

3-Phase Relay testing

AK-10



AK-10

- AC and DC Voltage Source
- AC Current Source
- Auxiliary AC/DC Power Supplies
- 8 possible configurations

amperis

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Features:

- All-in-one design:
 - Embedded Windows CE & mouse & panel keyboard
 - 6.4" TFT LCD
 - Ethernet port for separate PC
 - Built in amplifier
- 13 channels output: 6x20 (3x40A) / 7x130
- High power: 6x420 VA, at 0...20A:
 - 3 x 520 VA, at 0...40A
 - 1 x 1000 VA, at 0...120A
- High precision:
 - 0.14% reading + 0.06% range guaranteed at 0...300 V
 - 0.14% reading + 0.06% range guaranteed at 0...30 A
- Amplitude, frequency and phase angle are adjustable respectively, independently and continuously

AK10 Series Protection Relay Test Set:

AK1030: 3x30A / 4x130V
AK1040: 3x40A / 4x130V
AK1063: 3x40A, 6x20A / 4x130V
AK1066: 3x40A, 6x20A / 7x130V
AK1030i: 3x30A / 4x300V
AK1040i: 3x40A / 4x300V
AK1063i: 3x60A, 6x30A / 4x300V
AK1066i: 3x60A, 6x30A / 7x300V



Technical Data:

Voltage generators

Setting Range	7-phase AC (L-N)	7x0...130V
	1-phase AC (N-N)	1x0...260V
Power	7-phase AC (L-N)	7x70VA, at 0...130V
	1-phase AC (N-N)	1x140VA, at 0...260V
Accuracy	<0.14% reading + 0.06% range guaranteed at 0...130V <0.04% reading + 0.01% range typical at 0...130V	
Resolution	1 mV	

Current generators

Setting Range	6-phase AC (L-N)	6x0...20A
	3-phase AC (L-N)	3x0...40A
	1-phase AC (L-N)	1x0...120A
Power	6-phase AC (L-N)	6x150 VA, at 0...20A Max 250 VA. With the other current channels unload
	3-phase AC (L-N)	3x300 VA, at 0...40A Max 450 VA. With the other current channels unload
	1-phase AC (L-N)	1x900 VA
Accuracy	<0.14% reading + 0.06% range guaranteed at 0...20A <0.05% reading + 0.02% range typical at 0...20A	
Resolution	1 mA	

Binary inputs

Number	8 Pairs
Compatible voltage	10V...250V/2A

Binary outputs

Number	4 Pairs
Capacity	250V/3A

Generators, general

Frequency	Range	0...1000 Hz
	Accuracy / drift	<0.001 Hz at 10...450 Hz <0.01 Hz at 450...1000 Hz
	Resolution	0.01 Hz
Phase	Range	-360° ... +360°
	Accuracy	< 0.2°
	Resolution	0.1°
Time	Range	Infinite
	Accuracy	1 ms

DC generators

Voltage ranges	0...300V / 180 W
Current ranges	0...20A / 300 W
Accuracy	<0.14%rd + 0.06%rg
Resolution	1mA; 1mV

Aux DC Supply

Range	0...300V / 0.6 A
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Synchronization

Synchronization mode	GPS
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Power supply

Nominal input voltage	220 V±20% Vac
Power	1000 VA
Nominal frequency	50/60 Hz±10%

Environmental conditions

Operation temperature	-5°C...55°C
Humidity range	≤90%, non-condensing
Harmonic superpose times	2...20
Weight	24 kg
Dimensions	360x460x140 (mm)
PC connection	RJ45

NOTE: the above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice



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Software Key Features

All-in-one.

Automatic test report creation, user friendly.

Control of 10 analog generators (6i & 4V) independently.

Online vector display.

Power system model for dynamic testing.

Automatic comparison actual characteristic with expected characteristic.

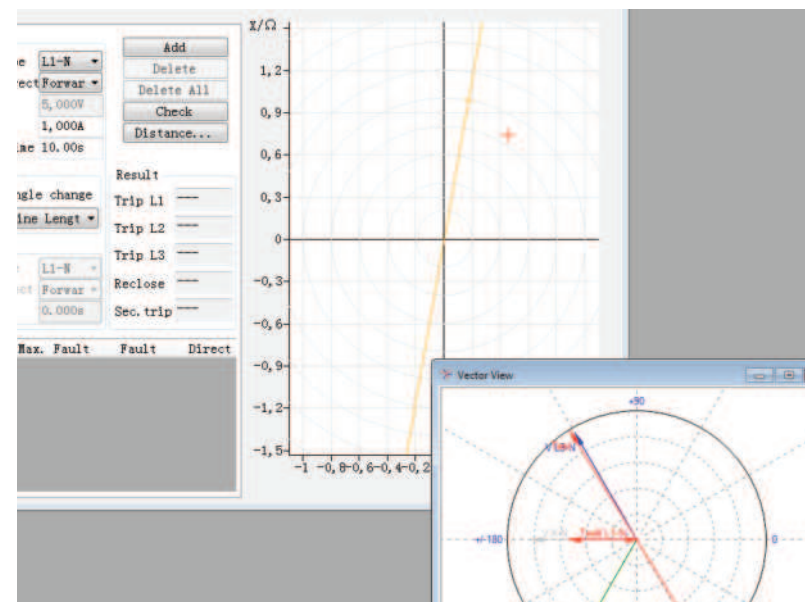
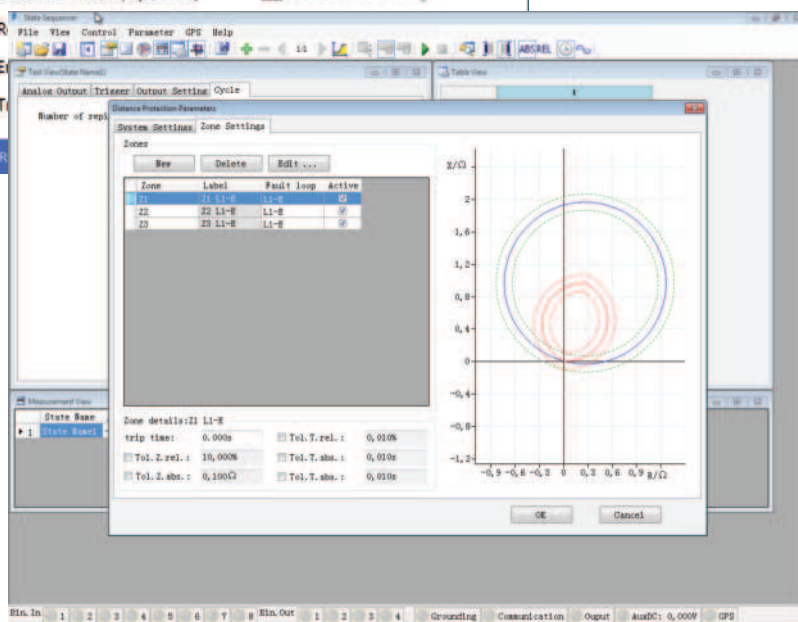
RIO / XRIO import and export facility.

Shot, Search, Check Point and Click testing.

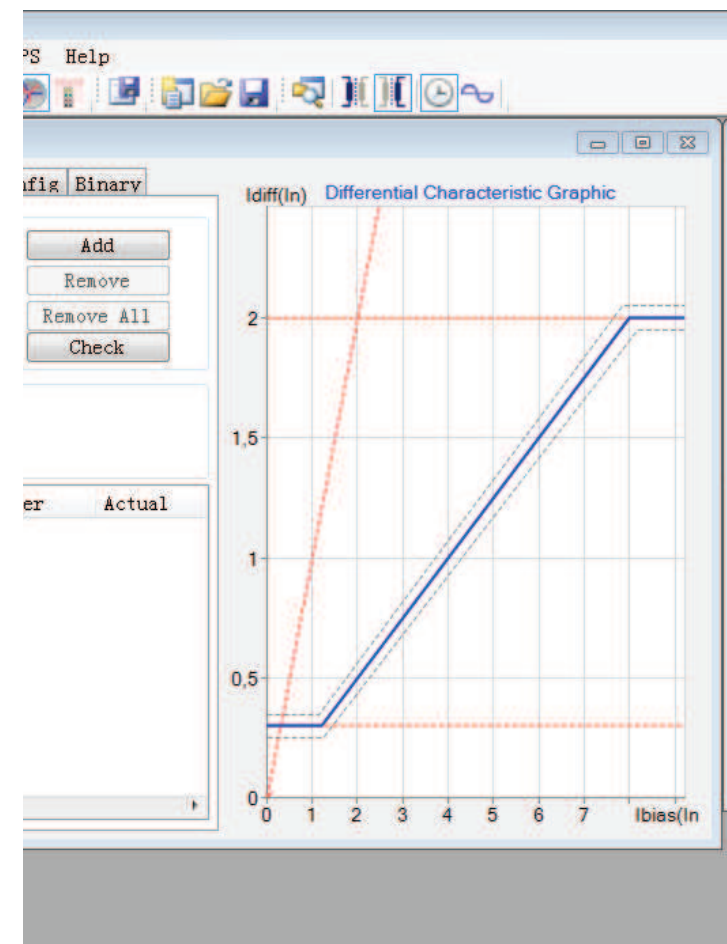
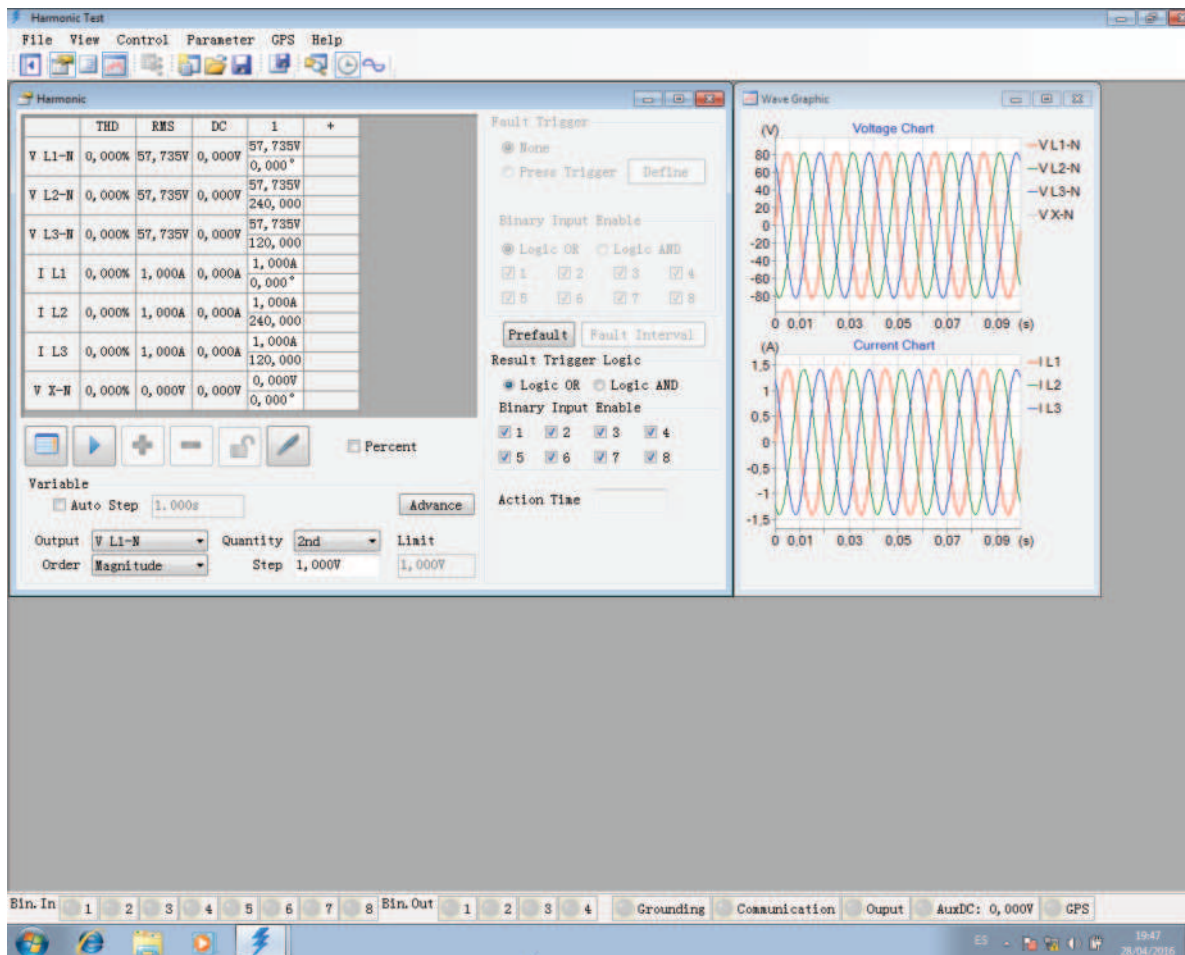
Quick relay testing, facility in Manual Mode.

Graphical test modules and templates for testing of various relays.

COMTRADE (Common Format for Transient Data Exchange) format file supported.



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