

HZDL130

Primary Current Injection Tester



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I.Summary

1.Usage

HZDL 130 Primary Current Injection Tester(referred to as the current booster), our company's own research and development equipment, it combines the advantages of similar products at home and abroad, using CNC technology, strong anti-interference ability, compared with the previous generation of current riser Due to the low power consumption, large capacity self-twisting voltage regulator and high magnetic permeability core made of converter, it has the advantages of large output power, small size and light weight. It is mainly used for testing of busbar protection and various current transformers. It is widely used in research, production and electrical test sites of power, railway, petrochemical, metallurgical and mining enterprises.

2.Performance characteristics

1. Voltage and current 6 and half LCD display, with higher display precision and more accurate experimental results (the only one in China)
- 2.128*64 dot matrix liquid crystal display, display data more intuitive, faster reading (the only one in China)
3. The instrument display lock function, especially for the transformer to read more accurately and quickly than in the experiment (the only one in China)
4. Polarity measurement, ct polarity automatic measurement, no need for separate test (the only one in China)
5. Time meter: 0.01 s-9999.999 S liquid crystal display (the only one in China)
6. Added self-locking function (the only one in China)
7. Variable ratio automatic detection function
8. Added internal stop meter function
9. Beautiful and generous PVC panel is adopted to make the panel more resistant to dirt and wear
10. High measuring accuracy, 0.5 grade
11. Large power, small volume and strong load capacity
12. Small size, light weight, the volume is only 30% ~ 70% of similar products, very

convenient to carry.

3.Operational aspects

(1) 1) after the completion of wiring, check whether there is any wiring error and whether the connector is in good contact.

(2) during the test, if there is any abnormal phenomenon such as lighting or no display when starting up, the power should be immediately turned off and the wiring should be rechecked.

(3) during actual wiring, the current output terminal should form a circuit, or the instrument will not output current.

(4) the current riser is equipped with random output conductor; The output external copper wire is selected according to 10A/mm². (two 3-meter test wires are standard)

(5) the capacity of the equipment is designed for short-time work of 5 minutes. If it is used for batch test, the working time should be less than 2.5 minutes. Wait for 10 minutes before the next work. If do temperature rise (30 minutes -24 hours) should be prepared according to long-term working temperature rise.

II.The Technical Features

1.Name and classification

(1)Name: HZDL 130 Primary Current Injection Tester

(2)Environmental groups: belong to GB6587.1-86 in "electronic measuring instrument test master plan" III group instrument (can be used in outdoor environment).

2. 1 Input voltage: AC220V $\pm$ 10%

2. 2 Power: 5KVA

2. 3 Output voltage: series: AC0~500A (10V) parallel: AC0~1000A (5V) Stepless adjustable, panel with digital display ammeter

2. 4 Output voltage: (>10V)

2. 5 Output waveform: the output current is the standard sinusoidal wave with small burrs, which is better than the standard power system requirements.

2. 6 Measuring accuracy :(using grade 0.2S material) the actual value is around 0.3; Each

current can be smoothly, smoothly and continuously adjustable, and the precision is higher than 0.5 level. The current voltmeter shows true and effective value with high accuracy and stability.

2. 7 Output current mode: true RMS value is continuously adjustable;

2.8 current stability: 0.2%

2.9 structure and form: integrated

2.10 wiring mode: according to requirements

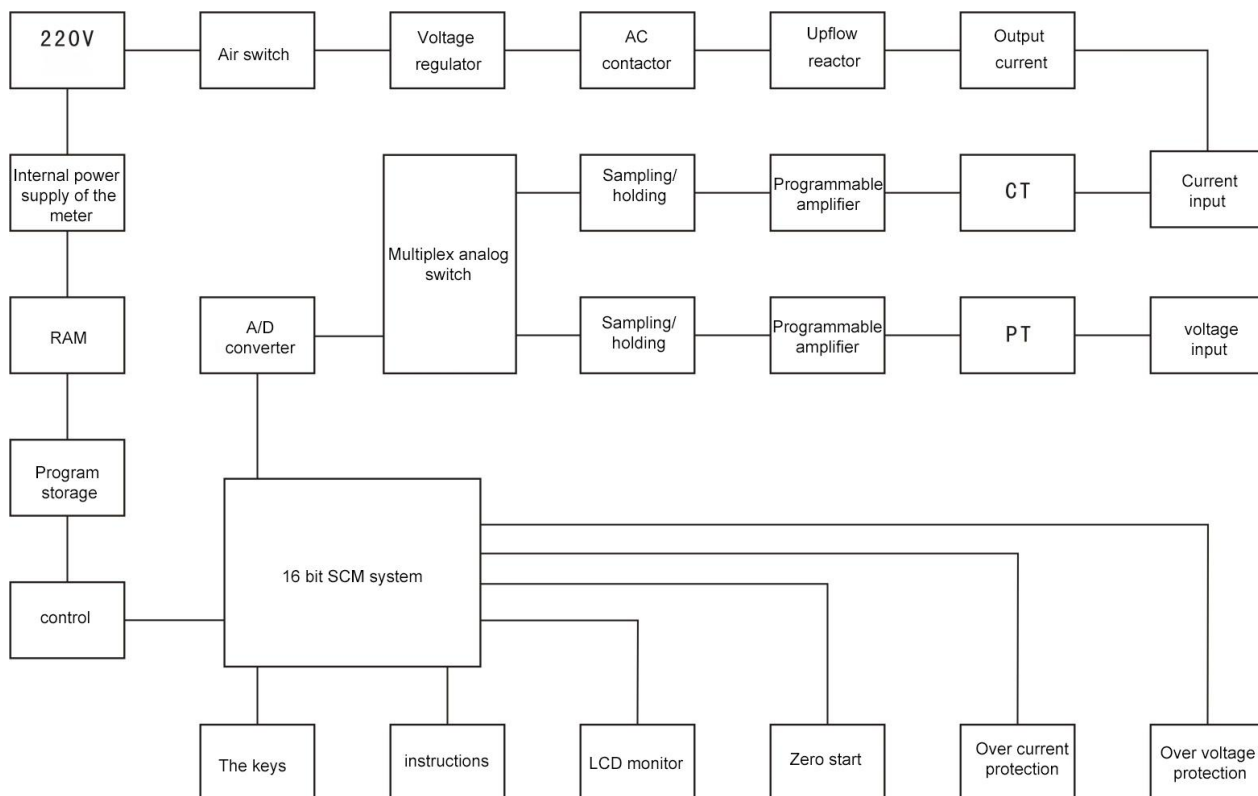
2.11 current stability: 0.2%;

2.12 protection Settings: over-current and over-voltage

2.13 0.001S-99999.999S

III.Working Principle

1.Schematic diagram



2.Working principle

The instrument measurement circuit includes a current measurement circuit. (voltage test can be added as required) with extended volt-ampere characteristics.

The current measurement circuit includes micro-current zero impedance CT, program-controlled amplifier circuit and sampling circuit.

Voltage measurement circuit includes PT isolated signal acquisition circuit, program controlled amplifier circuit and sampling circuit.

By 16 bit single chip microcomputer using computer digital real-time acquisition method, by measuring the voltage signal amplitude, according to the voltage proportional relationship, high pressure can be calculated measured voltage value, by measuring the voltage signal amplitude and setting value compared to realize the function of automatic timing, according to the current proportion relations, can calculate the current output size, by measuring the current/voltage signal amplitude comparing with set point to realize the function of over-current protection.

IV.Panel Shows

1. Operating power switch: press the switch ammeter and the control circuit to start work.
2. Output adjustment knob: after starting the test, the adjustment knob outputs current from the "L1" and "L2" ends.
3. Primary ammeter: monitors the output current value of "L1 and L2" end.
4. Secondary ammeter: monitoring input current value "K1, K2" end ($\leq 5A$)
5. Time to test 0.01S-99999.999S

V.Operational Instructions

I) Time test

1. Before the power is connected, the "power switch" should be disconnected and the "current regulation" handle should be turned back to zero counterclockwise.
2. The input end of the power supply is connected with the AC 220V voltage, and then

the "current output" terminals "2000A,*" and "switching input" terminals are connected to the contacts of the relay, switch or circuit breaker under test with special test lines. (Note: When the test usually starts, the "normal closing point" terminals should be connected with a short test line. Otherwise, the instrument will not start and it will not be able to carry out the test.)

3. After the connection is completed, close the "power switch" and press the "start" button, and slowly adjust the "current regulation" handle clockwise, so that the current can be output from the "current output" terminal. (Note: Current output from 2000, * terminal. Time detection: If the overload current is 200A, after 200A, press the (stop) switch, press the reset switch of the timer, press the start switch again, contact action, output stop, which shows the action time of the tested equipment.

II) Variable ratio test

1. Before the power cord is connected, first adjust the "current adjustment" handle counterclockwise to zero. The current output end is connected to the primary side of the current transformer under test and connected to the ammeter of the equipment at the secondary side of the current transformer under test.

2, after power ON, close the instrument after the power switch to "power control" switch "ON" position, then clockwise (" current "handle, bring up the required output current, can characteristic test was carried out ON the equipment under test (an ammeter displays a current value at this time, the secondary current meter display at this time of the secondary current, according to the primary and secondary current value can be calculated the change of the measured transformer ratio).

If the selector switch is pulled to the series, the L2 and L3 should be shorted, and the output terminals are L1 and L4. The output current is 500A.

If the selector switch is selected to the parallel gear, L1 and L2 should be shorted, L3 and L4 shorted, the output terminals are L1 and L3 or L2 and L4, and the output current is 1000A.

3. During impact test, the required current shall be adjusted first, and the "impact" switch shall be pressed to power off the equipment, and the power shall be released to make impact test on the tested equipment.

VI.Safety Precautions

(1) ensure that the instrument is well grounded for the safety of operators and instruments.

(2) ground wire should be connected before test preparation, and the grounding wire should be removed at the end of the work.

(3) the power supply connected to the instrument should be able to withstand 30A current shock.

(4) when connecting the instrument with the test product, pay attention to check whether the wiring is wrong, so as to avoid damage of the equipment caused by wrong wiring.

(5) the maximum current value set for overcurrent protection should not exceed the rated output current value of the instrument.

(6) in the case of electrification, no connection shall be inserted or unplugged.

VII.Transportation and Maintenance

1.Transportation

This product must be packed during transportation. The packing cases should be wooden cases with foam and other shock-proof layers. Packaged products, should be able to road, rail, air transport. In the process of transportation, it shall not be placed in the open carriage, and the warehouse shall pay attention to prevent rain, dust and mechanical damage.

2. Store

The instrument should be stored in a room with ambient temperature of $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$, relative humidity not exceeding 85%, ventilation and no corrosive gas. It should not be placed close to the ground and walls.

3. The moisture

In humid climate or wet season, if the instrument is not used for a long time, it is required to turn on the power once a month (about 2 hours) to release moisture and protect electronic components.

4. Prevent exposure

When the instrument is used outdoors, avoid or reduce direct sunlight exposure to the display screen as much as possible. It can't be put in a very damp warehouse.

VIII. Quality Assurance and After-sales Service

1. The instrument is manufactured in strict accordance with national and enterprise standards. The production process strictly implements ISO9000 standards to ensure the quality of the instrument.

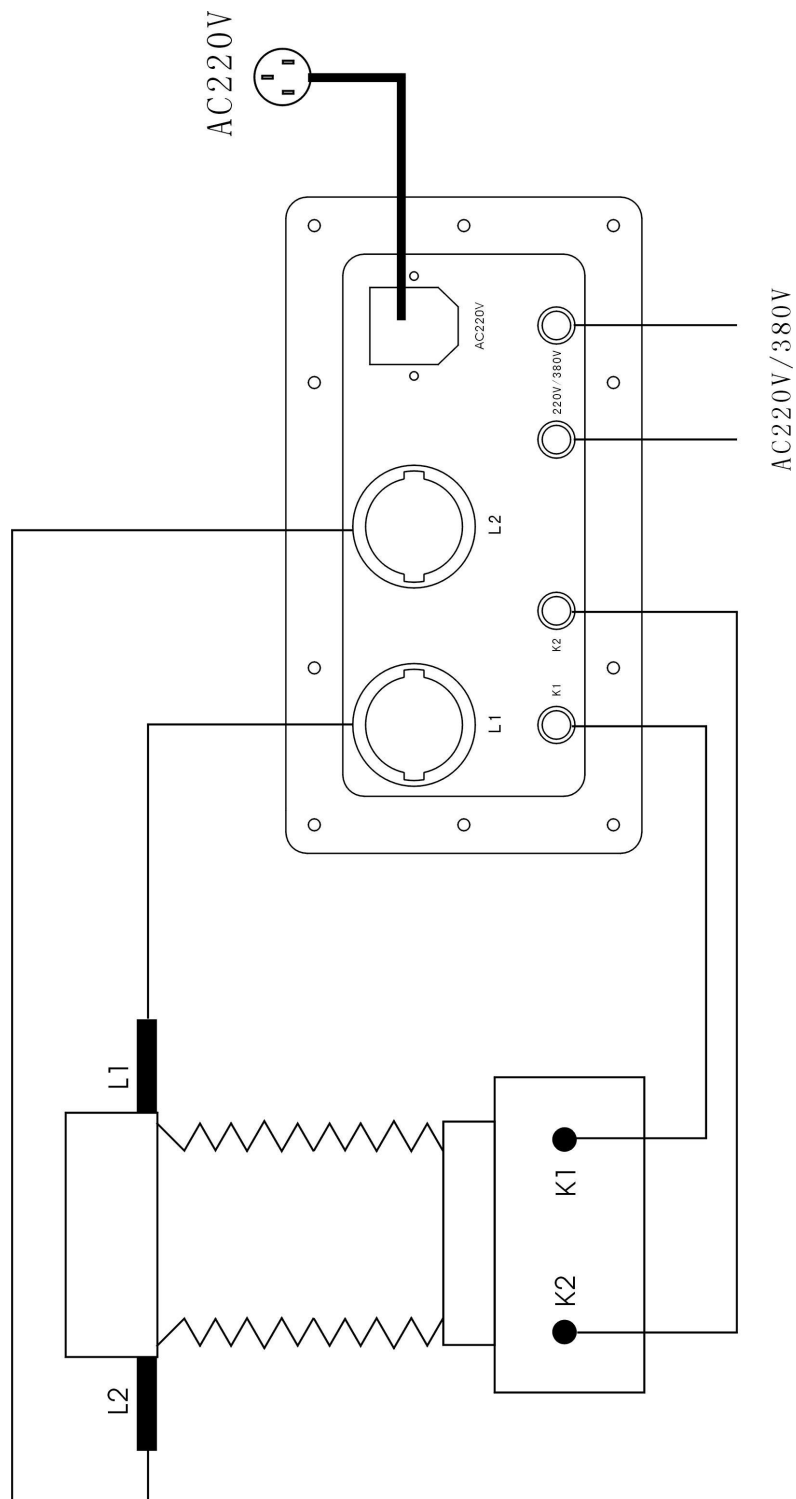
2. The instrument has a one-year warranty period. During this period, the company will repair it free of charge because the quality is lower than the characteristic requirement due to manufacturing reasons.

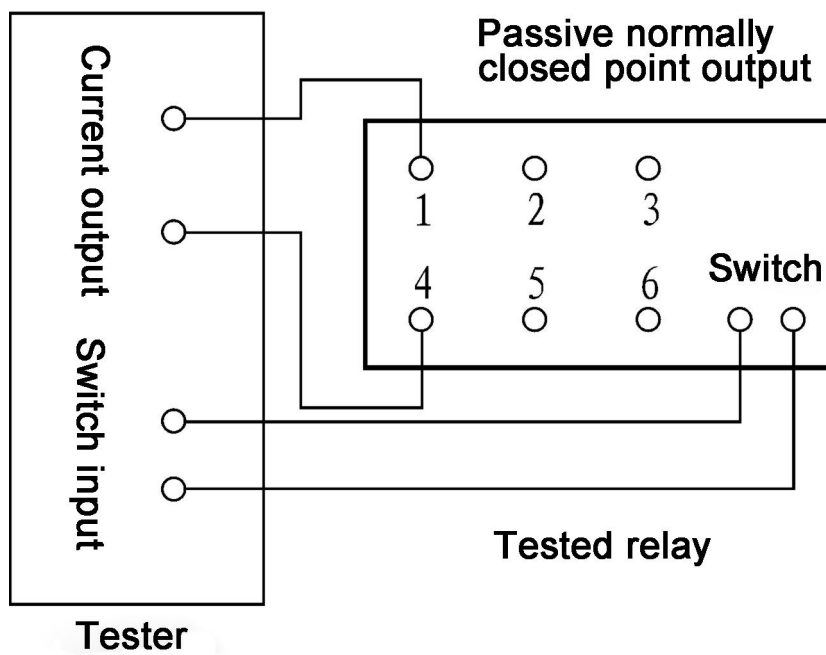
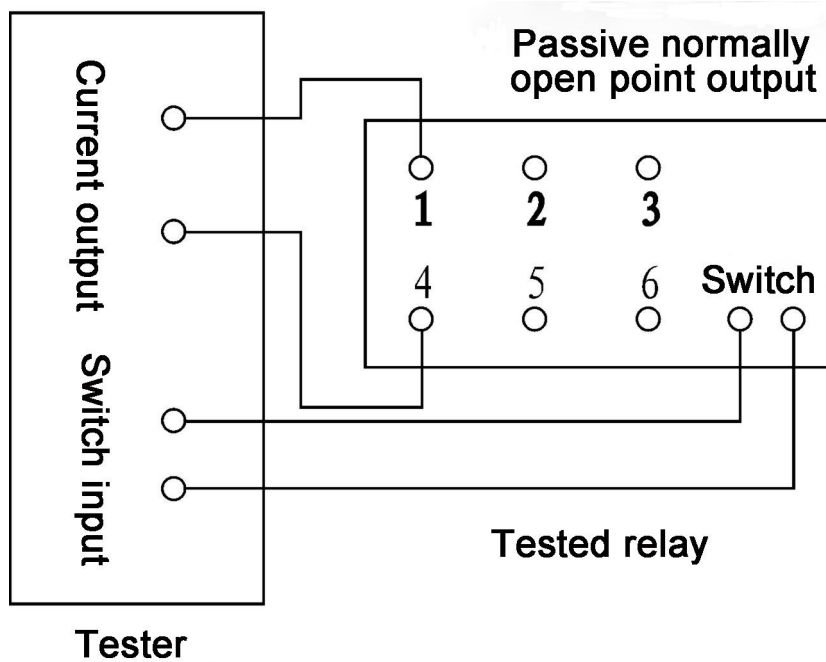
3. The instrument is packaged in three packages.

4. In the service life of the instrument, the company will provide long-term maintenance, use training, spare parts supply and other related services.

5. If problems are found in use, please contact our company in time. We will take different ways according to the situation: door-to-door maintenance guidance, or back-to-factory maintenance.

Attached Drawing: System Wiring





IX. Packing List

No.	Item	Qty
1	Main engine	1
2	Power line (1 black 1 red)	2
3	High current test line	4
4	Secondary current line	2
5	Auxiliary contact line	3