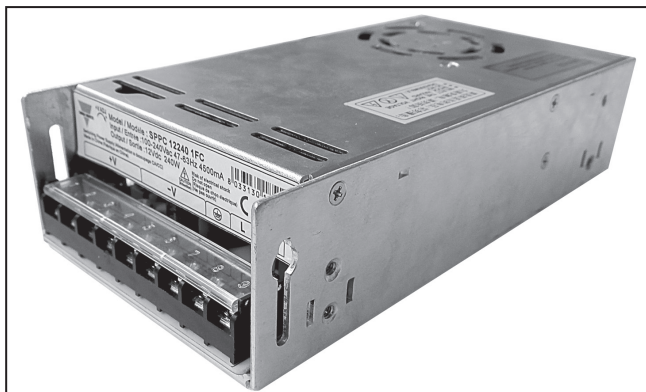


Switching Power Supply Enclosed Type SPPC 320W Series Single Output



- 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 320W 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 320 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 5320 1FC	85VAC~264VAC 120VDC~370VDC	5V	-5%~+10%	55 A	±1.0%
SPPC 12320 1FC	85VAC~264VAC 120VDC~370VDC	12V	-5%~+10%	25 A	±1.0%
SPPC 24320 1FC	85VAC~264VAC 120VDC~370VDC	24V	-5%~+10%	13 A	±1.0%
SPPC 48320 1FC	85VAC~264VAC 120VDC~370VDC	48V	-5%~+10%	6.7 A	±1.0%

Output Data

Current range	
SPPC 5320 1FC	0~55A
SPPC 12320 1FC	0~25A
SPPC 24320 1FC	0~13A
SPPC 48320 1FC	0~6.7A
Ripple and noise *Note	
SPPC 5320 1FC;	<150mV
SPPC 12320 1FC	<150mV
SPPC 24320 1FC	<200mV
SPPC 48320 1FC	<200mV

Line regulation	± 0.5%
Load regulation	± 1.0%
Turn on time	≤2S (230VAC input, Full load)
Output voltage accuracy	±1.0%
Temperature coefficient	±0.03%/°C
Hold up time	≥10mS (230VAC input, Full load)
Overshoot and Undershoot	< 5.0%

* 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 5320 1FC	79%	Frequency range	47-63Hz
SPPC 12320 1FC	84.5%	AC current (max.)	<4.5A
SPPC 24320 1FC	87%	PFC (Power Factor Correction)	PF>0.98/115VAC; PF>0.95/230VAC
SPPC 48320 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.		

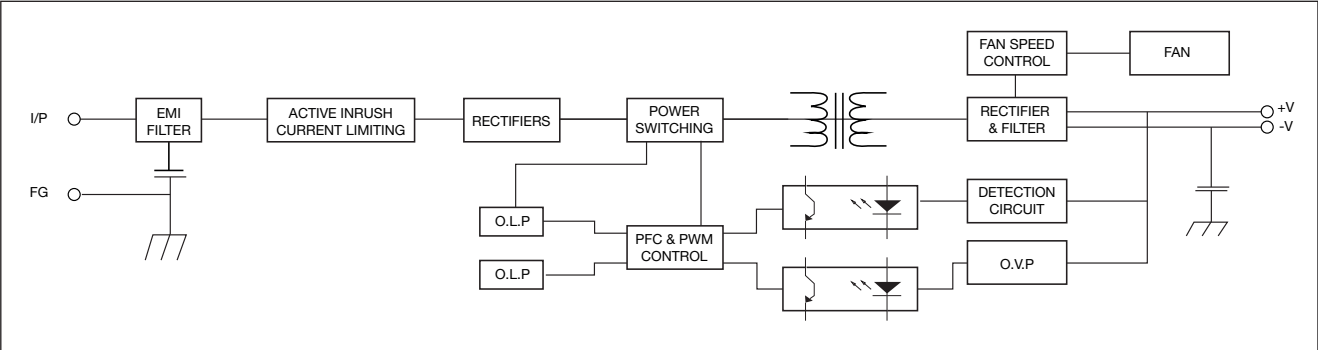
General Data All specifications are at nominal values, full load, 25°C unless otherwise noticed

Ambient temperature	-25°C to +70°C	MTBF (MIL-HDBK-217F)	More than 200.000 hrs
Relative humidity	20%~90%RH	Case material	Metal
Storage	-40°C to +85°C	Dimensions LxWxD	199 x 99 x 50 mm
Cooling	Forced air (built-in fan controlled by load and internal temperature)	Packing	12 PCS/CTN. G.W: 11.6kgs 0.04CBM
Insolation resistance I/O	≥100M ohms		

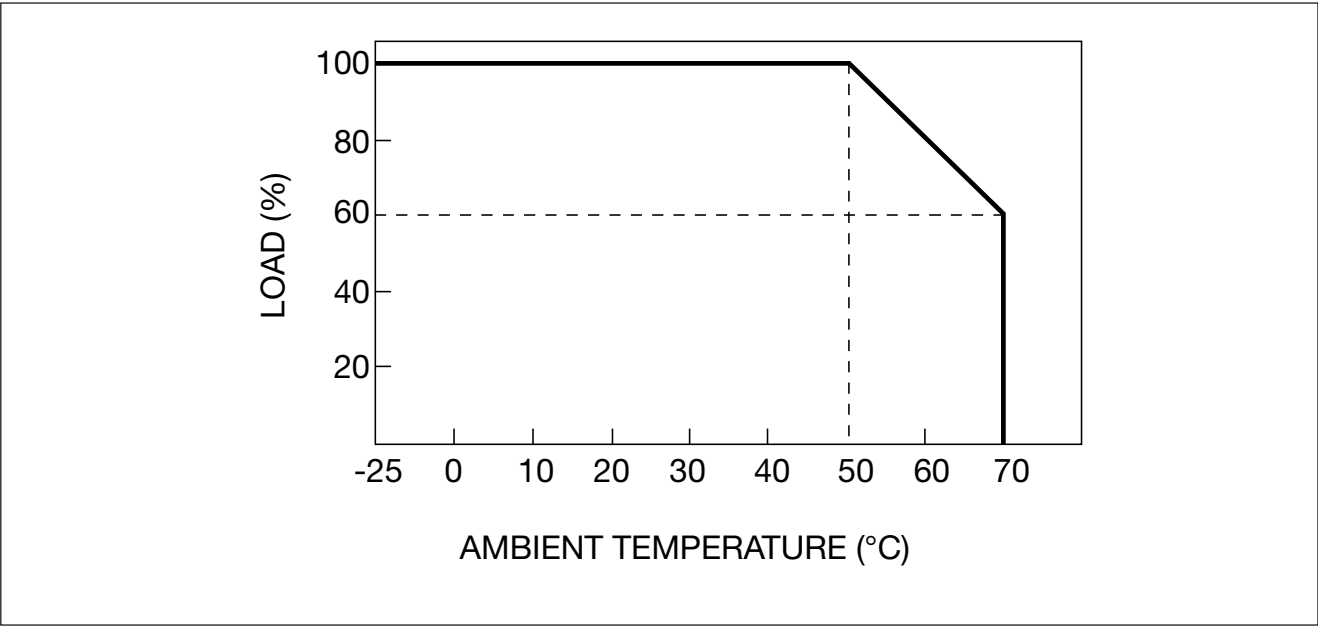
Norms and Standard

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 with the following details:

- Top View:** Shows a rectangular cover with overall dimensions of 199mm (width) and 119mm (height). It includes a central fan area with a diameter of 126mm. Various mounting points are labeled with callouts 1 through 15. A terminal block on the left side includes pins for +V, -V, L, and N, with a 49.5mm spacing. Other components like RV1, S1, FC, and CON1 are also indicated.
- Side View:** Shows the cover's profile with a total height of 33mm. It includes mounting points 10, 7, 8, 9, and 11. A 3-M4 screw is shown for mounting.
- Cross-sectional View:** Shows the assembly of the Customer Plate, SMPS Cover, and Assemble Screw. The thickness of the Customer Plate is specified as $L \leq 4\text{mm}$.
- Optional Fixtures:** Fixture A (option) and Fixture B (option) are shown as additional mounting options for the cover.