

Before the speech

1. sincerely thank you for choosing our products. You will get our comprehensive technical support and service guarantee.
2. This manual is applicable to LNGG1000A Primary Current Injection Tester.
3. Before using this product, please read this manual carefully and keep it for reference.
4. If you have any doubt during reading this manual or using the instrument, please consult our company.

Orders to record

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I .An overview of the use

LNGG1000A Primary Current Injection Tester(hereinafter referred to as heat flow device), the test equipment developed by our company, it combines the advantages of similar products at home and abroad in one, USES the numerical control technology, strong anti-jamming capability, compared with the generation of heat flow device with low power consumption, large capacity of the lotus root voltage regulator and high permeability core current transformer, has big output power, small volume, light weight, etc. Mainly used for thermal relay, motor protector, contactor, breaker, air switch, switch cabinet, circuit breaker, protection screen verification; It is widely used in the scientific research, production and electrical test field of electric power, railway, petrochemical, metallurgy and mining enterprises.

1.The main function

- (1) output 0 ~ 1000A current
- (2) the operation time of test equipment can be synchronized
- (3) Automatic identification of normally open and normally closed contacts
- (4) can be several serial check at the same time, improve work efficiency
- (5) directly display the test values of primary current and secondary current for the convenience of test observation and recording.

2.The performance characteristics

- (1) six and a half display, the national initiative six and a half display, display accuracy is higher, more accurate experimental results
- (2) Large LCD display, display data more intuitive, faster reading
- (3) the meter display locking function, especially for the transformer can be more accurate and faster than the test

- (4) use beautiful and generous PVC panel, make the panel more resistant to dirt and wear
- (5) The measurement accuracy is 0.1 grade higher
- (6) large power, small size, with a strong load capacity
- (7) small size, light weight, volume of similar products only 30% ~ 70%, very convenient to carry.

3.Pay attention to the operation

- (1) After wiring, should check again, to see if there is a wiring error, connector is in good contact.
- (2) During the test, if there is any ignition, and no abnormal phenomenon such as any display when starting up, please turn off the power immediately and check the wiring again.
- (3) In the actual wiring, the current output terminal should form a loop, otherwise the instrument will not output the current.
- (4) The current riser has random output lead; The output copper wire is selected as 10A/mm500. (two 1-meter test wires are standard)
- (5) The capacity of the equipment is designed as a 5-minute short-time work. If it is used in batch test, the working time should be less than 5 minutes. Wait for 10 minutes before the next work. If do temperature rise (30-24 hours) should be according to long-term work temperature rise configuration.

II.The technical features

1.Name and classification

- (1) Name: LNGG1000A Primary Current Injection Tester
- (2) Environmental groups: belong to GB6587.1-86 in "electronic measuring

instrument test master plan" III group (can be used in outdoor environment) instrument.

(3) Input ac 50Hz, 220V.

(4) Output single phase 0-3000a ac current; The current can be adjusted smoothly, smoothly and continuously, with the accuracy higher than 0.2.

The output current is the standard sine wave with small burr, which is better than the standard of power system requirements, ripple system

The number is less than 0.3%.

(5) Output current mode: true RMS value is continuously adjustable;

(6) Output waveform: standard sine wave;

(7) Output opening voltage: 6V.

(8) Current accuracy: each current can be adjusted smoothly, steadily and continuously, with the accuracy higher than 0.5.

(9) Current stability: 0.1%;

(10) Current waveform distortion: THD 1%;

(11) Protection Settings: overcurrent, overvoltage;

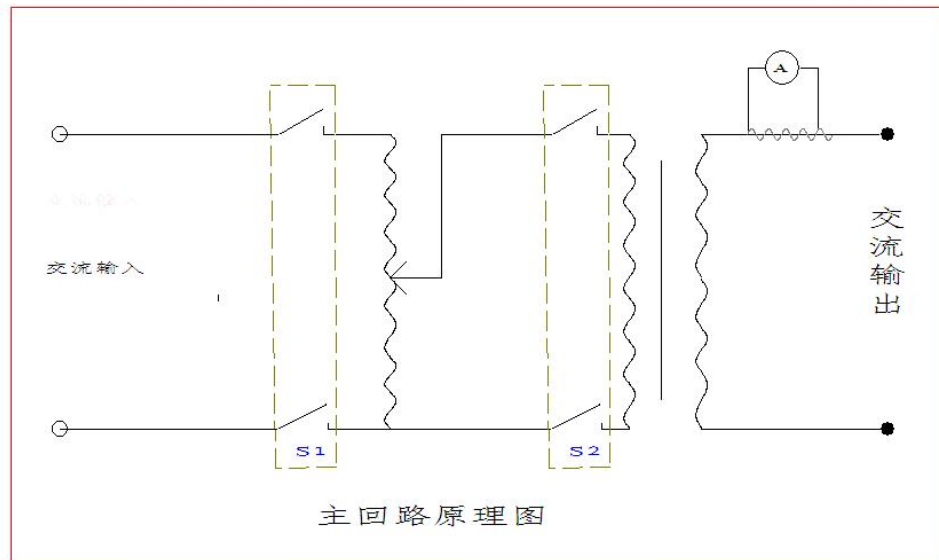
(12) The current action time of the tested element can be measured and the locked action time can be recorded synchronously. Automatic identification of normally open and normally closed contacts.

(13) Measuring time range: 0.0001s -- 9999.9999s, accuracy: 0.0001s

(14) Power: 5 kva

III.The working principle of

1.Principle block diagram (omitted)



2.The working principle of

(1)The measuring circuit includes one current measuring circuit and one current measuring circuit. Electricity can be increased as required

Voltage test) can extend the volt ampere characteristic function.

(2)The current measurement circuit includes microcurrent zero impedance CT, programmable amplifier circuit and sampling circuit.

(3)The voltage measurement circuit includes PT isolated signal acquisition circuit, programmed amplifier circuit and sampling circuit.

(4)By 16 - bit microcontroller using the computer digital real-time acquisition method, through the measurement of voltage signal amplitude, root

According to the voltage proportional relation, the voltage measured value can be calculated by measuring the voltage signal amplitude and setting electricity

The pressure value is compared to realize the function of automatic timing. According

to the current ratio, the output of the equipment can be calculated

Overcurrent protection is realized by measuring the current/voltage signal amplitude and comparing it with the set value

The function.

IV. Panel description

1. Power switch: press the switch ammeter and control circuit to start working
2. Start: the power supply of the main loop is connected, and "L1 and L2" have current output
3. Stop: power supply of the main loop is disconnected, and there is no current output of "L1 and L2"
4. Current adjustment: after starting the test, the adjusting knob outputs current from the "L1 and L2" terminals
5. Time display: monitor the action time of the action node
6. Primary current: monitor the output current value of "L1 and L2" terminals
7. Secondary current: monitor the input current value of "K1, K2" terminal

V. Instructions for

Action value and action time detection

1. Before power connection, disconnect the "power switch" and turn the "current adjustment" handle counterclockwise to zero.
2. The power supply input end is connected with AC220V voltage, and then the "current output" terminals "L1, L2" and "switch quantity" terminals are connected to the normally open and normally closed contacts of the relay, switch or circuit breaker under test with a special test wire. (note: when the test is normally open, the "normally closed point" terminal should be connected with a short test line. Otherwise,

the instrument will not start and the test cannot be conducted.)

3, after the connection, close the power switch, and press the "start" button, clockwise slowly adjust the "current" handle, can output current from the current output end, adjust to the relay operation, the "current" table displays the current value is the action current relay, press the "stop" button after the experiment.

4. Time detection: if the overload current is 3000A, after 3000A is called out, press the "stop" switch, press the "reset" button, press the "start" button again, the contact action and the output stop, then the value on the "time display" is the action time of the equipment under test (experimental wiring as shown in figure 2).

Variable ratio detection:

1. Before connecting the power line, first adjust the "current adjustment" handle counterclockwise to zero. Normally closed contacts are connected with short wires. The current output end "L1 and L2" is connected to the primary side of the tested ct, and the secondary side of the tested ct is connected to "K1 and K2" of the device.

2. power on, press the power switch "on" start "button, clockwise (" current" handle, bring up the required output current, can characteristic test was carried out on the equipment under test (" current "shows the output to the transformer primary side current value, the secondary current display the output current of the transformer secondary side, according to the primary and secondary current value can be calculated the change of the measured transformer ratio). After the experiment, press the "stop" button and disconnect the "power switch".

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 finally when the work is finished.

(3) the power supply of the access instrument shall be able to withstand 30A current

shock.

(4) when connecting the instrument with the test product, please check whether the wiring is wrong, so as not to damage the equipment due to the wiring error.

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

(6) in the case of electrification, do not plug or unplug any wiring.

VII. Transportation and maintenance

1. Transport

The product must be packed during transportation. The packing cases shall be packed in wooden cases. The packing cases shall be padded with foam and other shockproof layers. The packed products should be able to be transported by road, rail and air. In the process of transportation shall not be placed in the open box, the warehouse should pay attention to rain, dust and mechanical damage.

2. Store

The instrument should be stored in the room with ambient temperature of $-40^{\circ}\text{C} \sim 60^{\circ}\text{C}$, relative humidity of no more than 85%, ventilation and no corrosive gas. Should not be placed against the ground and walls.

3. The moisture

In humid areas or humid seasons, if the instrument is not used for a long time, it is required to power on once a month (about 2 hours) to make moisture emission and protect electronic components.

4. Prevent exposure

When the instrument is used outdoors, avoid or reduce the direct exposure of sunlight to the display screen as far as possible, and it cannot be put in a particularly humid warehouse.

VIII. Accessories

1. One set of power cord
2. One copy of the instruction manual
3. One copy of qualification certificate
4. One warranty card

IX. Quality assurance and after-sales service

1. The instrument is manufactured in strict accordance with national standards and enterprise standards, and the production process is carried out in strict accordance with IBSO9000 standards to ensure the quality of the instrument.
2. The instrument has a shelf life of 3 years, during which the quality is lower than the characteristic requirements due to manufacturing reasons, the company will repair it free of charge.
3. This instrument has three guarantees.
4. During the service life of the instrument, the company will provide maintenance, use training, spare parts supply and other related services for a long time.
5. If problems are found in use, please contact our company in time. We will take different ways according to the situation: on-site maintenance guidance, or return to the factory for maintenance.

X.The appended drawings:

