

# **HZ-109S5 Primary Current Injection Tester**

## **USER MANUAL**

**Notes:**

1. To ensure the safety of the test, the device should be reliably grounded before the test.
2. The power supply voltage should be  $380V \pm 10\%$ .
3. When the test is in progress, it is strictly forbidden to connect the test line.
4. The cross section of input power cable should be greater than  $16\text{mm}^2$ , the cross section of the high current output connection cable should be greater than  $450\text{mm}^2$ , and the length of the output connection cable should be shortened as much as possible.
- 5 As far as the output current requirements are met, use parallel outputs as much as possible.
6. Avoid long-term continuous output when passing large current.

**Note:** When the current exceeds 3500A at 50Hz, use a cable tie to tie the output high current wire together; at 60Hz, when the current exceeds 3000A, use a cable tie to tie the output high current wire together.

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## **I.Description**

HZ-109S5 High Voltage 5000A Primary Current Injection Test Kit , The ARM chip is used to control the output technology and the large capacity ring transformer, and the ammeter is displayed on the LCD screen, and the one or two current and variable ratio are displayed at the same time. The external aluminum alloy chassis, PC panel, has beautiful appearance, large output capacity, small volume.

## **II.Technical Parameter**

2.1. power input: AC:380V. 75A

2.2 . power supply: AC:220V. 1A, 50Hz/60HZ

2.3. output current: AC:5000A. 5V or 2500A. 10V

2.4. LCD display shows current value, ratio and phase angle at one time and two times.

Primary current range: 0~5500A, resolution: 0.1A, Two measuring current range: 0 ~ 6A, resolution: 0.001A, accuracy: 0.5%

2.5.accuracy: 0.5%

2.6. use environment: temperature -10~40℃, relative humidity 80%

2.7.Host: 430mm × 430mm × 470mm;

External pressure regulator: 515mm × 375mm × 950mm;

Wire box: 385mm × 270mm × 380mm × 2 pieces.

2.8 Weight: Host 108Kg, external voltage regulator 120Kg, wire box (2) 55Kg.

## **III. Operation Manual**

### **Control Part:**



- 3.1.1 high current output terminal;
- 3.1.2 High-current series-parallel pressure plate, the middle of the two plates is connected in series, and the two sides are connected in parallel;
- 3.1.3 series-parallel button, when the second pressure plate is placed in the middle, the button is pressed in series;
- 3.1.4 Grounding terminal, for safe use, the terminal should be reliably grounded during use;
- 3.1.5 secondary current measurement input;
- 3.1.6 The input end of the voltage regulator is connected to the 0-430V output terminal of the external voltage regulator;
- 3.1.7 contrast adjustment of the LCD screen;
- 3.1.8 LCD screen (display first and secondary current value, stopwatch and start, cut);
- 3.1.9 Output/cut button (red light when output);
- 3.1.10 Working power input terminal, working power supply for fan, LCD screen and control circuit, 220V·0.5A

## Regulator Menu



3.2.1 Current output adjustment knob;

3.2.2 voltage regulator power input: 380V · 80A;

3.2.3 Voltage input indicator of the voltage regulator. When there is power input, the indicator light is on. It is not related to whether the power is on or off. If the indicator is not lit, it indicates that there is no power input to the incoming line. Please check the power supply line.

3.2.4 voltage regulator output: 0-430V·70A;

3.2.5 working power output terminal, only for the host power supply;

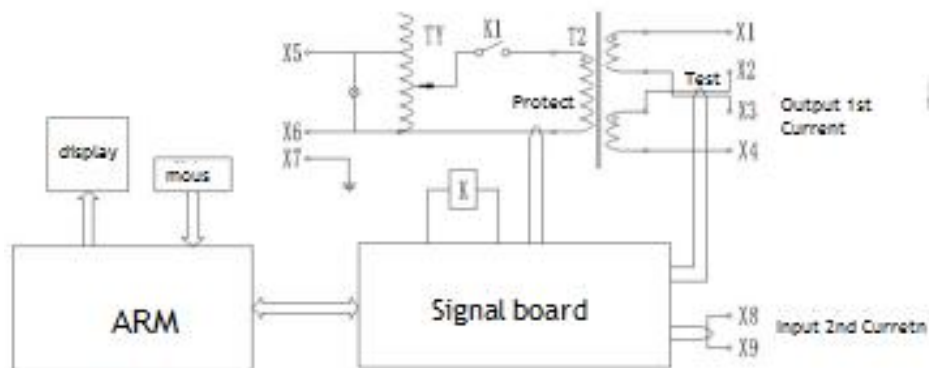
3.2.6 Power switch: It is a fast protection switch for device input power control and overload protection;

3.2.7 Grounding terminal, for safe use, the terminal should be reliably grounded during use.

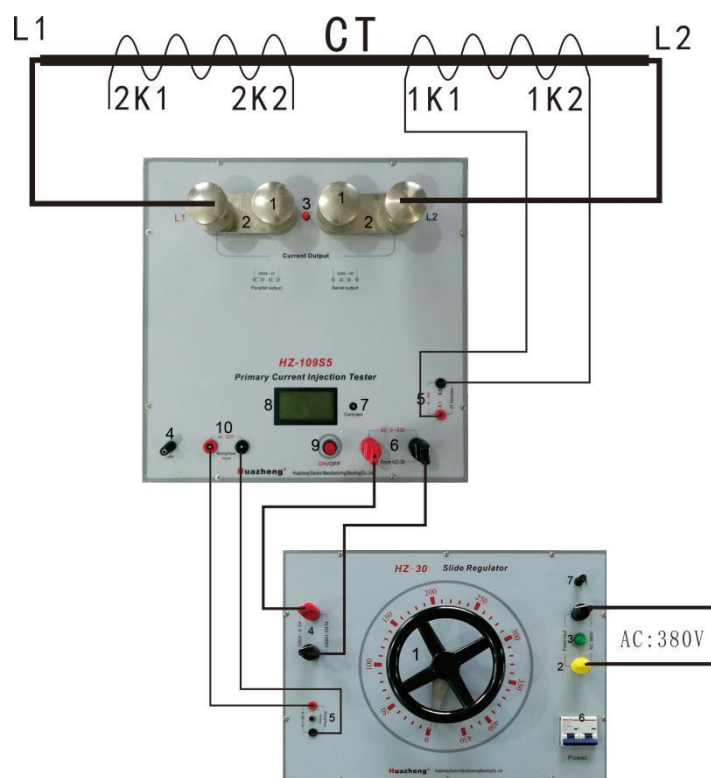
## IV.The Working Principle

The circuit is shown below. AC: 380V two-phase power supply is input by X5X6, regulated by TY regulator, T current riser rises, and X1X4 outputs large current through current transformer. When two sets of coils are output in parallel, it can output 5000A current, and the maximum no-load voltage is 5V. When two sets of coils are output in series, it can output 2500A current, and the maximum no-load voltage is 10V.

The ARM controller handles the data display and control output of the mouse and signal board.



### V.Operating Method



Use our dedicated power input line, dedicated output high current line, secondary circuit line or stopwatch input line and grounding line, etc.

After connecting, first reset the voltage regulator to zero, then plug in the 380V power supply (such as the field power socket is far away. If you need to use the power supply board, the cross section of the wire should be no less than 16.0mm<sup>2</sup>, otherwise it will

affect the output power).

Open the main switch and the screen displays “Welcome to use HZ-109S5 high current tester”, then enter the user interface, as shown below.

Turn Ratio:	0.000/5
1 <sup>st</sup> Current	2 <sup>nd</sup> Current
0.0 A	0.000A
Start	$\phi$ : 359°

At this time, press the **output/cut button** to indicate that the red light is on, the **start** will **stop**, and then adjust the voltage regulator. The high current terminal has current output. At the current meter, there is a primary current value of the display output. The secondary current input, the secondary current value is shown in the table, and at the same time shows the ratio of the measured transformer (0.000/5) and the phase of the primary current and the secondary current (that is, the polarity). If you press the **output/cut button** again, the red light is off, the **stop** becomes **Start**, and the output stops.

## VI.After Sales Service

The instrument will be free of charge and lifetime maintenance if there is any quality problem within the next year from the date of sale. Baoding Huazheng Electric Manufacturing Co., Ltd. will provide you with all-round technical support and high-quality and efficient after-sales service! Users can contact the company's customer service center at any time.

## VII.Packing List

No.	Item	Qty
1	Main engine	1
2	Regulator	1
3	High current test line	8
4	Regulator input power cord (12mm <sup>2</sup> -2.5m)	2
5	Double core sheathed wire (2×1.2mm <sup>2</sup> -5m)	1
6	Regulator connection cable (12mm <sup>2</sup> -1m)	2
7	Power line (2×1.6mm <sup>2</sup> -1m)	1
8	Ground lead	2
9	Small clip	3
10	Pull hands	1