

Switching Power Supply Enclosed Type SPPC 200W Series Single Output

CARLO GAVAZZI



- Built-in active PFC (Power Factor Protection), PF>0.95
- Compact size
- Built-in cooling fan speed control
- Universal AC input
- Withstand 300Vac surge input for 5 sec
- High efficiency, long life and high reliability
- Output protections: SCP/OLP/OPP
- Wide operating ambient temperature (-25°C~70°C)
- Operating altitude up to 5,000m
- 100% full load burn-in test
- PCB both sides with conformal coating
- 105°C long life electrolytic capacitor

Product Description

Enclosed Switching Power Supply for AC DC and DC DC power requirements. The new SPPC family provides flexible OEM power solutions for industrial control and automation applications,

which in the case of the SPPC 200W ranges from 5V to 48V. All the range carries full certification offering a wide range of universal input and screw terminal connections.

Ordering Key

SP PC XX 200 1 F C

Power supply model _____
 Panel mounted _____
 Output voltage _____
 Output power _____
 Input type (single phase) _____
 Power Factor Correction (PFC) _____
 Compact _____

Approvals



Output Performances

MODEL NO.	INPUT VOLTAGE	OUTPUT VOLTAGE	VOLTAGE ADJ	RATED CURRENT	VOLTAGE ACCURACY
Single Output Models					
SPPC 5200 1FC	85VAC~264VAC 120VDC~370VDC	5V	-5%~+10%	40 A	±1.0%
SPPC 12200 1FC	85VAC~264VAC 120VDC~370VDC	12V	-5%~+10%	16.7 A	±1.0%
SPPC 24200 1FC	85VAC~264VAC 120VDC~370VDC	24V	-5%~+10%	8.4 A	±1.0%
SPPC 48200 1FC	85VAC~264VAC 120VDC~370VDC	48V	-5%~+10%	4.2A	±1.0%

Output Data

Current range		Line regulation	± 0.5%
SPPC 5200 1FC	0~40	Load regulation	± 1.0%
SPPC 12200 1FC	0~16.7A	Turn on time	<2S (230VAC input, Full load)
SPPC 24200 1FC	0~8.4A	Output voltage accuracy	±1.0%
SPPC 48200 1FC	0~4.2A	Temperature coefficient	±0.03%/°C
Ripple and noise *Note		Hold up time	≥10mS (230VAC input, Full load)
SPPC 5200 1FC;		Overshoot and Undershoot	< 5.0%
SPPC 12200 1FC	<150mV		
SPPC 24200 1FC;			
SPPC 48200 1FC	<200mV		

* Note: Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 10uF parallel capacitor.

Input Data All specifications are at nominal values, full load, 25°C unless otherwise noticed

Voltage range	85 ~ 264VAC 120 ~ 370VDC	Leakage current	
Inrush current	<50A@230VAC; <30A@115VAC Cold start	Input-Output	<0.25mA
Efficiency		Input-PG	<1.0mA
SPPC 5200 1FC	79%	Frequency range	47-63Hz
SPPC 12200 1FC	84	AC current (max.)	<3.5A
SPPC 24200 1FC	86	PFC (Power Factor Correction)	PF>0.98/115VAC; PF>0.95/230VAC
SPPC 48200 1FC	87.5		

Controls and Protection

Overload (OLP)	105%~150% of rated output current, hiccup mode, auto recovery	Over voltage (OVP)	105%~150% of rated output voltage, hiccup mode, auto recovery
Output short circuit (SCP)	Long-term mode, auto recovery.		

General Data All specifications are at nominal values, full load, 25°C unless otherwise noticed

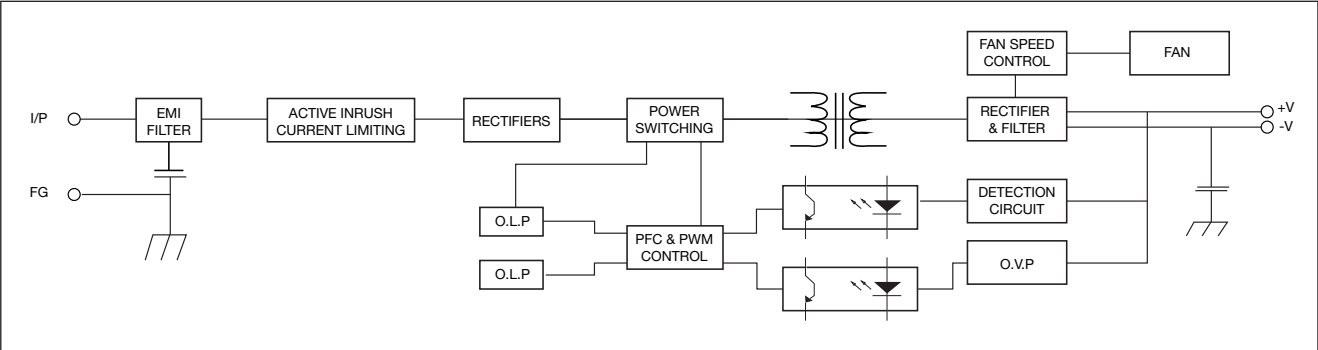
Ambient temperature	-25°C to +70°C	Insolation resistance I/O	≥100M ohms
Relative humidity	20%~90%RH	MTBF (MIL-HDBK-217F)	More than 200.000 hrs
Storage	-40°C to +85°C	Case material	Metal
Cooling	Forced air (built-in fan controlled by load and internal temperature)	Dimensions LxWxD	199 x 99 x 50 mm
		Packing	12 PCS/CTN. G.W: 11.4kgs 0.04CBM

Norms and Standard

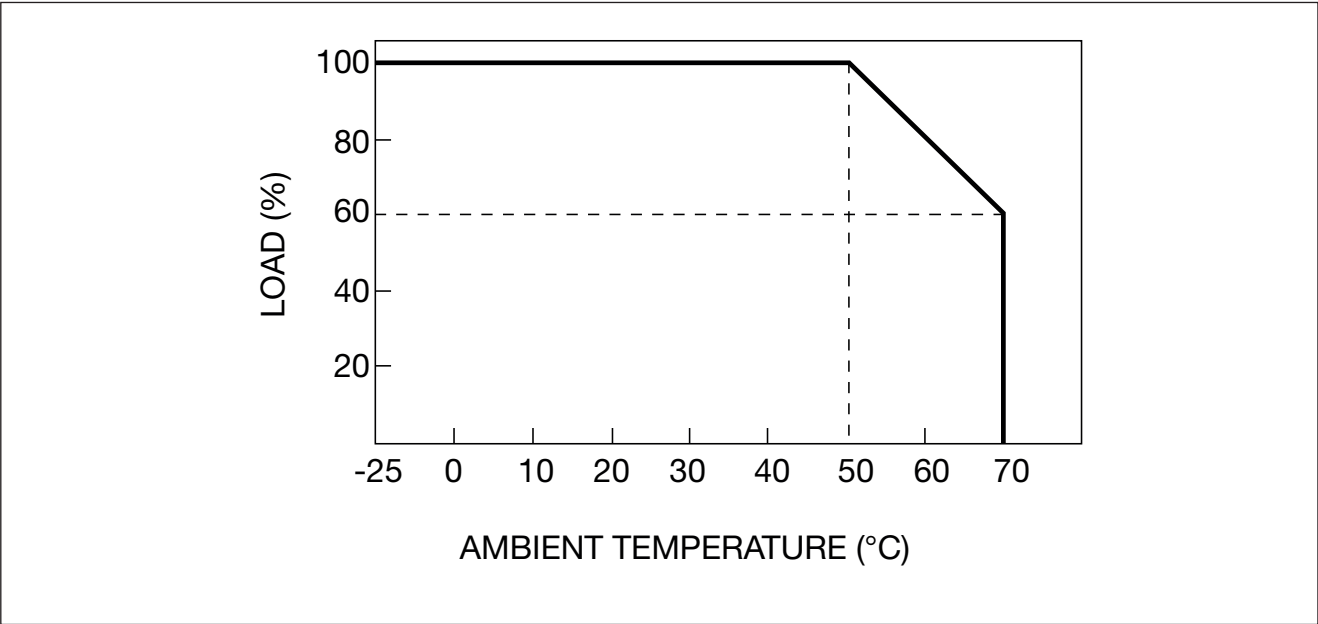
Safety standard	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	EMS immunity	Compliance to EN61000 -4- 2, 3, 4, 5, 6, 8, 11; heavy industry level.
Withstand voltage	Primary-Secondary: 3.0kVAC; ≤10mA. Primary-PG: 1.5kVAC; ≤10mA. Secondary PG: 0.5kVDC; ≤10mA	EMI conduction and radiation	Compliance to EN55022, Class B
		Harmonic current	Compliance to EN61000-3- 2, Class D



Block Diagram



Derating Curve



The technical drawing illustrates the SMPS cover assembly in three views: top, side, and cross-sectional.

Top View: Shows the overall dimensions of the cover, including a total width of 199mm and a height of 119mm. It details the placement of various components and mounting points, labeled with callouts 1 through 15. Key features include a central fan area, a terminal block on the left with pins for +V, -V, +V, -V, and N, and a connector labeled CON1. Mounting holes are specified as 2-M4 and 4-M3. A side view shows a width of 50mm and a mounting hole offset of 33mm.

Side View: Shows the cover's profile with a total height of 37.5mm. It includes callouts 7, 8, 9, 10, and 11, indicating the positions of internal components and mounting points. A mounting hole is specified as 3-M4.

Cross-sectional View: Shows the assembly of the cover onto a base plate. The components are labeled: Customer Plate, SMPS Cover, and Assemble Screw. The thickness of the customer plate is indicated as $L \leq 4\text{mm}$.

Mouser Electronics

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