

## Power System 1006 (PS 1006)

The Gamatronic PS 1006 power system provides clean DC power to sensitive equipment, and at the same time charges the battery bank and supplies backup power during mains failure.

The PS 1006 contains a 19" subrack that can house up to six hot-plugged rectifiers, a V/A meter or controller and an LVD device.



Two configurations are available:

- ▶ **Basic shelf I** includes a 19" 3U shelf (subrack) with up to six rectifiers, a digital V/A meter and an Electronic LVD device.
- ▶ **Basic shelf II** includes a 19" 3U shelf with up to six rectifiers, SC 1006 controller and an Electronic LVD device.

### Main Features

- ▶ One to six hot-swap rectifiers
- ▶ Active current sharing among rectifiers
- ▶ Universal input voltage
- ▶ A built-in dual 70A Electronic Low Voltage Disconnect device (ELVD) for battery protection
- ▶ A high-performance, hot-swap system controller (SC 1006) measure, monitor and control voltages, current, power, battery, temperature parameters etc.
- ▶ RS232 (SC1006) or TCP/IP communication (SC 1006 NET)
- ▶ Temperature compensation enhance battery life
- ▶ Battery current limit
- ▶ Up to two battery sets handled in one system
- ▶ Automatic and pre-programmed battery test (for each battery set)
- ▶ Automatic and pre-programmed equalize charging mode
- ▶ Comprehensive remote control and monitoring of the system using a dedicated graphical used interface (GeMSi, PSM-DC 1006)
- ▶ Breaking alert by modem (option)
- ▶ Battery / Load terminals protected by a dedicated thermal-magnetic circuit breaker



# System Controller 1006 (Standard)

## Main Features

- ▶ Large bright three-digit display
- ▶ RS232 serial port via RJ45
- ▶ Control of ELVD(s)
- ▶ Battery current limit
- ▶ Periodic and manual battery test
- ▶ DC voltage compensation according battery temperature
- ▶ Two temperature sensors for reliable measurement
- ▶ LED indicators on the front panel
- ▶ Audible alarm
- ▶ Measurements and indications:
  - >> DC voltage
  - >> Load current
  - >> Battery current
  - >> Rectifier current
  - >> Power (in Watts)
  - >> AC voltage and frequency
  - >> Status of input, output, ELVD, rectifiers, battery and circuit breakers
  - >> Battery temperature
  - >> Breaking alert by modem
  - >> Dry-contact signals (3 alarms)
- ▶ Control
  - >> Battery test
  - >> Two charging modes (FL, EQ)
  - >> DC voltage-settings (EQUALIZE or FLOAT charge modes)
  - >> ELVD threshold setting (connect, disconnect)
  - >> Unconditional control of each ELVD
- ▶ Calibration by software (all-digital, no analog potentiometers)
- ▶ Graphical User Interface (GUI) (PC)
- ▶ Real-Time-Clock (RTC) with backup
- ▶ Events log
- ▶ Additional dry contacts (4)



## System Controller 1006 NET (optional)

Additionally the NET model offers:

- ▶ Communication via SNMP - TCP /IP from front panel by RJ45
- ▶ User defined communications - RS232 or SMMP (PPP / 10baseT)



# Power System 1006

RECTIFIER MODULES		12-18	12-30	24-15	24-30	48-12	48-25	60-15
<b>INPUT</b>								
Nominal Voltage (-15%, +12%)		100 ~ 240Vac						
Voltage Range		85Vac to 270Vac						
Max. Current (at full load) <sup>1</sup>		N*3.5	N*6A	N*6A	N*10A	N*6A	N*10A	
Frequency		47Hz to 63Hz						
Power Factor (at full load)		≥ 0.99						
<b>OUTPUT</b>								
Voltage (default)		13.5±0.2Vdc		27±0.2Vdc		54±0.2Vdc		67.5±0.2Vdc
Adjustable Range		10-15Vdc		20-30Vdc		47-60Vdc		60-75Vdc
Regulation (line & load)		0.5%						
Nominal Current <sup>1</sup>		N*18A	N*30A	N*15A	N*30A(Vin>100V) N*20A (Vin<100V)	N*12A(Vin>150V) N*8A(Vin<150V)	N*25A(Vin>165V) N*18A(165>Vin>120V) <sup>5</sup>	N*15A(Vin>100V) N*10A(Vin<100V)
Ripple & Noise @ BW=30MHz		200mV p-p, 20mVrms						
Psophometric Noise		-52 dbm over 600Ω (<2mV)						
Efficiency (nominal load)		86% @ 230Vac 82% @ 115Vac		88% @ 230Vac 84% @ 115Vac		90% @ 230Vac 87% @ 115Vac		92% @ 230Vac 89% @ 115Vac
Overload Current <sup>1</sup> (short circuit current, Vo=0)		<N*20A N*3A<Isc<N*5A	<N*7A N*6A<Isc<N*8A	<N*16A N*3A<Isc<N*4A	<N*31A (Vin>100V) <N*21A (Vin<100V) N*6A<Isc<N*8A	<N*13A (Vin>150V) <N*9A (Vin<150V) N*3A<Isc<N*5A	<N*26A (Vin>165V) <N*19A (165>Vin>120V) N*4A<Isc<N*6A	<N*18A N*3A<Isc<N*5A
Over-voltage Protection		15V		30V		60V		75V
Walk-in Time		<1 sec						
Hold-up Time (fully loaded)		40ms	20ms	20ms	10ms	15ms	10ms	
Output Current Indication		10 LED's bar-graph (1 <sup>st</sup> LED indications operation only)						
Active Current Sharing		±10% accuracy at full load						
<b>GENERAL</b>								
System Controller <sup>2</sup>		Full status monitoring and communication with a PC, dedicated Graphical User Interface						
Withstand Voltage (1 min) <sup>3</sup>		3000Vac INPUT / OUTPUT, 1500vAC INPUT / GND 1000Vdc OUTPUT / GND						
Operating Temperature		-10 to 65° C		-10 to 45° C		-10 to 65° C		-10 to 40° C
Humidity		<95% non-condensing, equipped with standard PS1006 rack						
Storage Temperature		-20 to 80° C						
EMC		EN 300 386-2 V1.1.1.3 (1997), EN55022, EN6100-4-2, 3, 4, 5, 6, 11 EN 61000-3-2 and EN 61000-3-3						
Safety		Complies with IEC950, EN60950						
Dimensions		19"(W) x 3U (H) x 320mm (D) w/o terminals (360mm with terminals)						
		60mm (W) x 135mm (H) x 235mm (D)						
Weight (Kg)		(N*1KG)+4.2Kg (fully equipped system - max.10.2Kg)						
		1Kg						
<b>ELVD</b>								
Max. Current Withstand		2x60 A or 1x100A						
Trip Voltage Levels <sup>4</sup>		Disconnect:42±0.5Vdc, Reconnect (AC line recovers): 49±0.5Vdc						

1. N=number of modules

2. Basic Shelf 1 has V/A meter. Basic Shelf 2 has a system controller.

3. Equipment DC test voltage is applied to overcome Y-capacitors leakage current to ground. Output is floating (not grounded) during test.

4. Programmable with SC1006 if included

5. N\*18A to N\*12A decreases linearly for Vin<120V [N\*12A (for Vin=85V)]