, and it will display in automatic scanning state "AUTO".
- 2.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.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:

- 1)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;
- 2)After completing all measurement operations, disconnect the test leads from the circuit under test.

2-3-2.resistance (  $\Omega$  )

| Accuracy<br>range | VICTOR 6012C/6012D | Resolution   |
|-------------------|--------------------|--------------|
| 600 $\Omega$      | $\pm (0.8\%+5)$    | 0.1 $\Omega$ |
| 6k $\Omega$       | $\pm (0.8\%+3)$    | 1 $\Omega$   |
| 60k $\Omega$      |                    | 10 $\Omega$  |
| 600k $\Omega$     |                    | 100 $\Omega$ |
| 6M $\Omega$       |                    | 1k $\Omega$  |
| 60M $\Omega$      | $\pm (2.5\%+3)$    | 10k $\Omega$ |

Input impedance: 10M  $\Omega$  ; overload protection: DC1000V or 700V AC peak value.

The specific operation is as follows:

- 1.The boot display is automatic scanning state "AUTO".
- 2.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 the measured resistance at both ends of the test lead is less than 50  $\Omega$  , the buzzer will emit a continuous beep, and quick buzzer measurement is required, please press the power key to enter the buzzer quick measurement.
- 4.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.
- 5.Enter the resistance measurement value between the input port "COM" and "pen tip", the meter will automatically switch between 600  $\Omega$  /6k  $\Omega$  /60k  $\Omega$  /600k  $\Omega$  /6M  $\Omega$  /60M  $\Omega$  according to the resistance measurement value, and then the measured value will be displayed on the LCD.

notice:

- 1) 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.;
- 2) 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;

## 2-3-3.Fast continuity test/diode/capacitor

| range  | Display value  | Test Conditions   |
|--------|--|---|
| "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 $(50 \pm 20) \Omega$ | Open circuit voltage is about 0.4V, press "power" to switch between two functions |
|        |  |   |

## 2-3-4 Frequency measurement (only D model with color screen has frequency measurement function)

| accuracy<br>range | VICTOR 6012D    | resolution |
|-------------------|-----------------|------------|
| 10Hz              | $\pm (0.1\%+3)$ | 0.01Hz     |
| 100Hz             |                 | 0.1Hz      |
| 1kHz              |                 | 1Hz        |
| 10kHz             |                 | 10Hz       |
| 100kHz            |                 | 100Hz      |
| 1MHz              |                 | 1kHz       |
| 8MHz              |                 | 10kHz      |

Input sensitivity: 1.5V effective value; overload protection: 550V DC or AC peak value (not more than 10 seconds)

Frequency measurement

- 1.Trigger the power button; switch to the frequency measurement function
- 2.The black test lead is negative, the red test lead is positive, and the test lead reliably touches the test point
- 3.The measured value will be displayed on the LCD



## 2-3-5 Capacitance(C)

| Accuracy<br>range | VICTOR 6012C/6012D | Resolution |
|-------------------|--------------------|------------|
| 10nF              | $\pm (3.5\%+20)$   | 10pF       |
| 100nF             |                    | 100pF      |
| 1uF               |                    | 1nF        |
| 10uF              |                    | 10nF       |
| 100uF             |                    | 100nF      |
| 1mF               |                    | 1uF        |
| 10mF              |                    | 10uF       |
| 60mF              | $\pm (5\%+3)$      | 100uF      |

Overload protection: DC1000V or 700V AC peak value.

- 1.The power-on display shows the automatic scanning state "AUTO".
- 2.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

2-3-6. NCV/LIVE/phase sequence measurement (this series is divided into two models: phase sequence and no phase sequence, the model with phase sequence measurement is a color screen, and the phase sequence measurement is a black and white screen);

The operation is as follows:

3. Power-on state is automatic scanning state;

4. 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,

## 2-3-7 Temperature measurement (°C/°F)

| Accuracy<br>range | VICTOR 6012C/6012D                      | Resolution |
|-------------------|---|------------|
| (-20-50) °C       | $\pm (1.0\%+5) < 50^{\circ}\text{C};$   | 1 °C       |
| (0-122) °F        | $\pm (0.75\%+5) < 122^{\circ}\text{F};$ | 1 °F       |

Overload protection: DC1000V or 700V AC 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;

## V. Automatic boot

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";

- 4) When the user is operating and measuring, it will not shut down, and only after stopping use can it automatically shut down for 5 minutes;
- 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. The user is measuring  
It won't shut down automatically;
- 5) Automatically shut down in 5 minutes during electric field measurement/fire wire measurement/phase sequence measurement;

## VI. Troubleshooting

If your meter does not work normally, the following methods can help you quickly solve general problems. If the fault still cannot be eliminated, Please contact the repair center or dealer.

| Failure phenomenon             | Inspection site and method           |
|--------------------------------|--------------------------------------|
| Did not show                   | Power is not turned on               |
|                                | Replacement battery                  |
| Large resistance display error | The test lead is not in good contact |

This manual is subject to change without notice;

The content of this manual is considered correct. If users find errors or omissions, please contact the manufacturer;

The company is not responsible for accidents and hazards caused by users' wrong operations;

The functions described in this manual are not used as a reason for using the product for special purposes.