Huazheng®

HZHG-100KV-1.5
AC DC Voltage Divider

Huazheng Electric Manufacturing (Baoding) Co., Ltd

Dear user:

Thank you for choosing HZHG-100KV-1.5 AC DC Voltage Divider.

We hope that this instrument can make your work easier and more enjoyable, so that you can get the feeling of office automation in the test and analysis work.

Before using the instrument, please read this manual, and operate and maintain the instrument according to the manual to prolong its service life. "Just a light press, the test will be completed automatically" is the operating characteristics of this instrument.

If you are satisfied with this instrument, please tell your colleagues; if you are not satisfied with this instrument, please call (0312) 6775656 to tell you to serve you at all times-Baoding Huazheng Electric Manufacturing Co., Ltd., our company will definitely make you satisfied !

Contents

I. Overview

The AC/DC voltage divider is mainly used for measuring AC/DC high voltage. The device consists of a high-stability passive RC voltage divider and a high-precision digital sampling system. The meter is equipped with a rechargeable battery and can work continuously for more than 4 hours. The voltage divider, LCD digital display head, measuring line, power line, etc. are concentrated in an aluminum alloy box, which is easy to carry and use. The AC/DC voltage divider is suitable for on-site measurement of power systems and for measuring power frequency AC/DC or resonant AC/DC voltage in laboratories of colleges and universities.

II. Technical Indicators

1. Rated voltage: AC:100kV DC:100kV
2. AC measurement method: True RMS measurement
3. Accuracy: AC:1.5% DC:1.0%
4. Insulation medium: dry dielectric material
5. Environmental conditions:

   Temperature: -5℃～+45℃

   Humidity: <85%

   Altitude: ≤2000m

   No chemical deposits that seriously affect the surface insulation and electrical tests of the equipment
6. Capacitance: 100pF
7. Resistance: 800MΩ
8. Weight: 8kg
9. Volume: 180×1870×850mm
10. kilovoltmeter related parameters:

    Voltage measurement range: 0～200.00V

    Voltage display range: 0～1000kV

    DC voltage measurement accuracy: 1.0%±100 words

    AC voltage true effective value Vrms measurement accuracy:

1.5% ± 200 characters

AC measurement frequency response range: 45～65Hz

Voltage divider ratio range: 1-9999

11. Voltage divider withstand voltage: 1.1 times rated voltage for 1 minute

12. Power supply: external AC220V±10% 50Hz, built-in 12V rechargeable battery

III. Work Principle

The AC/DC voltage divider is a resistor-capacitor voltage divider, which consists of two parts: an AC/DC voltage divider and a kilovoltmeter. The resistor-capacitor voltage divider can measure both AC and DC; the resistor-capacitor voltage divider consists of a low-temperature drift resistor and a high-voltage capacitor. It uses a 32-bit ARM chip and a true-color touch screen.

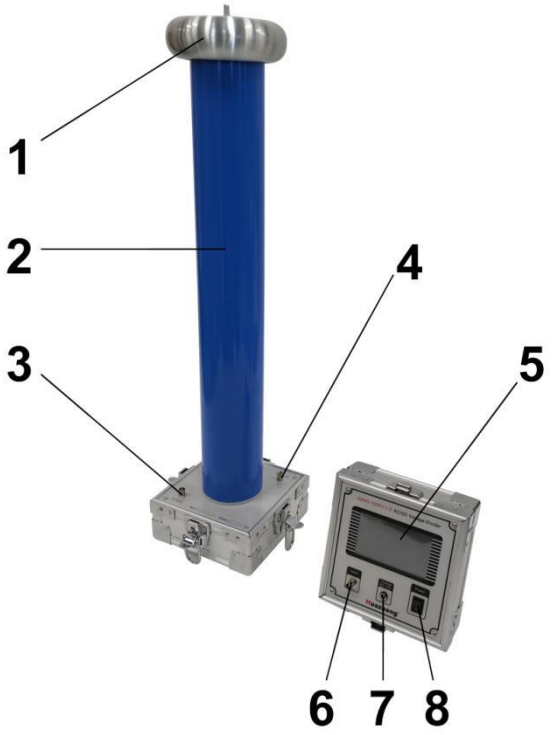
The kilovoltmeter has the following technical features:

1. The high voltage is sampled by the voltage divider and connected to the kilovoltmeter through a coaxial cable. The kilovoltmeter automatically identifies the input AC voltage and DC voltage:

2. When measuring AC, the true effective value of the measured voltage can be displayed on the display screen of the meter; when measuring DC, the DC voltage value can be displayed.

3. The instrument adopts a true color touch screen human-machine interface, which is easy to operate and has high measurement accuracy. The power supply can be either an external power supply (charger) or a built-in lithium battery DC power supply, which is convenient for on-site use in various occasions.

IV. Structural Layout Description



① High voltage input: The top of the voltage equalizing cap (M8) is the high voltage connection terminal to be measured.

② High-voltage cylinder: built-in voltage-dividing resistor and capacitor.

③Output: The sampling signal output terminal of the voltage divider is connected to the input terminal of the meter panel.

④Grounding: connected to the earth grid.

⑤Display area: Automatic identification of AC and DC. When the input is AC, it is displayed as AC; when the input is DC, this value is displayed as DC. When used with a voltage divider, it is necessary to set a suitable voltage divider ratio (set at the factory).

⑥Sampling signal input: sampling voltage input connection port.

⑦Charging port: charging terminal (connect to mains 90-220V).

⑧Power switch: main power switch.

5 Preparation before the test

The AC and DC voltage dividers are placed in a certain space, and

the surrounding space is kept at least twice the height of the voltage divider.

Ground connection: The grounding poles at the bottom of the voltage divider and on the kilovolt meter panel should be reliably grounded. It is prohibited to use the voltage divider before grounding.

Signal connection: The coaxial cable provided to the user is a sampling signal connection cable dedicated to the kilovoltmeter. Use this cable to connect the signal output port at the bottom of the voltage divider to the signal input port on the kilovoltmeter panel.

Note: The signal connection cable is for single-use only and cannot be connected with other coaxial cables or any connecting wires!

High voltage connection: Use a high voltage lead to connect the high voltage measured end to the M8 screw of the voltage equalizing cap at the top of the voltage divider.

V. Basic Operation

Press the "Switch" button to turn on the power, and the screen will display the measurement interface. Connect the coaxial cable signal line to the kilovoltmeter to start measuring. When a valid voltage signal is input (the input voltage is greater than 5%-10% of the full-scale voltage), the system will automatically distinguish between AC and DC and display the corresponding value of the voltage signal on the display panel.

VI. Built-In Battery Instructions

In the normal display interface, the power level of the host's built-in power supply will be displayed in the upper right corner of the screen. The length of the green energy column shows the percentage of battery power. When charging, the battery power symbol will change to a charging symbol.

When powered by a lithium battery, if the battery voltage is too low,

please charge it in time and use the charger that comes with the device (the red light on the charger indicates charging status, and the green light indicates full charge).

VII. Precautions

The equipment should be calibrated regularly to ensure the accuracy of the measurement. It should be stored in a warehouse with dry air and suitable temperature. When taking out the equipment for use, check that the surface is clean. If necessary, wipe it with a dry and clean cloth before starting it for use.

The screen surface is equipped with a conductive glass layer that is anti-static and strong electric field, preventing sharp and hard objects from scratching or damaging the protective layer.

When not in use for a long time, the battery needs to be charged regularly.

VIII. Packing List

No.	Item	Qty
1	Digital kilovolt meter	1
2	Voltage divider	1
3	Charger	1
4	Coaxial cable (for single pair)	1
5	User manual	1
6	Product certificate	1