

# SG/SGI Series

5000-30000 WATTS PROGRAMMABLE DC SUPPLY

## Features

- Fast load transient response
- Low RMS and P-P noise
- Parallelable up to 150kW
- High power density, 15kW in 3RU, 30kW in 6RU
- Modular design
- Ethernet control option
- Unique analog and digital summing capability



## SPECIFICATIONS

### INPUT

Input voltage	187-242VAC, 3 phase, 3 wire plus ground standard; optional 342-440VAC or 396-528VAC (not available in 40V output).
Frequency	47-63Hz
Power factor	>0.9 typical at 208/220 VAC, input >0.78 typical at 380/400 VAC input
Protection	1/2 cycle ride-through on all three phases, 3 cycle ride-through on single phase; Missing phase shutdown

### ENVIRONMENTAL

Operating temperature	0°C to 50° (No De-rating)
Storage temperature	-25°C to 65°C
Humidity range	0-95% RH, non condensing
Cooling	Front and side air inlet, rear exhaust. Units may be stacked without spacing.

### OUTPUT

Voltage adjustment	Zero to rated output
Current adjustment	Zero to rated output
Ripple & Noise	Voltage Mode: See table Current Mode: <+/-0.04% of full scale rms current
Line regulation	Voltage Mode: +/-0.1% of full scale Current Mode: +/-0.05% of full scale
Load regulation voltage	Mode: +/-0.02% of full scale Current Mode: +/-0.1% of full scale
Output float voltage	Maximum voltage different from output (-) to chassis, +/- 150VDC
Load transient response	Recovers within 1ms to +/-0.75% of steady-state output for a 50% to 100% or 100% to 50% load change
Efficiency	87% typical at nominal line and max load
Stability	+/-0.05% of maximum voltage or current over 8 hours. Warm-up at fixed line, load and temperature
Temperature coefficient	0.02%/°C of rated output

## OPERATING

Remote sense	60V to 100V units: 5% of full scale voltage per line (10% total). 160V to 600V units: 2% of full scale voltage per line (4% total).
Remote analog programming	Voltage, current (0-100%) and OVP (5-110%) can be programmed by selectable 0-5V, 0-10V or 0-5K $\Omega$ resistance programming (optional isolated programming inputs)
Programming accuracy	Voltage: +/-0.25% of full scale output Current: +/-0.8% of full scale output
Remote analog monitoring	Voltage and current can be monitored with 0-10V outputs corresponding to 0-100%, (optional isolated programming outputs)
Over-voltage protection	Programming range: 5-110% settable from front panel, remote analog or via optional digital inputs
Programming accuracy	+/-1% of full scale output (optional isolated programming input)
Digital programming	RS232C (standard on SGI) and Optional IEEE-488.2
Programming & readback accuracy	Voltage +/-0.1% of full scale output (Readback voltage +/-0.15%) Current +/-0.4% of full scale output; Over voltage +/-1% of full scale O/P.
Programming & readback resolution	+/-0.002% of full-scale output
Modulation	Analog input is summed with the digital Programming signal to allow modulation of the output voltage and Current setting
Operating features	Up to 5 units may be paralleled for additional current. Additional cable required. Up to 2 units may be put in series within limitations of output float voltage

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## SGA MODEL – ANALOG FRONT PANEL

Programming	10 turns knobs for voltage and current control, preview/reset pushbutton and 4 turn recessed control for setting of OVP
Readout	3.5 digit LED readouts for Voltage and Current
Indicators	Voltage mode, current mode, over voltage and fault

## SGI MODEL – INTELLIGENT, DIGITAL FRONT PANEL

Programming	Functions- voltage, current, over voltage, power, save/recall, sequencing, IEEE-488.2/RS232C setup, parallel setup, language select, front panel lock/unlock
Voltage/Current/Power	Direct keyboard input, or incrementing using the up/down arrow keys
Power mode control	Allows independent setting of power, maximum current, and maximum voltage
Save/Recall	Save/recall up to 10 voltage, current, OVP, and power settings
Sequencing	Number: 50 sequences Steps: 20 steps maximum per sequence. Each step can store voltage/ramp, current/ramp, power, on/off state, dwell time, and next step branch

Branching	Continuous, pause, stop, loop, (1-65535), call sequence number, go to sequence number, trigger (via GET or GPIB trigger command)
Dwell time	Up to 3,599,999,999 counts, with 1ms Resolution (41.7days)
IEEE-488.2/RS232C set-up	IEEE-488.2 address selection and Setup Serial baud rate selection of 2400/4800 /9600/19200
Parallel setup	Set maximum system current, system on/off display
Language select	Select menu language (English, French, German, Italian, Spanish, Chinese, Japanese, Korean)
Readout	High visibility graphics vacuum florescent display
Indicators	Voltage mode, current mode, power mode, output on, output off and remote

## PHYSICAL

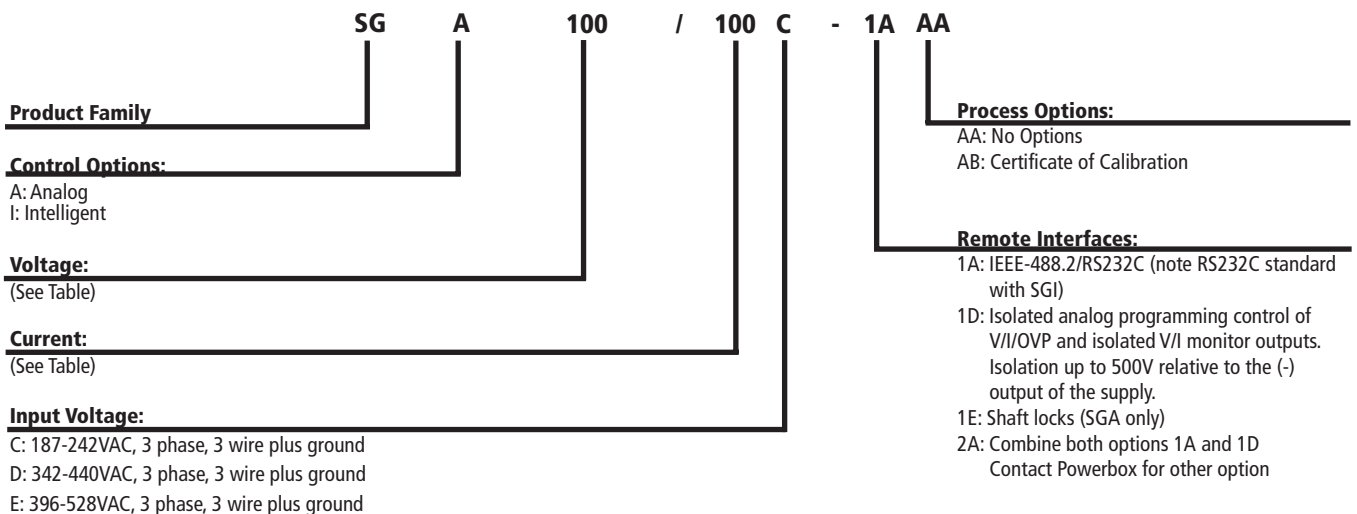
Dimensions	19" (W), 25" or 63.5cm(D)
Height	5-15kW units 3RU (13.34cm) 20-30kW units 6RU (26.67cm)
Weight	3RU < 36kg 6RU < 73kg
Shipping Weight	3RU < 50kg 6RU < 86kg

## Output Voltage and Current Ratings

POWER VOLTAGE (V)	5KW	10KW	15KW	20KW	25KW	30KW	RIPPLE RMS	NOISE P-P
	CURRENT (AMPS)							
40	125	250	375	500*	625*	750*	20mV	75mV
60	83	167	250	333	417	500	20mV	75mV
80	63	125	188	250	313	375	20mV	100mV
100	50	100	150	200	250	300	20mV	100mV
160	31	63	94	125	156	188	25mV	150mV
200	25	50	75	100	125	150	25mV	175mV
250	20	40	60	80	100	120	30mV	200mV
330	15	30	45	61	76	91	30mV	200mV
400	12	25	38	50	63	75	30mV	300mV
600	8	17	25	33	42	50	60mV	350mV

Note: \*With paralleling 5KW, 10KW, 15KW supplies.

## Model Configuration, Options & Accessories

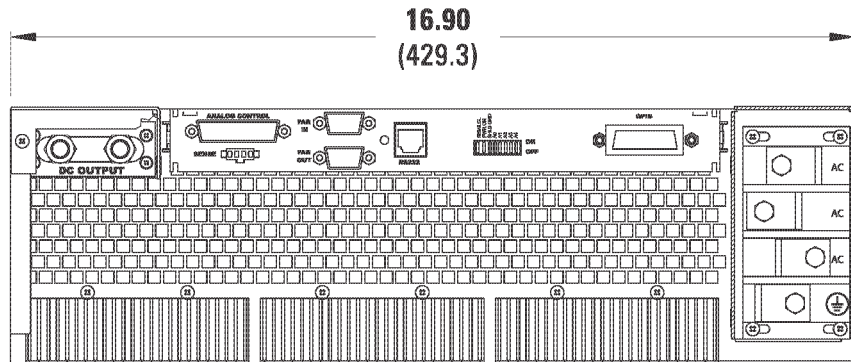
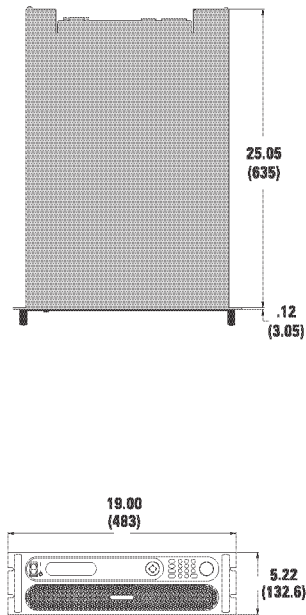


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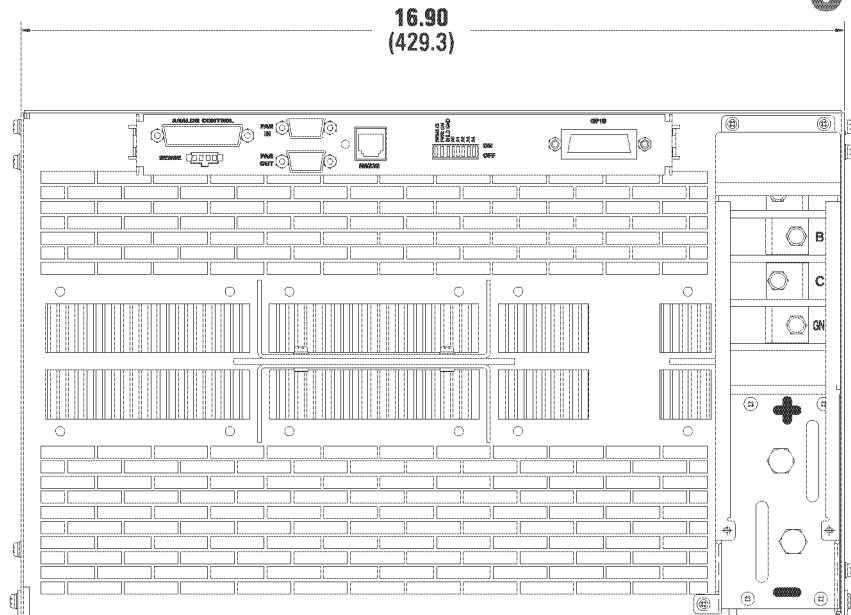
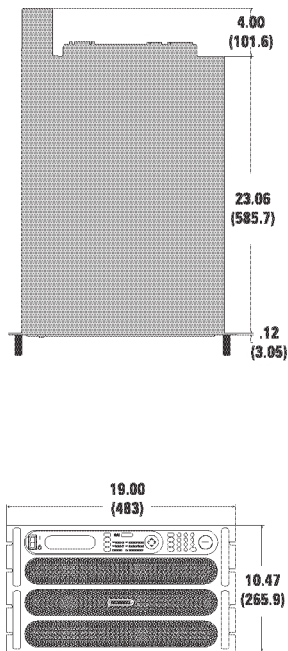
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## Technical Illustrations

**3U**



**6U**



Dimensions in inches (millimeters)