AHZJB-I

Relay test equipment



Four voltages and three 40 A currents, up to 120 A in parallel, with stand-alone or PC operation

AHZJB-I

Three-phase relay protection test set

amperis

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Contact

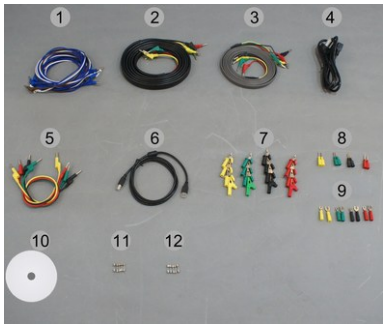
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Compact three-phase set for stand-alone use or with a PC.

Product description



AHZJB-I: voltage and current outputs, binary inputs/outputs, LCD display and rotary knob



Supplied accessories: test leads, clips, terminals, USB cable and fuses

Full three-phase testing

The AHZJB-I generates four voltages—UA, UB, UC and the multifunction output UX—and three currents of up to 40 A, reaching 120 A in parallel. UX can be configured as 3U0, as a synchronism voltage or as any other voltage, so the unit covers everything from simple relays to distance, differential and synchronizing protection.

Two ways of working

Without a computer, it is operated from its backlit LCD display with a rotary knob and two step keys; the main menu offers ten tests. Connected to a PC via USB, the included software adds automatic tests, vector diagrams and reports.

Main features

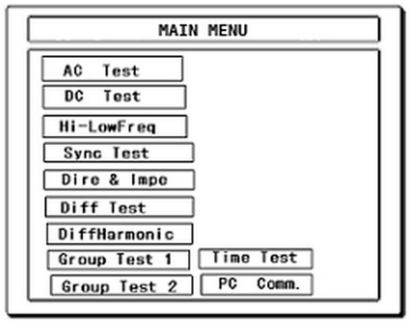
- Indicators on each current output warn of waveform distortion or open circuit.
- 8 binary inputs (dry contact or voltage up to 250 V) and 4 binary outputs.
- 110 V or 220 V auxiliary DC supply, adjustable from 80 to 110 %.
- Portable: 400 × 300 × 180 mm and 22 kg.
- Power supply 220 V AC ±10 %, 50/60 Hz.

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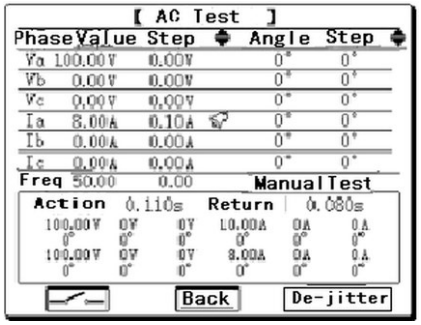
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Tests and software



Main menu on the unit display: ten tests and communication with the PC



AC test on the unit display, with pick-up and drop-off values

Stand-alone tests

AC and DC test, high and low frequency, synchronization, power direction and impedance, differential, differential harmonics, complete-set test I and II and time measurement. Each value is set by turning the knob, and the two step keys raise or lower the value.

Tests from the PC

AC and DC test, state sequence, harmonic superposition, high and low frequency, power direction and impedance, synchronization, complete-set test I and II, distance and zero-sequence, impedance characteristic, differential, differential harmonics, 6-35 kV line protection and fault playback.

Time measurement

In the timing test the unit works as a seven-channel millisecond timer: it measures the closing and opening times of a circuit breaker and the difference between poles.

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Applications and use

Relays and protection

Current, voltage, frequency, time, directional power, impedance and synchronism relays; line protection with auto-reclosing, distance and zero-sequence, transformer differential and 6-35 kV line protection.

Binary inputs and outputs

The 8 inputs accept dry or wet contacts at 0-250 V, with the positive pole on the +KM common, and are isolated from the analogue outputs. The 4 outputs are voltage-free contacts rated 220 V DC / 0.2 A and 220 V AC / 0.5 A.

Auxiliary supply

On the rear panel, a 110 V or 220 V DC source, adjustable from 80 to 110 % and rated 1.5 A maximum, powers the relay or the control circuit during the test.

Protection

10 A / 250 V main fuse and 2 A / 250 V fuses in the voltage circuits. Above 10 A per phase the output time is limited; with the three currents in parallel, 120 A for 10 s.

Scope of supply

Test set, power cable, USB cable, software disc, 10 A and 2 A fuses (5 of each), 2 four-wire cables, short and long test leads, crocodile clips in three sizes, plugs and pin terminals.

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AHZJB-I — TECHNICAL SPECIFICATIONS (1/2)

Output channels	4 voltage (UA, UB, UC and multifunction UX) and 3 current
AC current per phase	3 × 0-40 A, class 0.2
Parallel AC current	1 × 0-120 A with all 3 phases in parallel
Continuous current	10 A per phase
Current output power	450 VA per phase; 900 VA with 3 phases in parallel (10 s)
DC current	0-±10 A per phase; 0-±30 A with 3 phases in parallel; class 0.5
AC voltage	0-120 V phase-neutral, class 0.2; 0-240 V phase-phase
AC voltage output power	80 VA per phase; 100 VA phase-phase
DC voltage	0-±160 V per phase, class 0.5; 0-±320 V phase-phase
DC voltage output power	70 VA per phase; 140 VA phase-phase
Frequency and harmonics	20-1000 Hz (fundamental); harmonics up to 20th order

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AHZJB-I — TECHNICAL SPECIFICATIONS (2/2)

Binary inputs	8; dry contact or wet contact at 0-250 V
Binary outputs	4 dry contacts; 220 V DC / 0.2 A; 220 V AC / 0.5 A
Time measurement	0.1 ms-9999 ms; accuracy < 0.1 ms
Auxiliary DC supply	110 V or 220 V, adjustable from 80 to 110 %; 1.5 A max.
Control	Stand-alone with backlit LCD display, rotary knob and step keys; or from a PC via USB
Fuses	Main 10 A / 250 V; voltage circuits 2 A / 250 V
Power supply	220 V AC ±10 %, 50/60 Hz
Operating temperature	−10 °C to +50 °C
Dimensions	400 × 300 × 180 mm
Weight	22 kg
Scope of supply	Test set, power cable, USB cable, software, fuses, test leads, clips, plugs and pin terminals

Specifications subject to change without notice.

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