



GDJB-1200A Relay Protection Tester



Product Description

Relay Protection Microcomputer Test Device plays a key role in operating electricity power systems reliably and safely. It is the testing device used in professional field of microcomputer protection, relay protection, excitation measurement, fault recorder.

Features

- High-Performance Industrial Control Computer

High performance Industrial control computer is adopted as the controlling computer, by which users can run the windows operating system directly. With 8.5" TFT true color

LCD display, tracking ball and optimized keyboard, which can be used without the external mouse and keyboard. USB interface, 10-100M net mouth and serial communication interface are located on the back plate of this tester, by which users can access data, communicate data and upgrade software conveniently.

The whole process and the result of the test will all be shown on the LCD. The operational interface of the complete set is very friendly and convenient. The tracking ball and keyboard on the panel will implement the operation. The operation is simple and convenient, and is easy to be mastered. Operator only needs a little knowledge of computer.

With Keyboard and mouse interface. If users would like to use the external mouse and keyboard, through plugging them with corresponding interfaces, users can operate this tester just like operating a desk-top computer.

- Digital Signal Processor Microcomputer

High-speed digital controlling processor is adopted as the output core of the tester. 32 bit double precision arithmetic is employed in the software, through which arbitrary high-accuracy waveform of each phase can be produced. Since integrative structure is adopted, the structure of the tester is layed compactly. The distance of data transmission is short with tight structure, which overcomes the problem of fewer points of waveform output due to long data communication line and narrow frequency band when using the test controller controlled directly by PC.

- D/A Conversion and Low-Pass Filtering

High precision D/A converter is employed for ensuring the precision and linearity of current and voltage in the whole range.

Due to high density of fitting point, fidelity of waveform is high and harmonic component is small, which doesn't have a strict requirement on the low-pass filter. Consequently, it has good characteristics of transient, phase frequency and amplitude frequency, which is easy to perform accurate phase-shifting and harmonic superposition and ensures very high precision even when the frequency is high.

- Voltage and Current Amplifier

For phase current and voltage, high performance linear amplifier output mode is used in order to make the current and voltage source to directly output all kinds of waveform from the DC waveform to the waveform including all kinds of frequency components, such as square wave, combined waveform overlapped by each order harmonic, fault transient waveform, etc. In addition, the output waveform is clear and smooth without high-frequency radiated interference with neighboring equipment. It can simulate well all kinds of current and voltage characteristics under the circumstance of short circuit fault. For power amplifier circuit, we adopt import power parts with high-power and hi-fi module style as power output, combining with heat dissipation structure layed elaborately and reasonably, it has enough large power redundancy and thermal capacity. The power amplifier circuit has overheat, overflow, overvoltage and short circuit protections. When overflow occurs in the current circuit and overload or short circuit occurs in the voltage circuit, it will limit the output power automatically, switch off the whole power amplifier circuit and give alarm signal. In order to prevent the overheat of the power amplifier for long time operating under large current, a software time terminating system under large current is set in this tester. It can work for a long period when outputting is 10A or below. When the current is over 10A, the tester will start up the software time termination order. When time is up, the software will forbid power output automatically and give alarm signal. The higher output current is, the shorter the limiting time will be.

- Digital Input and output

This tester has 10 channels digital input and 8 channels output, please refer to the corresponding instruction to hardware structure of 702/703“ Tester.

The switching input circuit is compatible for both the empty contacts and 0-250V electric potential contacts in the input and output circuit. When the electric potential contacts are selected, 0-6V belongs to closed switch and 11-250V belongs to open switch. The switching capacity can test the action time and the action time interval of every phase switch's contact conveniently.

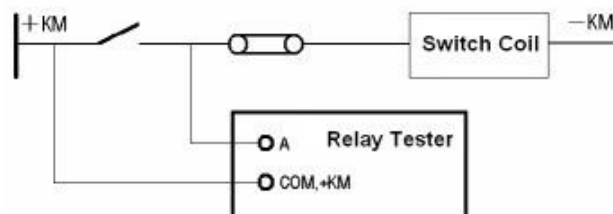
The part of the digital input is isolated from the resources of the mainframe and the amplifier. The end of the digital input is hung, so the common end of the digital input is separated from the Common End UN, IN of current and voltage parts.

Switching potential input has directivity, the common end should be connected with the positive terminal of potential, and connecting the input end with negative terminal of potential for ensuring the potential of common end is higher than the one of input end. In practice, the input common end with +KM should be connected, and the negative terminal of contact is connected with input end. Otherwise, test can not be proceed correctly.

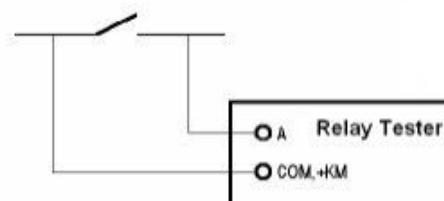
The output part is the free contact output of relay. Output capacity is DC: 220V/0.2A, AC: 220V/0.5A. Output of switching capacity is independent of voltage, current, input and all other parts. Action process of each digital output part is different in each testing module. For details, please refer to the operation instruction on software module.

The connection diagram of two kinds of familiar digital output are as follows:

Mode of potential contact



Mode of free contact



- Auxiliary DC Power Supply Output for Special Use

A circuit of special adjustable DC power supply output is located on the rear panel, which has 110V and 220V two shifts that can be used as test standby power supply on the spot. We still set a potentiometer for this power supply, it can be adjusted within the

range of 80%-110%. Rated current of this power supply is 1.5A, which can be used as DC power supply of protective tester or switch loop supply. If overload or short circuit occurs, corresponding protector tube will be burned out (2A/250V), users only need to change this protector tube at that time.

Specifications

- AC Current Output

6-phase (RMS) 6*0~30A

3-phase (RMS) 3*0~60A

6-phase parallel current output (RMS) 0~180A

Allowable long time working value of phase current (RMS) 10A

Maximum output power of phase current 400VA

Allowable working hours @ max. output of 6-phase parallel current 10s

Accuracy: <0.2% (within the main range)

Frequency range (Fundamental wave) 0~1000Hz

Harmonic times 0~20 times

- DC Current Output

Current output 0~±10A/phase; 0~±60A/6-phase parallel

Accuracy 0.2%

Maximum output load voltage 18V

- AC Voltage Output

Phase voltage output (RMS) 0~120V Accuracy: 0.2%

Line voltage output (RMS) 0~240V

Phase voltage/Line voltage output power 80VA/100VA

Frequency range (Fundamental wave) 20~1000Hz

Harmonic times 1~20 times

- DC Voltage Output

Phase voltage output amplitude 0~±160V Accuracy: 0.2%

Line voltage output amplitude 0~±320V

Phase voltage/Line voltage output power 70VA/140VA

- Binary

Binary input 10 channels

Idle contact 1~20mA, 24V

Potential contact access "0": 0 ~+6V; "1": +11 V ~+250 V

Binary output 8 pairs DC: 220 V/0.2 A; AC: 220 V/0.5 A

- Time Measuring Range: 0.1ms~9999s Measuring accuracy: <0.1mS
- Dimension & Weight: 480*360*200mm³ 19kg