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ZENONE
POWER ELECTRONIC TEST EQUIPMENTS
High-power technology

Fast bidirectional power supplies AL3000R

- *powers from 5KW up to 500KW*
- *voltages from 10 up to 1200V*
- *connectable in parallel over 4MW*
- *rise/fall time down to 500 µS*
- *reduced sizes and high performance*
- *modular execution*
- *constant power models*
- *overload capacity up to 200% for 1'*
- *high conversion efficiency > 92%*
- *functioning CV / CC /constant power, resistor simulation*
- *access to PID adjustment parameters*
- *easy to use, easy maintenance and calibration*
- *precision better than 0.2%*
- *insulated output*
- *software for PC control*

Typical applications

- Power supply of equipment in general where high demands of reaction are required
- Battery charger and discharger, batteries simulation, automotive
- Trafo, coils, cores tests

Description and applications

economical, easy to use static equipments. Developed for intensive use on production lines are ideal for research and development laboratories. Due to their high switching frequency joined to the multilevel switching technology they provide a clean DC source in low ripple with short reaction times and a high conversion efficiency> 92%. They can operate in two quadrants, supply and absorb energy from the load with line regeneration. The power range goes from **5KW** up to **500KW** with parallel option up to over **4MW** with a range of voltages from 10V up to 1000V. The operating modes provide constant voltage CV, constant current CC, constant power and internal resistance simulation. The CP models provide output in constant power supplying twice the current in the mid voltage to ensure maximum adaptation to the load. Equipped with a modern and simple user interface which makes setup and parameter readings very simple and intuitive. They are realized in wheeled cabinet (low and medium powers) or cabinet.

Programmable via serial RS485 optional USB, LAN or optic fiber. 4 digital I / O and 4 analog I / O they guarantee a perfect integration with automatic test lines The output voltage can be regulated with continuity from 0 to the maximum value, as well as the current, power, and the internal resistance. All devices are equipped with "**sensing**" for the compensation of the drop along the cables (up to 10% of the F.S.). They bear abrupt load variations even with recovery times of less than 1 mS for load variations of 50%.
All the equipments can be fitted with dissipative BLCD module for the dissipation of energy coming from the load.

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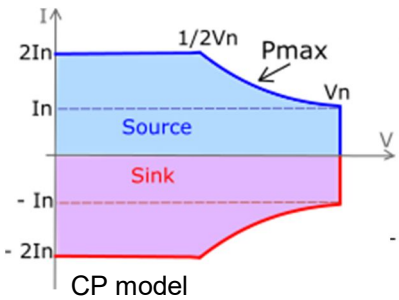
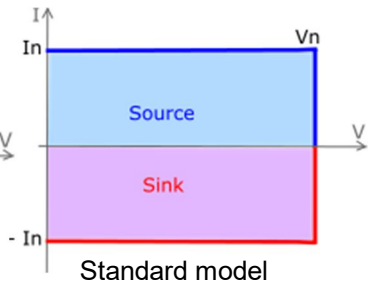
Main features

Output features	
Output voltage	10V ÷ 1200V
Minimum regulated voltage	0V
Minimum regulated current	1% F.S.
Accuracy CV	Tip. 0.2% F.S.
Accuracy CC	Typ 0.3% F.S.
Power limitation	0 ÷ Pmax
Simulated resistance	According to the power 1mΩ Resolution
Line regulation	Typ 0.2% F.S.
Load regulation	Typ 0.2% F.S.
Linearity	0.0.2% F.S.
Max offset	0.2%
Max output ripple HF	Typ 0.2%F.S.
Maximum power output	500KVW, parallelable over 4MVW
Maximum power input	The same as power output
Output connections	Internal terminals
Overload	0% standard, optional 200%
Constant power (CP models)	on ½ Vmax 2*In
Maximum time in overload	1 minute
Rise / Fall time (10 / 90%)	According to the model up to 500µS
Recovery time for load variation of 50%	Typ. 1mS
Maximum voltage recovered from sensing	10% f.s.
Conversion efficiency	>92%

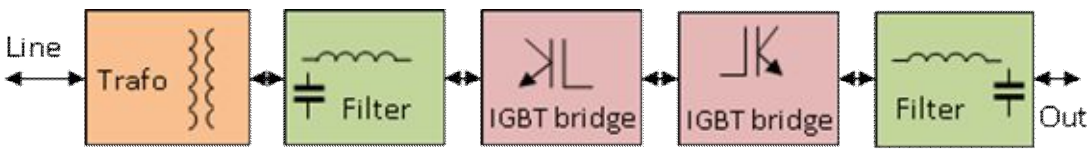
Measures	
Voltage	F.S. + 10% accuracy 0.2% F.S.
Current	F.S. + 10% accuracy 0.3% F.S.
Power	F.S. + 10% accuracy 0.5% F.S.
Controls on the front	
Run/stop	button
Voltage setting	potentiometer
Current setting	potentiometer
Other	Main switch, emergency, views
Supply	
Line voltage	400V 3F ± 10%
Frequency	45 ÷ 65Hz
Cosphi	Typ 0.99
Line protection	Automatic breaker
Connections	Internal
Other	
Dimensions	According to the model, cabinet
Weight	According to the model
Output connections	Internal
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	RS485 Optional USB,LAN, Optic fiber
Digital inputs	2, 24V NPN + emergency circuit
Digital outputs	2, 24V PNP
Analog inputs	2, 0 ÷ 10V
Analog outputs	2, 0 ÷ 10V



CP model



Standard model



Principled schemes

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Availabe powers
5KW
10KW
15KW
20KW
30KW
50KW
75KW
100KW
150KW
200KW
300KW
400KW
500KW

Available standard voltages
10V
30V
50V
100V
200V
300V
400V
500V
600V
700V
800V
1000V
1200V
Other voltages on request

Options / Finishing on request	
/M-FVC-SW	Software ALmanager
/PCR	Interface for parallel
/LAN	LAN interface
/FIB	Optic fiber interface
/Sout	Access to particular output (specify)
/USB	USB interface
/Cons	Separate control unit (3 mt cable)

Modular assembly for easy maintenance

Available designs
Wheeled Cabinet
Cabinet

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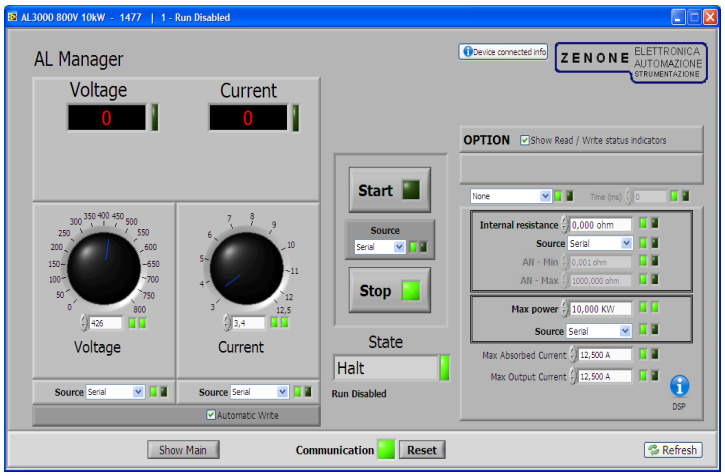
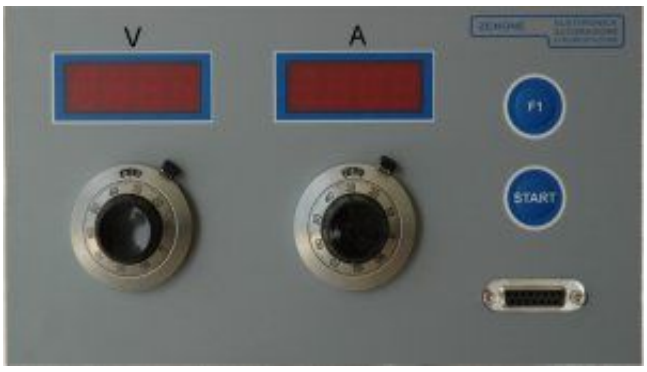
Software ALmanager



Frontal



Other Zenone Elettronica products

- Current Sources GI1K series
- 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 supply AL3000 series

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