



- Robust Design
- Compact structure
- Temperature compensated charging
- User programmable charge Topologies
- Fully protected AC & DC operation

## DESCRIPTION

The GS120 Series of DC UPS Power Supplies are designed and built with high quality components and stringent Quality Control. We trust that the GS120 will provide many years of trouble-free and reliable services.

The GS120 provides a total power of 120W to the DC bus and the charging of the Backup Batteries. Upon Main's failure, the DC bus is supported by the Backup batteries until Mains is restored. With AC mains present (AC Mode), the GS120 recharges the Backup Battery with (temperature compensated) Boost and Float modes. With the AC mains absent (DC mode), the GS120 monitors and protects the Backup Battery against deep discharge and overcurrent.

Two solid-state Alarm contacts are available for remote monitoring of the status of the Mains and battery condition. DC OK alarm contacts indicate the presence of Mains and Power Supply is working. Batt OK indicates the charge state of the standby battery during backup mode. Charge topologies are user-programmable by dip switches on side of unit.

The main features of the GS120 are:

1. Robust design , which increases reliability and durability of the product
2. Compact structure , which results in easy installation and space saving
3. Temperature compensated charging , which provides optimum charge time and increases battery life
4. User programmable topologies, which results in a more suitable charger for various applications
5. Fully protected operation with or without mains presence, giving peace of mind and protecting your investment

## MODEL TYPES

MODEL	Float Voltage	Boost Voltage	Ouput Current
SA-GS11208	13.8V	15VDC	8A
SA-GS-2404	27.6V	30VDC	4A

## SPECIFICATIONS

<b>Input voltage:</b>	196Vac to 264Vac / 98Vac to 132Vac internal link select
<b>Frequency:</b>	48 to 64Hz
<b>Inrush current:</b>	30A @ 230Vac (cold start)
<b>Isolation:</b>	3KVac Input to Output , 1KVac Input to Earth/Chassis , 500Vac Output to Earth/Chassis
<b>Input connector:</b>	IEC inlet socket
<b>Approvals:</b>	BS/EN60950 & C-tick
<b>Operating temperature range</b>	-20°C to 55°C ambient

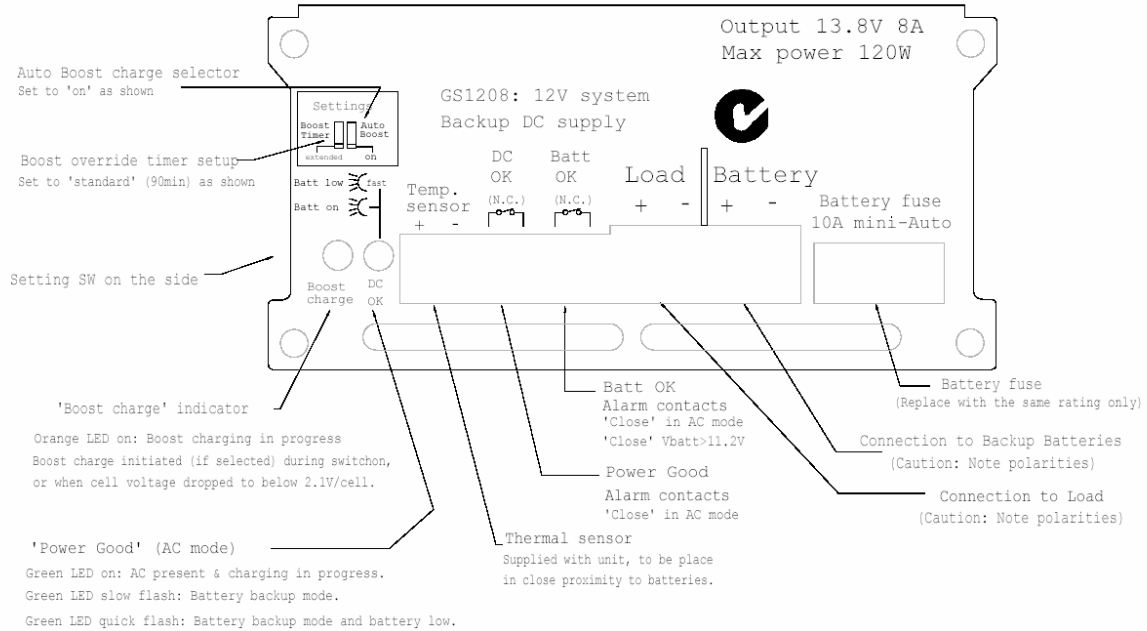
### WITH MAINS PRESENT ( AC MODE )

<b>Output voltage</b>	<b>Float mode:</b> 2.3V/cell @ 25°C, ±1.3% , 12V system: 13.8Vdc , 24V system: 27.6Vdc <b>Boost mode:</b> 2.5V/cell @ 25°C, ±2% , 12V system: 15.0Vdc , 24V system: 30.0Vdc
<b>Regulation (Line and Load)</b>	less than 0.7%
<b>Output noise &amp; ripple (30MHz BW)</b>	0.8%V <sub>out p-p</sub>
<b>Temperature compensation</b>	-3.9mV/°C/cell
<b>Total current limit (Batt &amp; Load)</b>	SA-GS120-1208: 8.5A ±0.5A SA-GS120-2404: 4.3A ±0.3A
<b>Boost to Float charge transition:</b>	Charge current taper: SA-GS120-1208: 1.2A ±0.2A SA-GS120-2404: 0.6A ±0.1A
<b>Internal timer override</b>	Standard: 90mins ±30% Extended: 180mins ±30%

### WITH MAINS ABSENT ( DC BACKUP MODE )

<b>Battery OK threshold</b>	1.85V/cell ± 8%
<b>Battery undervoltage cutout</b>	1.7V/cell ± 8%
<b>Battery overcurrent cutout</b>	SA-GS120-1208: 9A ±1A SA-GS120-2404: 4.5A ±0.5A
<b>Battery drain into PSU</b>	Less than 15mA <sub>average</sub>

## MECHANICAL DRAWINGS



**Caution:** Internal link change is required for the changover between 115V and 230V operation.  
If link change is required, remove Mains plug and WAIT 5 MINUTES BEFORE REMOVE COVER.  
Remove header link from P2 and insert to the appropriate position as indicated on the circuit board.

NO USER SERVICEABLE PARTS INSIDE. DO NOT OPEN COVER. TRAINED SERVICE PERSONNEL ONLY. INDOOR USE ONLY.

### TOP VIEW

