

Zensol

Strongly built Strongly backed



GEN-13V

Recloser Control Analyzer and
Recloser Simulator

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More than 20 years of experience in manufacturing portable instruments !

Strongly built

- Instruments with a life expectancy better than 15 years
- Thanks to a powerful design, our instrument is the only one that can sustain shocks and drops without damage.
- Casing made of reinforced polyethylene with molded-in ribs for extra protection.
- No fragile mechanical components inside as built-in printers, screens or keyboards.
- Easy and robust connections

Strongly backed

Zensol offers many kind of technical support

- Software included with unlimited upgrades
- Test assistance for field-testing
- Web support available anywhere at any time
- Training
- Support any time for our clients



GEN-I3V

Recloser Control Analyzer and Recloser Simulator

Features and benefits

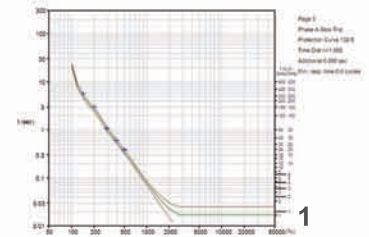
The GEN-I3V is a Recloser Control Analyzer and Recloser Simulator designed to test all types of Recloser Control Cabinets. In addition to current injection, it also supplies three fully independent and programmable voltage sources.

The GEN-I3V offers a “plug and play” solution to most Recloser Controls cabinets with a simple connection interface. Many specialised interfaces are available for different manufacturers as: Cooper (F3, F4, F5 & F6), ABB (PCD), Westinghouse (MTR type), Schneider Nu-Lec ADVC2, Nu-Lec PTCC, Artech, Panacea, GE, W&B, G&W, etc...

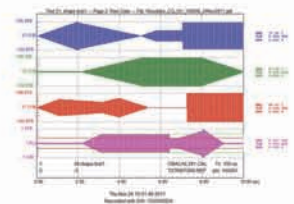
The GEN-I3V is driven by OpenZen, a specialized software that allows to test any kind of recloser controls.

Some of the major benefits and features are described below.

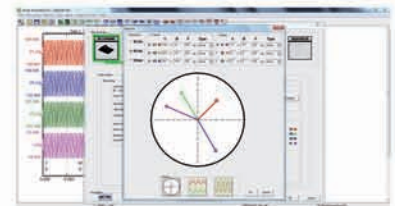
- Independent control of amplitude, frequency and phase on the 3 voltage sources and the current source. (Fig 3,4,5)
- Complete control of shape, timing and amplitude. (Fig.2)
- Control and execution of a complete test sequence (Trip, Reclose, Reset, Lockout, etc...) with instantaneous display of test results. (Fig.6)
- Quick visual comparison of test results. The controller's protection curve (TCC) along with the +/- 10% tolerance curves are plotted against the measured response time. (Fig.1)
- Numerous TCC curves (Time Current Curve) from different manufacturers (Cooper, ANSI, IEC etc.) are predefined and included in OpenZen.
- Easy display of protection curves according to the recloser control cabinet programmed settings.
- OpenZen-I3V is supplied with a test plan library, including a default test plan that fills most of the users needs.
- Batch tests capabilities: Execution of programmable long series of tests without user intervention.
- Up to 30 tests per file including minimum Trip, Reclose interval, reset time, cold load pickup, etc...
- Extensive export capabilities in Excel format.



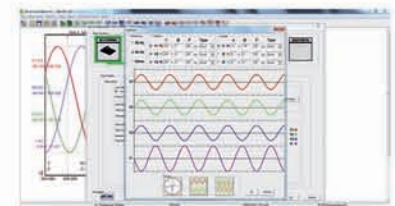
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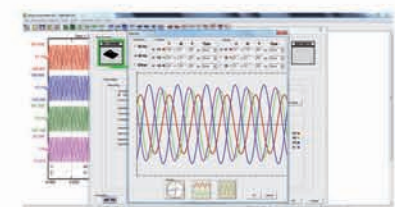
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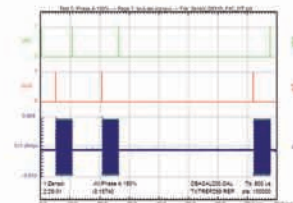
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GEN-I3V

Recloser Control Analyzer and Recloser Simulator

GEN instrument replaces and simulates the mechanical parts of the recloser during the tests. Various types of adapters are available for a large range of reclosers, existing or future

CURRENT SOURCE

Number: 1 current source
(multiplexed to 3 outputs)
Signal forms: Sinusoidal, triangular or square
Frequency range: 1 Hz to 10 KHz, Increments of 1Hz with 0,004Hz precision
Frequency resolution: 28-bits, less than 0,004 Hz precision
Phase shift: 0 to 360 degrees
Increments of 1 degree with a 0,09 degree precision

VOLTAGE SOURCE

Number: 3 voltage sources
(mutlplexed to 6 outputs)
Voltage range: 10V to 250 V amplitude in steps of 50mV peak
Signal forms: Sinusoidal, triangular or square
Frequency range: 1 Hz to 10 KHz, Increments of 1Hz with 0,004Hz precision
Frequency resolution: 28-bits, less than 0,004 Hz precision
Phase shift: 0 to 360 degrees
Increments of 1 degree with a 0,09 degree precision

CURRENT MEASUREMENT

Current input : 1
Current range: +/- 1A, +/- 5A, +/- 10A, +/- 20A

VOLTAGE MEASUREMENT

Voltage inputs: 3
Voltage range: +/- 240 V
RELAY CONTACTS OUTPUTS (SPST)
Number: 6 with individual control
Electric contacts rating: 5A 250VAC, 5A 30VDC

TRIP AND CLOSE INPUTS (ISOLATED)

Open (Trip) command input: 1

Close command input: 1
Close and open commands are:
• either software driven (OpenZen-I3V)
• or through control cabinet
• or through front panel push buttons

FRONT PANEL CONNECTOR

Number: 1
Type: Amphenol
Number of pins: 26
Specifications: MIL-5014

MEASUREMENT SUB SYSTEM

Sampling time: 45µs to 28 000µs
Sampling rate: 35,7 Hz to 22,2 KHz
Accuracy: +/-1 LSB
Resolution: 1µs
Recording time: 1ms to 100min.
Signal to noise ratio: Better than 80 dB
Graphic representation resolution: unlimited zoom able to visualize time and amplitude for each sample

GENERAL

Dimensions: 17"x16.5"x10"(43x42x25,4 cm)
Weight: 32lbs (14,5 kg)

THE SYSTEM INCLUDES

OpenZen-I3V software
USB cable
2 years warranty
OpenZen manual
Unlimited free software upgrades
Certificate of calibration and test reports

SPECIALISED INTERFACES (OPTION)

Interface box for COOPER F3, F4, F5, F6
Interface box for ABB PCD, OVR-1, OVR-3
Interface box for NU-LEC (Schneider), ADVC, CAPM, PTCC
Interface box for SCHWEITZER SEL 351R, 651R
Interface box for WESTINGHOUSE MTR type
Other interfaces available (Contact us)