AC220V-5KW-R

Directory

1. 一、Overview

1.1、 **AC220V-5KW-R** pure resistive load; the power input adopts segmented combination control, which can simulate various power loads in any combination to meet the needs of full load detection of inverters and UPS power supplies. It is suitable for production workshops, laboratories, installations A necessary testing tool for debugging, scientific research and development.

1.2、Resistive load adopt new type of consumption components,Resistor thermal shrinkage and sealing installed in stainless steel tube, steel tube with insulation radiator, so with good moisture and anti-corrosive, good heat dissipation, high insulation, safe and reliable. High power density of resistance elements,3-phase current balance，no red heat phenomenon，The independent cooling fan ensures the heat dissipation and service life of the whole system.

1.3、 The load overcomes the fact that the water resistance test system cannot accurately control the resistance value, the water is easy to boil, easy to scale, cannot perform sudden loading and load reduction test, and is difficult to control. It is an upgraded product of water resistance. This product has high safety, low maintenance cost, low noise and strong overload capability.

1.4、The fan adopts axial flow fan, with large wind volume, good heat dissipation, low noise and other characteristics.

1.5、The above features make the whole machine better than imported products in terms of safety, reliability and noise reduction.

二、Function

2.1、Over temperature protection

When the load temperature is higher than the set value (75° C), the fault alarm indicator flashes and a buzzer prompts; if the temperature continues to maintain (75° C), the load gear contactor is automatically powered off and the load is unloaded;

2.2、Overvoltage/Overcurrent Protection

When the load voltage/current exceeds the set value, the fault alarm indicator flashes and a buzzer prompts; and the load gear contactor is automatically powered off and the load is unloaded.

2.3、Emergency stop protection

When emergency occurs during the test, immediately take the emergency stop button and the load bank will power off.

2.4、Fan delay stop

When the load is not loaded, the fan does not start; when the load is loaded, the fan starts immediately; after the load is unloaded, the fan stops after a delay of 5 minutes;

2.5、Local/remote

There are two types of load control modes, local button control/remote host computer control; the control mode can be switched through the "local/remote" switch on the panel;

2.6、Remote data logging

When using the remote host computer control, the host computer software can save the load test data;

2.7、Fan undercurrent protection

When the load cooling fan fails, the fault alarm indicator flashes and a buzzer prompts; and the load gear contactor is automatically powered off and the load is unloaded.

三、Technical parameters

3.1、Working environment conditions

3.1.1、Ambient temperature: -10～+55 ° C;

3.1.2、Relative humidity: ≦ 90%, no condensation;

3.1.3、altitude: ≦ 2000mm;

3.1.4、Seismic index: VIII degrees;
3.1.5、Other conditions: For indoor use only, and no debris above 1 meter.

3.2、Rated electrical parameters

3.2.1、 Rated voltage:AC220V;
3.2.2、Rated current: 22.72A；
3.2.3、 Rated power: 5KW
3.2.5、 Power factor:1；
3.2.6、Operating power: AC220V±10%，60Hz。

3.3、Technical indicators

3.3.1、Overload capacity (current loop): 1.1 times of rated current for over-current protection.
3.3.2、Cooling Mode:Force-air cooling.
3.3.3、Inlet and outlet direction: side inlet, upper outlet;
3.3.4、Loading method: local panel keys + remote host computer control. Customers can input the required power value gear according to the test needs. Current value classification setting (14 levels in total)：100W、200W、200W、500W、1KW、1KW 2KW
3.3.5、 load measurement accuracy: ≤ 5%;
3.3.6、Dielectric strength: Class F;
3.3.7、Protection grade: IP54 for the whole machine;
3.3.8、Single continuous running time > 200h;
3.3.9、Box frame: 483*600*176mm (W * D * H).

四、Operation guide

4.1、Control panel

The control panel is composed of LED display, buttons, transfer switch and buzzer.
4.1.1、The LED display instantly displays the current load electrical parameter values, including: voltage, current, power and other power values (customers can choose to display the power);
4.1.2、Button, used to control the power start, power switch, load switch, gear switch, etc.;
4.1.3、Transfer switch. Local/remote control mode switch;
4.1.4 、 There is a fault alarm (buzzer) on the panel. When the load is over-temperature/overvoltage/overcurrent/fan undercurrent, the fault alarm buzzer

will flash and sound an alarm.

4.2、Operation guide

4.2.1、Check before power-on: Before power-on of the stored and transported load box, check the damage during transport, such as whether the screws are loose, whether the appearance is abnormal, whether the power cord and connectors are shaken off and whether they are damp, etc. Occurrence should be dealt with promptly and properly.

4.2.2、Wiring: ①In the case of disconnecting the "power switch", connect the auxiliary power cord distributed randomly to the AC220V power socket of the box baffle, and connect the other end to the mains AC220V-50/60Hz. ② In the case of disconnecting the power supply, according to the test needs, connect the connection between the device under test and the load box according to the connector marked (A、N) on the front panel (the total cross-sectional area of the wire is not less than 1.5mm²). Confirm that the connection is correct, and pay attention to check that the connection to the connector is firm. ③Reliable grounding.

4.2.3、In-place control of the sequence of operations:

1), confirm that the connection between the control power supply and the load power supply is correct; 2), press the "power switch" indicator button; 3), press the "load switch" button, the fan starts, and the corresponding power "gear" is closed according to the test needs switch”, and start the test (if you want to put a high-power load on at one time, first close the required power resistance “gear switch”, and then close the “load switch” indicator button); when unloading, gradually disconnect the closed power” Gear switch", press the load switch (or directly disconnect the "load switch" indicator button, and then gradually disconnect the power resistor "gear switch"). 4) After the gear is completely unloaded, disconnect the "power switch" indicator button, the fan will continue to run for 5 minutes, and then the load will stop working; 5) Finally, remove all power cables.

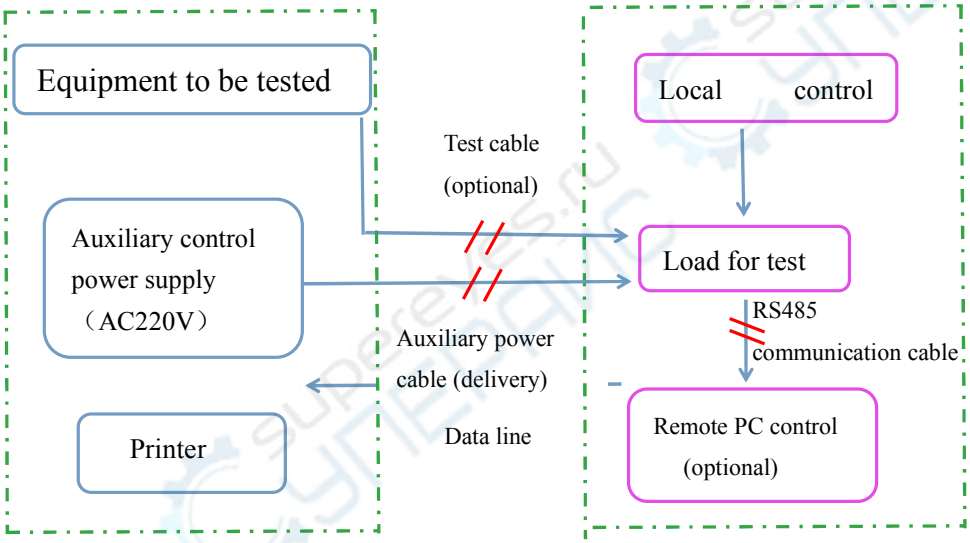
4.2.4、Handling when the load fails: If it is found that it is not working properly after starting the machine, turn off the load switch, disconnect the "power switch" and cut

off the input power cord, carefully check whether the connection of the load box is correct, whether the connector is loose, and whether the switch Is it normal? If there is a problem that is difficult to handle, please contact our company for assistance.

4.2.4、Remote control operation sequence:

Please refer to the operation manual of the remote host computer.

Working schematic diagram



六、Circuit schematic diagram

Figure (2): Schematic diagram of primary and secondary loop.

七、Factory test

7.1、Test items

7.1.1、Wire On-off test: check whether each control line is connected properly;

7.1.2、Short-circuit test: check the circuit whether short circuit;

7.1.3、Switch on&off test: check whether the load control switch can work normally;

7.1.4、Load resistance measurement: Measure whether the resistance value of each gear position is consistent with the rated value;

7.1.5、load power-on test: check whether the load works normally under the rated

voltage;

7.1.6、Insulation test: Detect the insulation resistance of power supply and other live parts of cabinet.

7.2、Test Tools

Bridges, multimeters, clamp meters, 3-phase smart meters, megohm meters, computers, etc.

7.3、Test content

7.3.1、Wire On-off test: According to the circuit diagram, the continuity of each circuit is measured by multimeter, and the connection is normal;

7.3.2 、 Short-circuit test: measure whether each component and wire are short-circuited;

7.3.3、Switch on&off test: use multimeter to measure each switch, on&off normally;

7.3.4 、 Load resistance measurement: first clamp the two measuring probes of the bridge on the (L、N) terminals of terminal, then gradually turn on the gear switches. The measured resistance values are the same as the rated values. Error ≦ ± 5%;

7.3.5、Load power-on test: The load auxiliary power supply is connected to the mains AC220V. The load terminal is connected to the DC1000V test power supply. Manually load each power level test and compare the current obtained by the clamp meter with the data displayed by the self-contained voltage and current meter. The results are similar.7.3.6、Insulation test: Use the megohmmeter to test the insulation resistance of the box for the power supply and other live parts. The monitored values are all greater than 100MΩ.

7.4、Test data

Schedule (1): Test data (internal data).

7.5、Test Summary

After a comprehensive inspection of the load at the factory, it is ensured that the

load can work normally and the power value does not change significantly when working for a long time, and the various indicators and functional parameters of the load reach the rated value.

八、Attention

●When the load is working, the fan inlet and outlet ports are free of debris at least 1 meter. After the load is stopped, the fan still needs to work for about 10-20 minutes until the outlet temperature is equal to the room temperature.

●The emergency stop switch can only be used in an emergency, the emergency stop switch is pressed, and the entire load is powered off (including remote control).

● When the temperature is too high, the temperature probe normally opens the contact to close, the buzzer alarms, and the contactor is powered off, that is, the load is automatically unloaded. When the internal temperature of the load box returns to normal, you need to manually resume the load.

●Tighten the screws of each component at load bank per half-year！

●The load must be used with grounding!

九、Shipping List

No	Name	Specification	Quantity
1	Load bank	483*600*267mm(W *D * H)	1
2	Operating Instructions		1
3	Warranty Card		1
4	certificate		1
5	circuit diagram		1
6	power cable	1.5 meters (Thai standard)	1