

AC current sources GI1K series



- currents from 50A up to 20KA
- powers from 600VA up to 300KVA
- output frequency 40 – 200Hz
- connectable in parallel up to 1MVA or 100KA
- bandwidth >500Hz
- synchronizable for poliphase systems
- Sequencer timer
- Multiscale systems
- output waveforms sinusoidal or arbitrary
- access to PID regulation parameters
- easy maintenance and calibration
- accuracy better than 0.3%
- harmonic distortion lower than 0.3%
- insulated output
- software for PC control

Typical applications

- Thermal and magnetic tests of switches, fuses, relays, trip units with measurement of the trip time
- Thermal testing of contacts, cables, junctions
- Trafo, coils tests
- Testing and calibration of measuring instruments

Description

The current sources of the GI series are static constant current generators, the models cover the range from 50A up to 20KA with powers up to 300KVA. Synchronizable to obtain polyphase systems or parallelable up to 1000KVA.

The GI sources deliver very stable AC currents in all load conditions with output frequencies from 40 to 200Hz, providing sinusoidal or arbitrary waveforms. They can have up to three scales current with manual or automatic switching. Equipped with a modern and simple user interface combined with a large LCD display they offer the possibility to make multiple applications. They are designed in 19" built-in or table rack (low powers), in wheeled cabinet (medium powers) or cabinet, there are also available models with a separate power for mounting on board. Ideal for laboratory applications, they play an important role in the final product test. Programmable via serial RS485, RS232, optional USB, LAN or optic fiber. The analog input (BOOSTER) allows the use as power amplifier and 8 programmable digital I / O ensure perfect integration with automatic test lines

Applications

Developed for the testing of switches the GI series is equipped with a sequencer timer that offers the possibility to set values of current and delivery times with accurate measurement of the trip time with a resolution of 1 mS. Other modes of operation provide ramps, dips, loops to create test programs according to standards or test procedures. Following informations are provided:

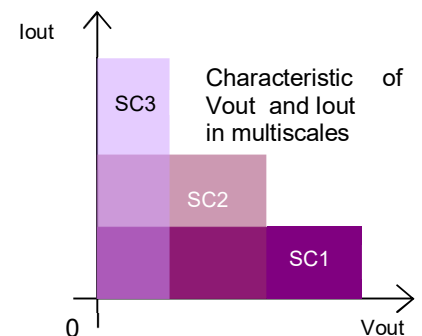
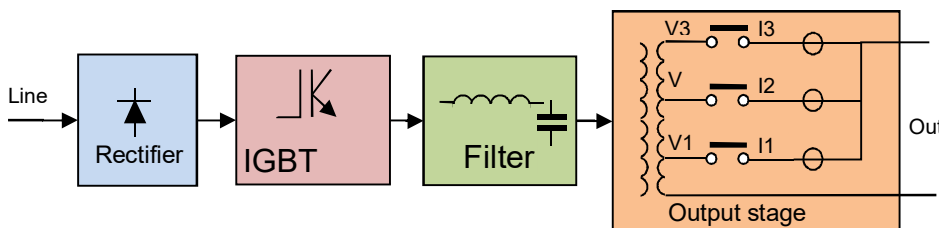
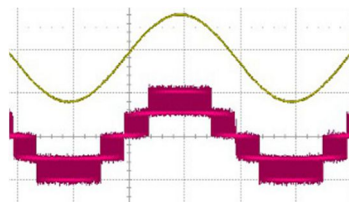
output current
 elapsed time
 voltage on the load
 active and reactive power
 load impedance
 these features allow the use in many fields such as:

magnetic and thermal testing of switches, fuses, relays, circuit breakers
 heating of electrical contacts in general
 coil, transformers, laminated cores tests
 testing and calibration of measuring instruments

Main features

Output features	
Output frequency	50A ÷ 20KA
Output power	600VA ÷ 300KVA
Number of scales	1 ÷ 3
Current resolution	0.3% F.S.
Minimum adjustable current	1/20 F.S.
Accuracy	0.3% F.S.
Line regulation	Typ 0.1% F.S.
Load regulation	Typ 0.2% F.S.
Linearity	0.1% F.S.
DC offset	0%
Max output ripple HF	Typ 0.3% F.S.
Output frequency	
Range	40 ÷ 200Hz
Resolution	0.01Hz
Accuracy	0.15%
Bandwidth	500Hz
Max THD at 50-60Hz	Typ 0.2%
Sequencer timer	
Range	1mS ÷ ∞
Resolution	1mS
Max step no.	30
Mode	Auto repeat, ramp, pause-resume, continuous or pulsed
Synchronism / Phase shift	
Synchronization	Auto / grid / external
Phase shift	0 ÷ 360°
Resolution	1°
Accuracy	± 1°
Start angle	0 ÷ 360°
Resolution	1°
Accuracy	± 1°

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 measures	PF, Impedance, Frequency
Supply	
Line voltage	230V 1F ±10% / 400V 3F ± 10%
Frequency	45 ÷ 65Hz
Cosphi	Typ 0.85
Line protection	Automatic switch
Connections	Internals
Others	
Dimensions	According to the model 19" rack or cabinet
Weight	According to the model
Output connections	Front or back-side
Operating temperature	5 ÷ 40°C
Storage temperature	-5 ÷ 60°C
Protection	IP20
Cooling	Forced air
Noise at 1mt	Typ 65dbA
Safety and EMC	CE (EMC and LVDT)
Insulation	
Line / output / GND	2500Vrms
Output / GND	1500Vrms
Maximum output voltage applicable / GND	It depends on the output voltage
Interfaces	
Communication	RS232 and 485 isolated Optional USB, LAN, Optic fiber
Digital inputs	4, 24V NPN programmable
Digital outputs	4, 24V PNP programmable
Booster for external	0 ÷ 20pk-pk (use as amplifier)
Analog control	
Other	Trig-in, Trig-out for synchronism



Principled and modulation schemes



High-power technology

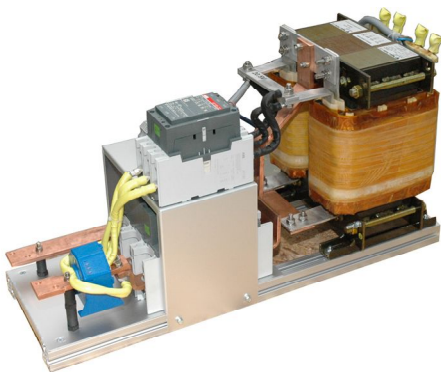
AC current sources GI1K series

Available powers
600VA
1200VA
2500VA
5KVA
7.5KVA
10KVA
15KVA
20KVA
30KVA
50KVA
75KVA
100KVA
150KVA
200KVA
300KVA

Available voltages
50A
120A
240A
350A
500A
750A
1000A
2000A
3000A
4000A
5000A
6000A
8000A
10KA
12KA
15KA
20KA
Other voltages on request

Options / Finishings on request	
/M-GI-SW	Software Gmanager with single phase arbitrary function
/M3-GI-SW	Software Gmanager with three phase arbitrary function
/Rack	Rack for built-in mounting (up to 5KVA)
/Rack-V	Rack for vertical built-in mounting (up to 5KVA)
/3-Rack	Cabinet with three phase sources
/LAN	LAN interface
/Rout	Output on the back side
/Fout	Output on the front side
/Sout	Access to particular output (to be specified)
/ATE	Without display
/Cons	Separate control unit (3 mt cable)
/USB	USB interface
/F-I/O	Connections I/O and serial on the front side
/R-I/O	Connections I/O and serial on the back side
/F-ms	Main switch on the front side
/R-ms	Main switch on the back side

Available designs
Horizontal built-in Rack
Vertical built-in Rack
Table Rack
Wheeled Cabinet
Cabinet
Electronics and power separated for mounting on board



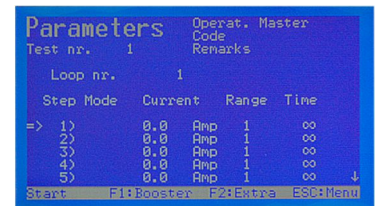
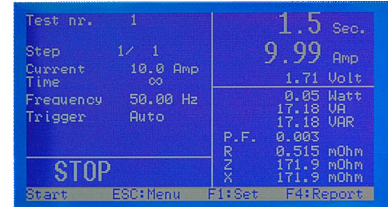
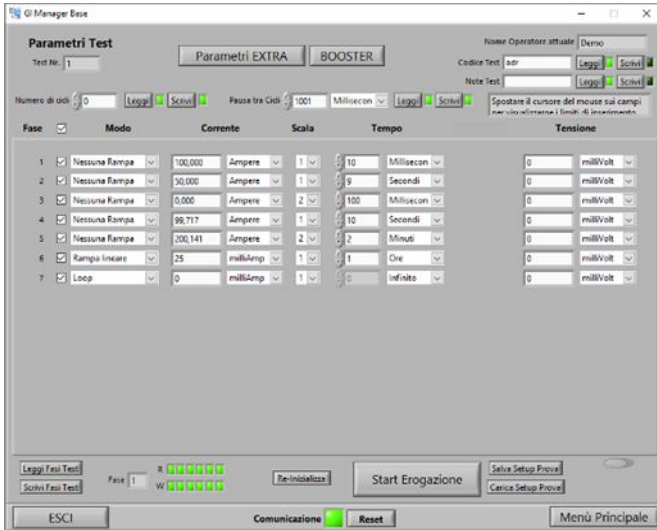


High-power technology

AC current sources GI1K series

Screens

Software GImanager



Other Zenone Elettronica products

- Pulsed Current Sources GI1K xxx SI series
- Current Sources GIS1K series with bandwidth from DC up to 2.5KHz
- Single-phase voltage sources GV1K series
- Single-phase voltage sources GTS1K series with bandwidth from DC up to 2.5KHz
- Frequency converters FVC1K three-phase series with high overload and output frequency up to 450Hz
- Fast Power Supplies AL3000 and AL3000R series with voltages from 10V to 1200V, currents up to 10KA and power ratings from 10KW to 1MW
- Fully bidirectional R Models

ZENONE ELETTRONICA HISTORY

Founded in 1990 in Mirabella Eclano (AV) 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 technological level, focusing on testing equipments for measurement laboratories and production lines

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