



High-power technology



AC pulsed current sources GI1K-SI series

- currents from 900A up to 40KA
- powers from 5KVA up to 300KVA
- output frequency 40 – 200Hz
- connectable in parallel up to 1MVA or 100KA
- bandwidth >500Hz
- supply times at I_{max} up to 2S
- 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 GI - SI series** are static constant current generators, the models cover the range from 900A up to 40KA with powers up to 300KVA. Synchronizable to obtain polyphase systems or parallelable up to 1000KVA.

The GI - SI sources deliver very stable AC current in all load conditions with output frequencies from 40 to 200Hz, providing sinusoidal or arbitrary waveforms. They can have up to three current scales 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 built-in or table rack 19" (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 a perfect integration with automatic test lines

Applications

Developed for the switch test the GI - SI series is equipped with a sequencer timer that offers the possibility to set current values 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.

They are able to deliver continuing current up to 1/3 of I_{max} for which they can be used either for impulsive and continuous tests

Following informations are provided:

output current

elapsed time

voltage on the load

active and reactive power

load impedance

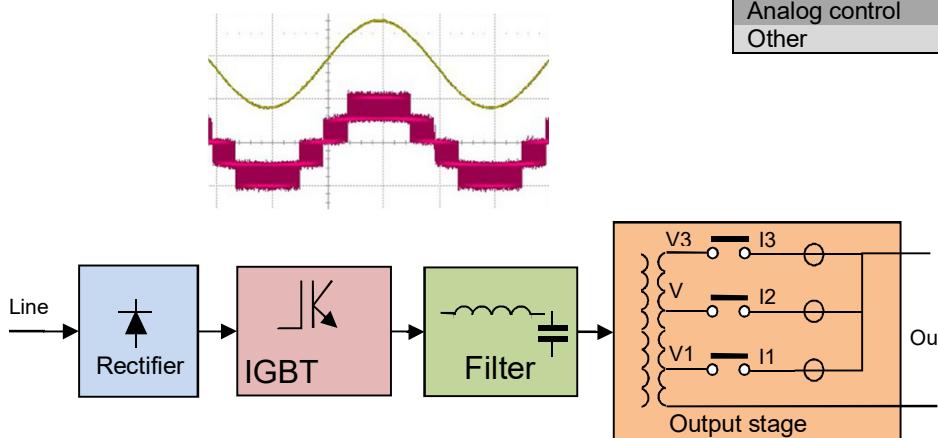
these features allow the use in many fields such as: magnetic and thermal testing of switches, fuses, relays, circuit breakers

heating of electrical contacts in general coil, transformers, laminated cores tests

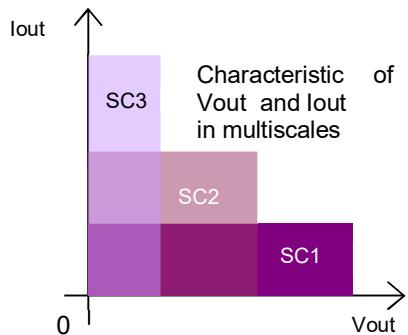
testing and calibration of measuring instruments

Main features

Output features		Current measurement	
Output frequency	900A ÷ 40kA	Range	+10% F.S.
Output power	600VA ÷ 300kVA	Resolution	0.2%
Number of scales	1 ÷ 3	Accuracy	0.3%
Current resolution	0.3% F.S.	Voltage measurement	
Minimum adjustable current	1/20 F.S.	Range	+10% F.S.
Accuracy	0.3% F.S.	Resolution	0.5%
Line regulation	Typ 0.1% F.S.	Accuracy	0.5%
Load regulation	Typ 0.2% F.S.	Additional measures	PF, Impedance, Frequency
Linearity	0.1% F.S.	Supply	
DC offset	0%	Line voltage	230V 1F ±10% / 400V 3F ± 10%
Max output ripple HF	Typ 0.3% F.S.	Frequency	45 ÷ 65Hz
Output frequency		Cosphi	Typ 0.85
Range	40 ÷ 200Hz	Line protection	Automatic switch
Resolution	0.01Hz	Connections	Internal or external
Accuracy	0.15%	Others	
Bandwidth	500Hz	Dimensions	According to the model 19" rack or cabinet
Max THD at 50-60Hz	Typ 0.2%	Weight	According to the model
Sequencer timer		Output connections	Front or back-side
Range	1mS ÷ ∞	Operating temperature	5 ÷ 40°C
Resolution	1mS	Storage temperature	-5 ÷ 60°C
Max step no.	30	Protection	IP20
Mode	Auto repeat, ramp, pause-resume, continuous or pulsed	Cooling	Forced air
Synchronism / Phase shift		Noise at 1mt	Typ 65dBa
Synchronization	Auto / grid / external	Safety and EMC	CE (EMC and LVDT)
Phase shift	0 ÷ 360°	Insulation	
Resolution	1°	Line / output / GND	2500Vrms
Accuracy	± 1°	Output / GND	1500Vrms
Start angle	0 ÷ 360°	Maximum output voltage applicable / GND	It depends on the output voltage
Resolution	1°	Interfaces	
Accuracy	± 1°	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
		Other	Trig-in, Trig-out for synchronism



Principled and modulation schemes





High-power technology

Available powers
5KVA
7.5KVA
10KVA
15KVA
20KVA
30KVA
50KVA
75KVA
100KVA
150KVA
200KVA
300KVA

Available Currents
900A
1300A
2500A
3500A
5000A
6000A
8000A
10KA
20KA
30KA
40KA
Other currents on request

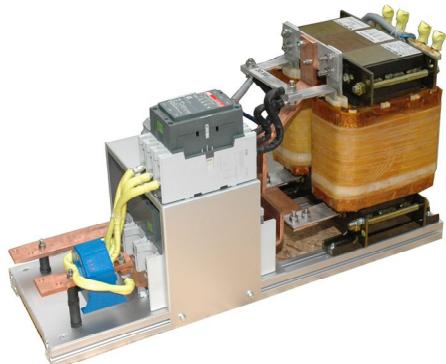
AC pulsed current sources GI1K-SI series

Options / Finishings on request

/M-GI-SW	Software GImanager with single phase arbitrary function
/M3-GI-SW	Software GImanager 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
Electronic and power separated for mounting on board



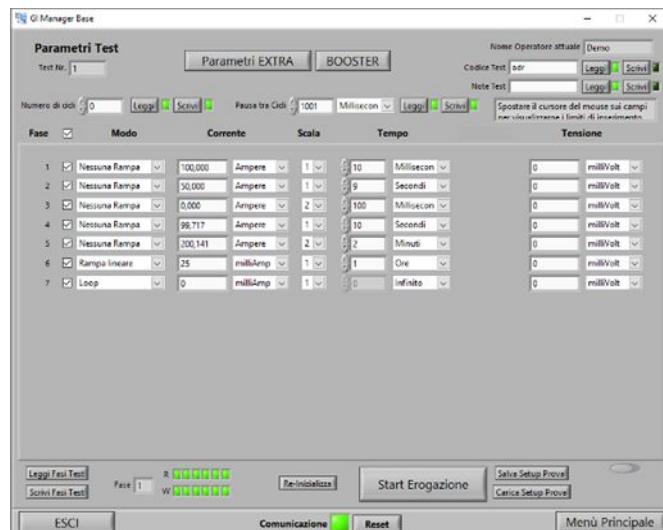


High-power technology

AC pulsed current sources GI1K-SI series

Screens

Software Glmanager



Test nr.	1	1.5	Sec.
Step	1/ 1	9.99	Amp
Current	10.0 Amp	1.71	Volt
Time	00	0.05	Watt
Frequency	50.00 Hz	17.18	VA
Trigger	Auto	17.18	VAR
		P.F.	0.003
		R	0.515 mOhm
		Z	171.9 mOhm
		X	171.9 mOhm
STOP			
Start	ESC:Menu	F1:Set	F4:Report

Parameters		Operat.	Master	
Test nr.	1	Code	Remarks	
Loop nr.	1			
Step Mode	Current	Range	Time	
=> 1)	0.0	Amp	1	∞
2)	0.0	Amp	1	∞
3)	0.0	Amp	1	∞
4)	0.0	Amp	1	∞
5)	0.0	Amp	1	∞
Start	F1:Booster	F2:Extra	ESC:Menu	↓

Other Zenone Elettronica products

- Continuously Current Sources GI1K xxx series
- Current Sources GIS1K 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

ORDERS INFORMATIONS



Mess- und Prüftechnik. Die Experten.

Ihr Ansprechpartner / Your Partner:

dataTec AG

E-Mail: info@datafec.eu

www.datatec.eu