

## GI-IS Series



## Pulse Mode AC Current Sources

### Key Features:

- Pulsed Current from 900A to 40kA
- Output Power from 5kVA to 300kVA
- Output Frequency: 40-200Hz
- Single and Three-Phase Systems
- Possibility of Paralleling to 1MVA or 100kA
- Pulse Mode Operation, max. duration 2 secs
- Up to 3 Output Current Ranges
- Integrated Timer and Sequencer with up to 30 steps
- Measurement of Trip Time for Fuse and CB test
- Ramp, Drop-out, Loop Modes
- Easy Maintenance and Calibration
- Access to PID Regulation Parameters
- Windows® Software GI-Manager

## General Description

Current generators of the GI-IS Series are pulsed sources of AC current. Models cover 900A to 40kA for pulse operation with up to 300kVA of pulsed output power.

The GI-IS Series units supply a very stable AC current in all load conditions at a variable frequency from 40 to 200Hz, providing sinusoidal or arbitrary current waveforms. Up to three current ranges per unit are provided, with manual or automatic selection. Equipped with a modern and easy to use front panel interface with a large LCD display, the controllers of the GI-IS Series offer advanced capabilities for current test applications.

Standard low power units are built into 19" racks or table cases. High power units are built into 19" cabinets on wheels.

Ideally suited for lab applications (R&D), the GI Series finds a great role in final product testing. Remote control is via the standard isolated RS232 and RS485, or optional USB, LAN, and Fiber Optic Interfaces. Analog inputs (Booster inputs) are available as well and allow the units to be used as current amplifiers using external analog signals. The GI-IS can also be used as a boost amplifier to reproduce arbitrary current waveforms. In addition, eight Digital inputs/outputs allow the GI-IS Series to be perfectly integrated in manufacturing lines.

Specially developed for the test of circuit breakers, the GI-IS Series is equipped with a sequencer and timer, allowing to set current and test time and measuring accurately the trip time with a resolution up to 1ms. Different modes like ramp, drop out and loop are available in order to create test program and sequences following norms or custom manufacturer procedures. They are able to deliver continuous current of 1/3 time  $I_{max}$  as well. Following information will be measured and displayed during the test:

- Output current
- Time of supply
- Voltage on the load
- Active power and reactive power consumption
- Complex load impedance

All these features allow the GI Series to be used in the following applications:

- Thermal and magnetic testing of switches, breakers, relays, fuses with trip-time measurement
- Heating tests of electrical contacts
- Tests of coils and transformers
- Test and calibration of measurement instruments

## North American Sales & Support

# GI-IS SERIES - PULSED AC CURRENT SOURCES

## Front Panel Controls

The sealed and splash proof membrane keypad of the GI-IS Series holds up well in harsh production environments and make for easy operator control.

The large back-lit LCD display provides large readout of settings and test results for the operator to see.

Test sequences can be programmed from the front panel as needed and locked down to prevent unauthorized changes.

Test results include trip current levels and trip duration with msec resolution.



Front panel user interface

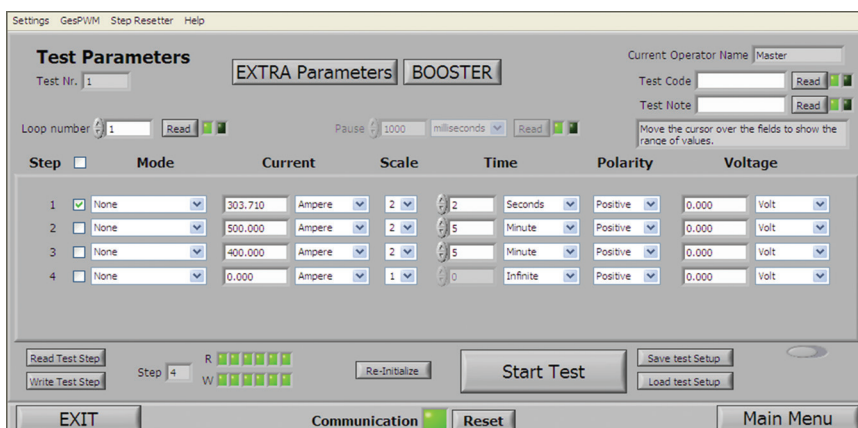


Parameter Input



Test Results Display

## AL Manager Software



The optional GI-Software allows remote control of the GI-IS Series through various available interfaces. Test sequences can be created and saved for engineering or production use.

## Typical Applications

- Thermal and magnetic tests of switches, breakers, relays or fuses with trip-time measurements
- Heating tests of electrical contacts
- Tests of coils and transformers
- Tests and calibration of measurement instruments

## Zenone Elettronica History

Founded in 1990 in Mirabella Eclano (AV), Italy by a staff with high experience in the power electronics sector, Zenone Elettronica has quickly become a leader in the development and manufacture of power electronics with a high level of technological sophistication, focusing on test equipment for measurement laboratories and production lines.

## Other products available from Zenone Elettronica

- Static Current Sources GI series
- AC up to 2.5KHz High Bandwidth and DC Current Sources GIS series
- DC Voltage Sources AL3000R series with available Regenerative capability

*In North America, contact PPST Solutions for more information*

# GI-IS SERIES - PULSED AC CURRENT SOURCES

## Technical Specification

### Output Specifications

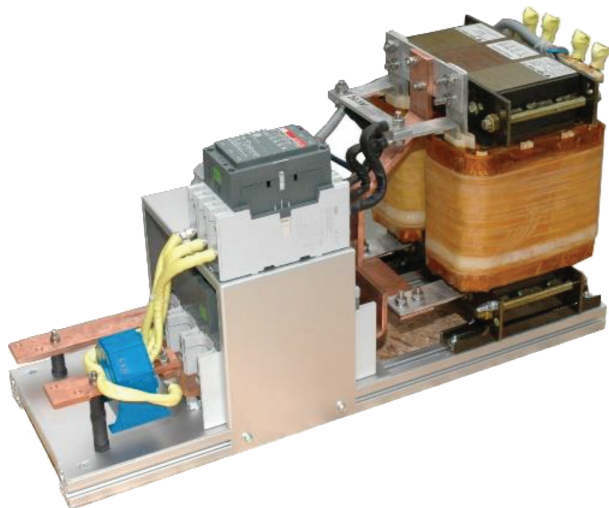
Output current	900A up to 40kA
Output power	600VA up to 1MVA
Output current ranges	1 to 3
Current resolution	0.3% F.S.
Minimum setting current	1/20 of F.S.
Accuracy	0.3% F.S.
Line accuracy	Typ. 0.1% F.S.
Load accuracy	Typ. 0.2% F.S.
Linearity	0.1% F.S.
DC offset	0.3%
Max output ripple at HF	Typ. 0.3% F.S.

### Output Frequency

Range	40 ~ 200Hz
Resolution	0.01Hz
Accuracy	0.15%
Bandwidth	500Hz
Max THD at 50-60Hz	0.2%

### Synchronization / Phase Control

Synchronization	Auto / Grid / External
Phase shift	0° ~ 360°
Resolution	1°
Accuracy	±1°
Start phase angle	0° ~ 360°
Resolution	1°
Accuracy	±1°



[Inquire about remote step-up transformer fixtures](#)

### Current Measurement

Range	+10% F.S.
Resolution	0.2%
Accuracy	0.3%

### Voltage Measurement

Range	+10% F.S.
Resolution	0.5%
Accuracy	0.5%
Additional Measurements	Power Factor, Frequency, Complex Impedance

### Line supply

Line voltage	230V 1F ± 10% / 480V 3F ± 10%
Line frequency	45 ~ 65 Hz
Cos phi	0.85
Line protection	Automatic switch
Line connection	External or internal

### Miscellaneous

Dimensions	depending on model, 19" rack or cabinet
Weight	depending on model
Output connection	Front or rear
Operating temperature	5 ~ 40°C / 41 ~ 104°F
Storage temperature	-5 ~ 60°C / 23 ~ 140°F
Protection rating	IP20B
Cooling	Forced air
Acoustic noise at 1m	Typ. 65dBA
Safety and EMC	CE (EMC & LVDT)

### Isolation

Line / Output-Gnd	2500 Vrms
Output / Gnd	1500 Vrms
Max operation voltage each output to gnd	depending on output voltage

### Interface

Communication	isolated RS232/RS485 std.; USB, LAN, Fiber Optic opt.
Digital Inputs	4x no contact no voltage isolated programmable inputs. Available functions: Start, Stop, Start/Stop, Enable, Status (1 to 4), Test End, Pause, Resume, etc.
Digital Outputs	4x 24V isolated programmable outputs. Available functions: Ready, Test started, Abnormal status, Failure, Test completed, etc.
Booster inputs for external analog control	0-20Vpk-pk (use as power amplifier)
External connections	Sync (Trig In / Trig Out)

# GI-IS SERIES - PULSED AC CURRENT SOURCES

## Available Configurations

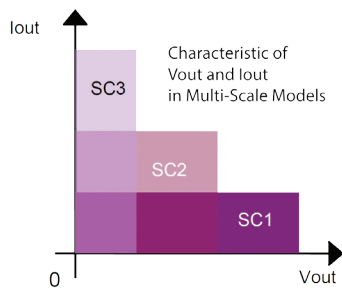
Contact PPST Solutions to discuss your application requirements and configure an optimal pulsed AC current source or system configuration.

Power Module
5 kVA
7.5 kVA
10 kVA
15 kVA
20 kVA
30 kVA
50 kVA
75 kVA
100 kVA
150 kVA
200 kVA
300 kVA

Current (Pulsed)
900 A
1300 A
2500 A
3500 A
5000 A
6000 A
8000 A
10 kA
20 kA
30 kA
40 kA

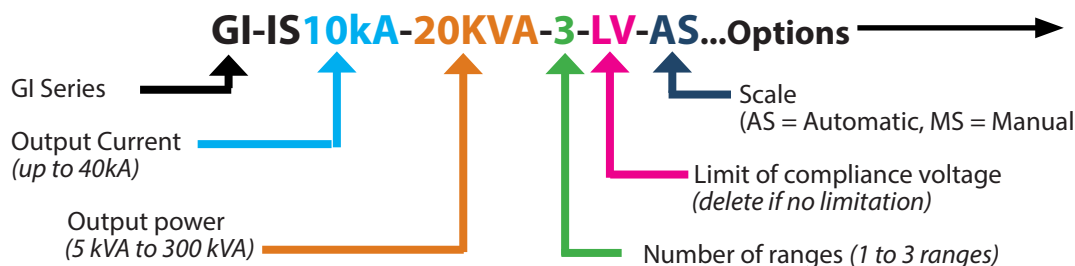
Other current ranges available on request

Options	
/M-GI-SW	Software including arbitrary waveforms for single phase unit
/M3-GI-SW	Software including arbitrary waveforms for 3 phase system
/PID	PID software, access to PID-regulation parameters
/Rack	19" Rack instead of cabinet (available up to 5kVA)
/Rack-V	Rack for vertical built-in mounting (up to 5kVA)
/3-Rack	19" Rack with connections for 3 phase systems
/LAN	LAN interface
/ROUT	Rear output connections
/FOUT	Front output connections
/SOUT	Special output connections
/ATE	Without Front panel control and display, for system integration
/Cons	Separate control unit (3 m / 10ft cable)
/USB	USB Interface
/F-I/O	Connections I/O and serial on front side
/R-I/O	Connections I/O and serial on rear panel
/F-ms	Main switch on front side
/R-ms	Main switch on rear panel



Up to three Voltage/Current Ranges combinations

## Order Example



Specify Options:

- Table Top or 19" rack mount /RACK form factor
- Current output on the front /FOUT or rear /ROUT
- AC Mains switch front or rear
- RS232 and I/O connectors front or rear
- AC input voltage



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