

HZDL-2000III

Primary Current Injection Tester



Dear user:

Thank you for choosing HZDL-2000III Primary Current Injection Tester.

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 !

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I. Overview

1. Purpose

HZDL-2000III Primary Current injection Tester is a test equipment developed by our company. It combines the advantages of similar products at home and abroad, adopts numerical control technology, and has strong anti-interference ability. Compared with the current booster, due to the use of a low-power, large-capacity, self-coupling voltage regulator and a converter made of a high-permeability iron core, it has the advantages of large output power, small size, and light weight. Mainly used for thermal relay, motor protector, contactor, circuit breaker, air switch, switch cabinet, circuit breaker, protection screen verification.

2. Performance characteristics

- ◆Use beautiful and generous PVC panel
- ◆Display the primary current directly, which is convenient for test observation and recording.
- ◆High measurement accuracy 0.5 level
- ◆High power, strong load capacity

3.Operation

- (1) After the wiring is completed, check it again to see if there is a wiring error and whether the connector is in good contact.
- (2) During the test, if there is any abnormal phenomenon such as sparking or no display when starting up, turn off the power immediately and recheck the wiring.
- (3) During actual wiring, the current output terminal should form a loop, otherwise the instrument will not output current.
- (4) The current booster is equipped with output wires; (The standard configuration is 12pcs of 3m test cables)
- (5) The capacity of the equipment is designed for short-time work of 30 minutes, wait for 20 minutes before proceeding to the next work.

II. Technical features

1. Name and classification

(1) Name: HZDL-2000III Primary Current injection Tester

(2) Environmental group: it belongs to the III group of instruments in the GB6587.1-86 "General Outline of Environmental Tests for Electronic Measuring Instruments" (that can be used in outdoor environments).

2. 1 Input voltage: AC 380 50Hz three-phase four-wire.

2. 2 power rate: 10KVA *3

2. 3 Output current: AC0 ~ 2000A steplessly adjustable, panel with digital display ammeter

2. 4 Output voltage: >5V

2. 5 Output Waveform: The output current is a standard sine wave with tiny burrs, which is better than the power system requirements and standards, and the ripple coefficient is less than 0.3%. Standard sine wave.

2. 6 Measurement accuracy: (using 0.2S grade material) is actually about 0.3; each current can be smoothly and continuously adjustable, and the accuracy is higher than 0.5 grade. The current and voltmeter display is a true effective value, with high accuracy and high stability.

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

2.8 Current stability: 0.2%

2.9 Structure: One

2.10 Wiring mode: as required

2.11 Protection settings: over-current, over-voltage

2.2 When the current is 2000A, the current injection time can reach 30 minutes

2.13 Can test the ratio and polarity of CT

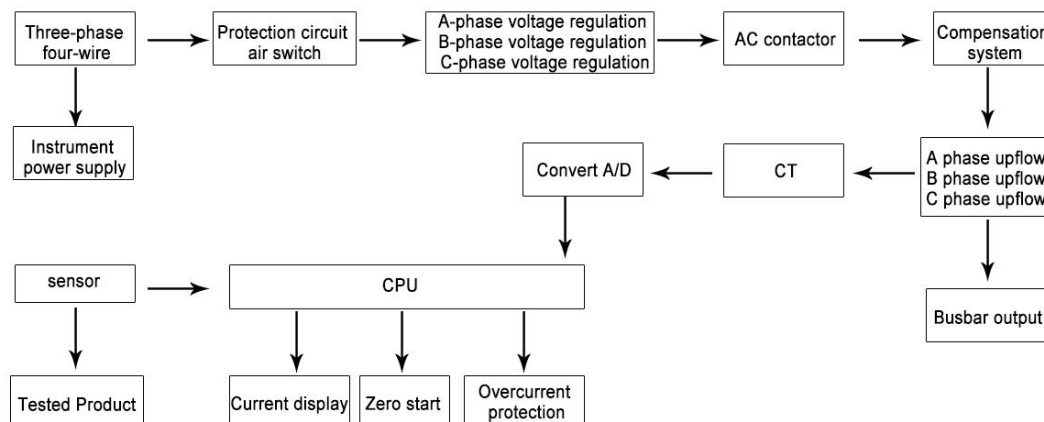
2.14 The instrument has a timed emergency stop function

2.15 with wheels, movable

2.16 A B C three-phase can set different current output values for simultaneous output.

III. Working principle

1.The principle diagram



2.Working principle

The instrument measurement circuit includes a current measurement circuit and a current measurement circuit. (Voltage test can be added as required) The volt-ampere characteristic function can be expanded.

The current measurement loop includes micro-current zero-impedance CT, programmable amplifying circuit and sampling circuit.

The voltage measurement circuit includes a PT isolation signal acquisition circuit, a program-controlled amplifier circuit and a sampling circuit.

The 16-bit single-chip microcomputer uses computer digital real-time acquisition method, by measuring the voltage signal amplitude, according to the voltage proportional relationship, the high-voltage measured voltage value can be calculated, and the automatic timing function can be realized by comparing the measured voltage signal amplitude with the set voltage value. According to the current proportional relationship, the output current of the device can be calculated, and the overcurrent protection function can be realized by comparing the amplitude of the measured current/voltage signal with the set value.

IV.Panel description

1. Working power switch: Press the switch ammeter and control circuit to start working.
2. Output adjustment knob: After starting the test, the adjustment knob outputs current from the "L1, L2" ends.

3. Primary ammeter: monitor the output current value of "L1, L2" terminal.

V.Instructions

1. Before turning on the power, turn off the "power control" switch, and adjust the "A phase adjustment", "B phase adjustment" and "C phase adjustment" counterclockwise to zero.

2. Turn on the power, connect the "power input" A, B, C, and N terminals to a three-phase four-wire power supply, and then connect the "A, B, C phase current output" terminals to the device under test with special test leads.

3. After the connection is completed, close the "Power Control" switch, press the "Start" button, and clockwise adjust the required test current for "A phase adjustment", "B phase adjustment" and "C phase adjustment"), and then press " Stop" button and press the "Start" button again to perform characteristic tests on the tested switch, circuit breaker, and bus.

4. For the operation of lack of phase and unbalanced operation of three phases, only one phase needs to be disconnected or adjusted to zero and open.

5. If there is only 220V power supply on site, you can short-circuit the ABC input to the live wire of the power supply, and connect the N of the equipment to the neutral wire; other operation methods are the same as 1, 2, 3, and 4.

VI.Safety Precautions

(1) For the safety of the operator and the instrument, ensure that the instrument is well grounded.

(2) Connect the ground wire first when preparing for the test, and remove the ground wire last when the work is completed.

(3) The power supply connected to the instrument is required to be able to withstand the impact of 30A current.

(4) When connecting the instrument to the test product, pay attention to check whether each wiring is wrong, so as to avoid damage to the equipment due to incorrect wiring.

(5) The maximum current value of the set over-current protection should not exceed the rated output current value of the instrument.

(6) Do not plug or unplug any wiring when the power is on.

VII.Transportation and maintenance

1. Transportation

This product must be packaged during transportation. The packaging box should be wooden, and the packaging box should be lined with a shock-proof layer such as foam. The packaged product should be able to be transported by road, rail, and air. During transportation, it should not be placed in open-air carts. The warehouse should be protected from rain, dust and mechanical damage.

2. Storage

The instrument should be stored in a ventilated, non-corrosive room with an ambient temperature of $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$, relative humidity not exceeding 85%. It should not be placed close to the ground and walls.

3. Moisture-proof

In humid climate areas or humid seasons, if the instrument is not used for a long time, it is required to turn on the power once a month (about two hours) to allow moisture to escape and protect electronic components.

4. Anti-exposure

When the instrument is used outdoors, try to avoid or reduce the direct exposure of sunlight to the display screen, and it should not be placed in a particularly humid warehouse.

VIII.Packing list

No	Name	Qty
1	Test line 3 meters	12
2	Test line (1 square)	6
3	Ground wire	1
4	Zero line	1
5	power cable	1

Attached picture: system wiring

