SGP1200-12G
AC-DC Power Supply
12V Output, 1133 Watts

The SGP1200-12G is a 1133 W, power-factor-corrected (PFC) AC-DC front-end which provides a 12 VDC output for datacom, telecom, and other distributed power applications.

The SGP1200-12G meets international safety requirements and is CE marked to the Low Voltage Directive (LVD).

The supply's compact dimensions of 11 x 3.2 x 1.57 inches [279 x 81 x 40 mm] make it ideal for 1U rack mounting. Its internal fan cooling assists providing a normal operating temperature range of -10°C to +50°C.

Key Features & Benefits

- Wide input voltage range (90-264 VAC) with PFC
- Active current share
- Incorporates remote sense
- I^2C interface status monitoring
- Standby voltage of 3.3 VDC @ 4 A
- Overtemperature, overcurrent, overvoltage, and undervoltage protection
- 1U or 2U height configurations
- Status LED provides indicators for input, output, and temperature plus fan status

Applications

- Data Communications
- Telecommunications
- Distributed Power Systems

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Please read our datasheet & drawing disclaimer here.

SGP1200-12G

Model Selection

MODEL	NOMINAL OUTPUT VOLTAGE	MAXIMUM OUTPUT CURRENT	REGULATION	RIPPLE & NOISE @ 20 MHz BW
SGP1200-12G	12 VDC 3.3 VDC (Standby)	93.3 A 4 A	±1 % ±2 %	100 mV 50 mV
SGP1200-12S204G	12 VDC 5 VDC (Standby)	93.3 A 2.6 A	±1 % ±2 %	100 mV 50 mV

Input Specifications

PARAMETER	CONDITIONS / DESCRIPTION		MIN	NOM	MAX	UNITS
AC Input Voltage	Single-phase continuous input range.		90		264	VAC
Input Frequency	AC input.		47		63	Hz
Hold-up Time	After last AC line peak at full power. At 120 VAC.		12			ms
Input Current	At full-rated load.	At 120 VAC			<12	Arms
Inrush Surge Current	Excluding Xcap. Under all conditions.				<30	Apk
Power Factor	Per EN61000-3-2; at 30% or higher load		> 0.95			W/VA

Output Specifications

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Efficiency [1]	110 VAC 70%FL	86.5	87.5		%
	110 VAC 100% FL	84.5	85.5		%
	230 VAC 70%FL	89	90		%
	230 VAC 100% FL	87.5	89		%
Minimum Load	Main Output 12 V minimum loading required to maintain regulation.	0.5			A
Output Power				1133	W
Overshoot				<5	%
Transient Response	Load Step of 50% Full load Note: Minimum starting load: 12 V -> 9 A, 3V3 -> 0.2 A			<5	%
Turn-On Delay with PS_ON signal	Time required for initial output voltage stabilization after application of AC input or ON/OFF signal.			<3000	ms
Output Regulation	See Model Selection table above				

I²C Bus Management Interface[2]

PARAMETER	CONDITIONS / DESCRIPTION
I2C Interface	BCA.00009
EEPROM Data	SGP1200-12MM

[1] The fan is considered to be part of the load.
[2] Reference "I²C Management Interface" and "EEPROM Table of Contents" documents for SGP1200-12G (consult factory).

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Interface Signals & Internal Protection[3]

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
TEMP_OK	Signal indicates temperature status. High signal indicates temperature is within range. Changes to a Low signal when PS is overtemperature and V1 output has been turned off.	55	60	65	°C
PS A0, PS A1	I²C Addresses.				
SDA	I²C Data line (3.3 V).				
SCL	I²C Clock line (3.3 V).				
AC_OK/L	Low signal indicates AC input is within PSU limits.				
PS_PRESENT/L	Pin on the PS connector that is tied internally to logic ground. When unit is inserted, line is driven low to indicate a power supply is present.				
FAN_FAIL/L	Low signal indicates any PSU fan is running below 90% of required speed.				
PW_OK	High signal indicates both outputs are within regulation limits.				
Overvoltage Protection	Main Output <15 V; Standby Output < 4.3 V				
Overcurrent Protection	Main Output – Latch off type 105 – 130% of max load; Standby Output Auto-recovery <6 A				
Short-circuit Protection	Main Output - Toff <20 ms; Standby Output – Current Limitation <6 A				

Safety, Regulatory and EMI Specifications

PARAMETER	CONDITIONS / DESCRIPTION		MIN	NOM	MAX	UNITS
Agency Approvals	Approved to the latest edition of the following standards: UL/CSA60950-1, IEC60950-1 and EN60950-1. CE Mark for LVD					
Electromagnetic Interference	FCC CFR title 47 Part 15 Sub-Part B, EN 55022	Conducted: Radiated:		CLASS A +3dB margin CLASS A +6dB margin		
Harmonics	Per IEC 61000-3-2.					
Voltage Fluctuation & Flicker	Per IEC 61000-3-3.					
ESD Susceptibility	Per EN 61000-4-2, Part 4., Performance criteria B	Contact Discharge: Air Discharge:			+/- 8 +/- 15	kV
Radiated Susceptibility	Per EN 61000-4-3, Part 3., Performance criteria A				10	V/m
EFT/Burst	Per EN 61000-4-4, Part 4., Performance criteria B				+/- 4	kV
Input Transient Protection	Per EN 61000-4-5, Performance criteria B	Line-to-Line: Line-to-Ground:			+/- 1.6 +/- 3	kV
RF Conducted Disturbances	Per EN 61000-4-6, Level 2., Performance criteria A	150 kHz–80 MHz:			3	V
Voltage Interruptions	Per EN 61000-4-11., Performance criteria A Performance criteria B				 12 1	 ms sec
Leakage Current	Per EN 60950, 264 VAC @ 60Hz:				<1.6	mA

[3] Refer to product specification for internal pull up impedances and timing of these signals.

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Environmental Specifications

PARAMETER	CONDITIONS / DESCRIPTION		MIN	NOM	MAX	UNITS
Altitude	Operating. Non-Operating.				10000 42000	ASL ft ASL ft
Operating Temperature	Internal DC fan for cooling.	At 100% load:	0		50	°C
Storage Temperature			-40		85	°C
Temperature Coefficient						
Relative Humidity	Non-condensing.@ 40 °C		7		93	%RH
Shock	Operating: half-sine, 11 ms, 10 shock per face, 6 faces Non-Operating: half-sine, 11 ms, 10 shock per face, 6 faces				7 30	G
Vibration	**Operating:** Swept Sine, 5-500-5Hz, 1 octave/min, 5 sweep cycles per axis, 3 axes **Non-Operating:** Swept Sine, 5-500-5Hz, 1 octave/min, 5 sweep cycles per axis, 3 axes Random 0.025G2/Hz, 10-500Hz, 1hr dwell per axis, 3 axes				2 4 3.5	Gpk Gpk Grms
MTBF	Per Telcordia (Bellcore) SR-332 at 45°C		200000			hrs

LED Indicators

Indicator	LED Color
Standby, 12V OFF	Green Blinking
Operation, 12V ON	Green
Low AC / no AC	LED OFF
Over current on 12V	Amber Blinking
Over voltage (12V OFF)	Amber
Under voltage (12V OFF)	Amber blinking
Over temperature (12V OFF)	Amber
Fan Fault	Amber

Mechanical Specifications

PARAMETER	CONDITIONS / DESCRIPTION
Dimensions	81.3 x 40 x 337.4 mm
Weight	1.6 kg (3.53 lb)

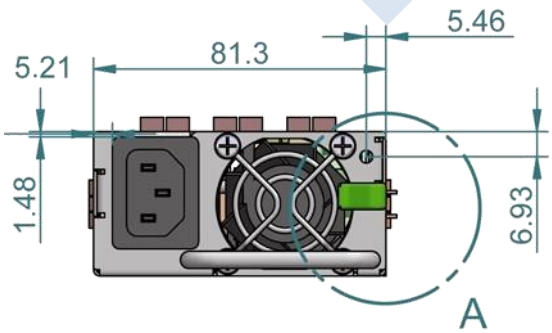

Figure 1 - Front View

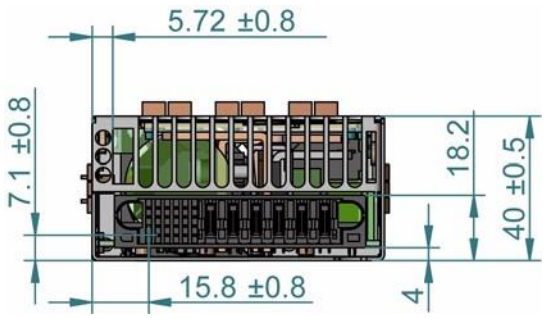

Figure 2 - Rear Connector View

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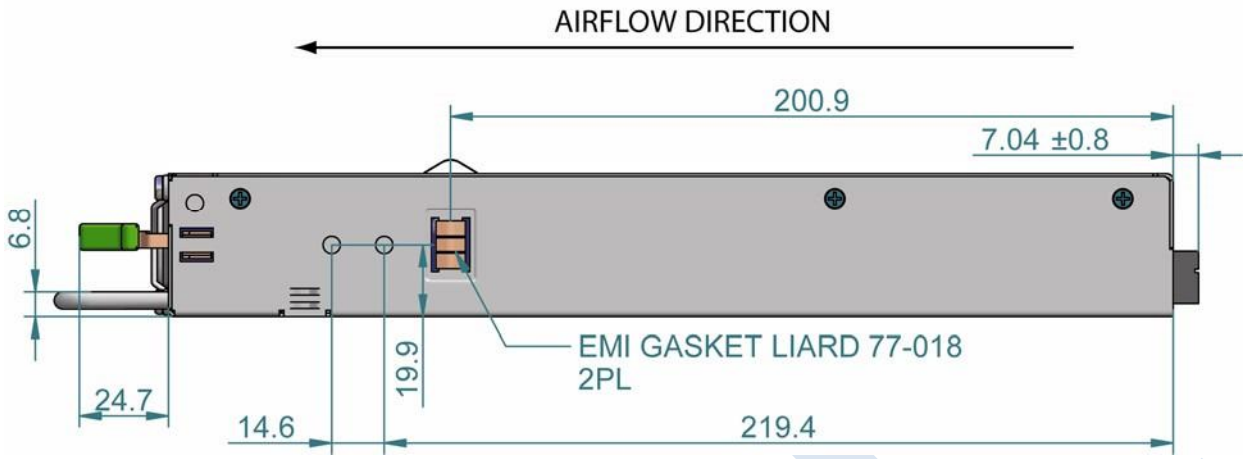

Figure 3 - Side View

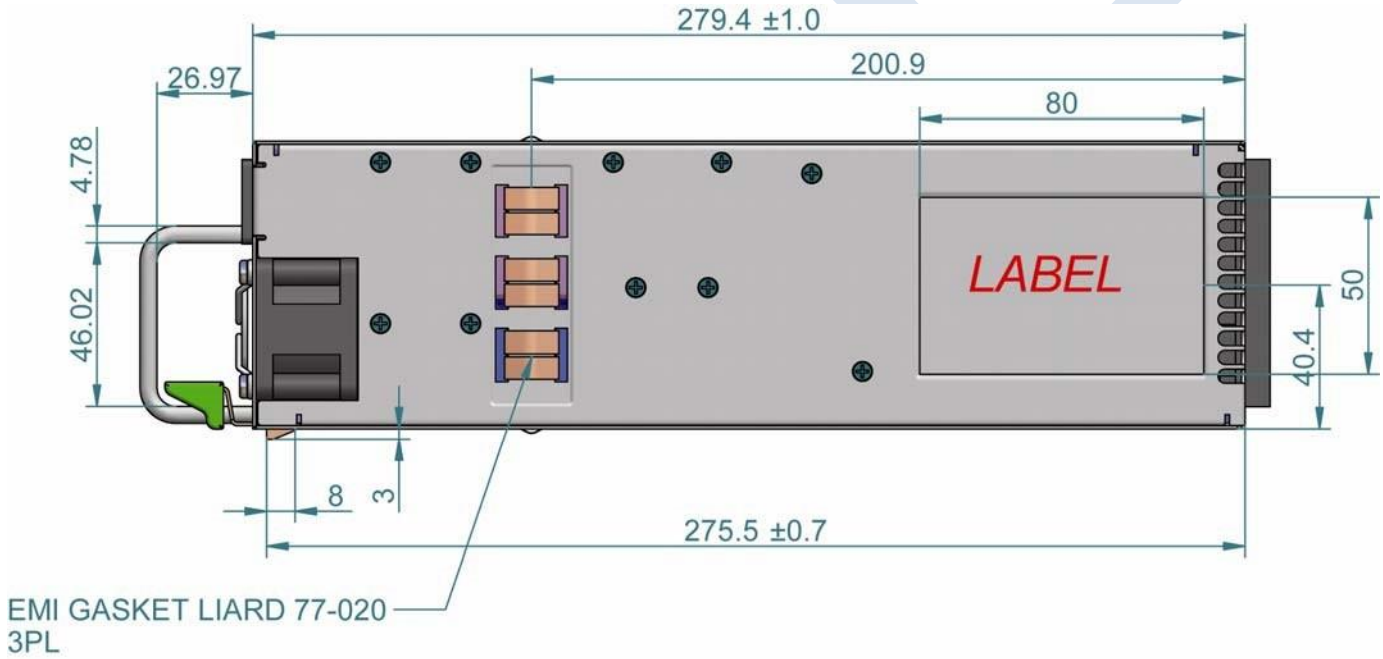

Figure 4 - Top View

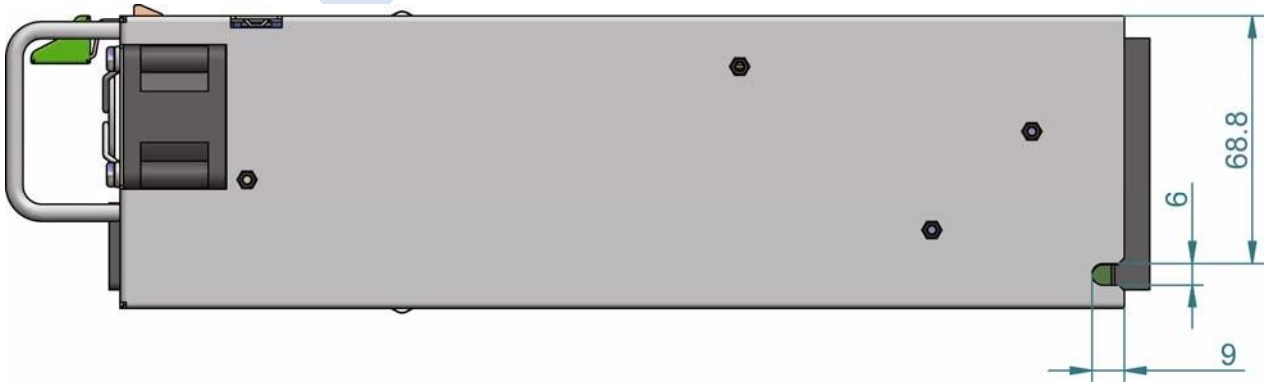

Figure 5 - Bottom View

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Connector Information

Power Supply:	Input - IEC Connector EN60320 C14 (plug) Output – FCI Power Blade 51721-10002406AA											
Mating Connections:	Input - IEC Connector EN60320 C13 (socket) Output – FCI Power Blade 51741-10002406CC											
Input Connector (AC Power)	**Input**			**Location**								
	Input AC plug			Front panel								
Output Connector (Pin & Signal Names) Power Supply connector viewed from the rear of supply	**Signal Pins**						**Power Blades**					
	D1 C1 B1 A1	D2 C2 B2 A2	D3 C3 B3 A3	D4 C4 B4 A4	D5 C5 B5 A5	D6 C6 B6 A6	PB1	PB2	PB3	PB4	PB5	PB6

PIN	SIGNAL NAME
PB1	+12V Return
PB2	+12V Return
PB3	+12V Return
PB4	+12V
PB5	+12V
PB6	+12V
A1	PS_ON/L
A2	+12V Sense -
A3	TEMP_OK
A4	PS_PRESENT/L
A5	+3V3 Standby
A6	+3V3 Standby GND
B1	AC_OK/L
B2	+12V Sense +
B3	+12V I_SHARE
B4	PS_KILL
B5	+3V3 Standby
B6	+3V3 Standby GND
C1	SDA
C2	SCL
C3	DC_OK
C4	FAN_FAIL/L
C5	+3V3 Standby
C6	+3V3 Standby GND
D1	PS_A0
D2	PS_A1
D3	S_INT
D4	+3V3 Sense +
D5	+3V3 Standby
D6	+3V3 Standby GND

For more information on these products consult: tech.support@psbel.com

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