

Switching Power Supply Type SPD 120W New DIN rail mounting

CARLO GAVAZZI



- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- PFC standard
- High efficiency
- Power ready output
- LED indicator for DC power ON
- LED indicator for DC low
- Parallel versions standard
- Compact dimensions
- UL, cUL listed and TUV/CE approved

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the installation is on a DIN rail and compact dimensions and performance are a must. Then version features PFC and parallel function as standard.

Ordering Key

SP D 24 120 1 B N

Model _____
 Mounting (D = Din rail) _____
 Output voltage _____
 Output power _____
 Input type _____
 Optional features _____
 New Type _____

Input type: 1= single phase

Approvals



Optional Features

Description	Code
Standard screw terminal	Nil
Plug-in connectors	B

Output Performances

Model	Rated output Voltage (VDC)	Output Power (W)	Output Current (A)	Voltage Trim Range		DC ON LED (VDC)Thereshold at startup		DC LO LED (VDC) Thereshold after startup		Typical Efficiency
				Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD12120	12	120	10	11.4	14.5	10	11.2	10	11.2	84%
SPD24120	24	120	5	22.5	28.5	17.6	19.4	17.6	19.4	86%
SPD48120	48	120	2.5	45.0	55.0	37.0	43.0	37.0	43.0	87%

Output Data

Output voltage accuracy	- 0 +1% max (factory adjusted)	Ripple and noise	50mVpp
Line regulation	± 0.5%	Vi nom, Io nom BW = 20Mhz	
Load regulation		Hold up Time Vi = 115VAC	25ms
Non parallel mode	± 1%	Hold up time Vi = 230VAC	30ms
Parallel mode	± 5%	Minimum load	0%
Temp. coefficient	± 0.03% / °C	Parallel Operation	3 units max.
Transient recovery time	2ms		

Input Data

Rated input voltage	115/230VAC autoselect	Frequency range	47- 63 Hz
Voltage range AC in, 115 AC in, 230 DC in	90 - 132VAC 180 - 264VAC 210 - 370VDC	Inrush current Vi= 115VAC Vi= 230VAC	24A 48A
Rated input current	2.2 / 0.83A	P.F.C. Passive 230VAC Io nom	0.7
Input current Vi 90 / 180 VAC	2.8 / 1.4A max	Leakage current Input-Output Input-Fg	0.25mA Max. 3.5mA Max.

Controls and Protections

Input Fuse	T3.15/250VAC internal ¹⁾	Power ready (only SPD 24) Threshold at start up (contact closed) Contact rating at 60VDC Insulation	17.6 - 19.4VDC 0.3A 500VDC
Overvoltage Protection Vi nom 0.8 Io nom	30 - 33VDC		
Output Short Circuit	Current limited		
Rated Overload Protection	110 - 145%		

¹⁾ Fuse not replaceable by user

General Data (@ nominal line, full load, 25°C)

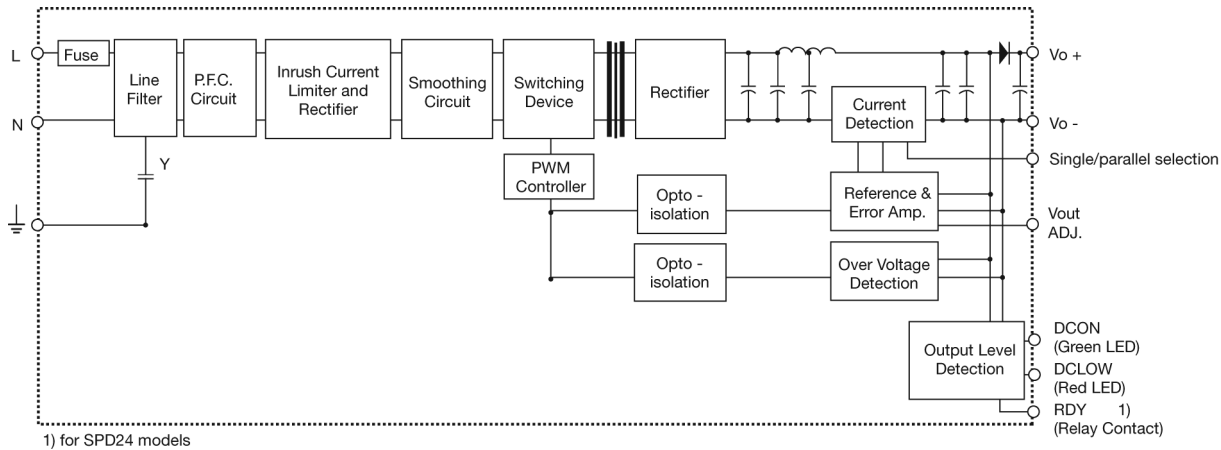
Ambient temperature	-35°C to 71°C	Switching frequency	55kHz
Derating (>60°C to +71°C)	2.5% / °C	MTBF (MIL-HDBK-217F)	450.000h
Ambient humidity	20 to 95%RH	Case material	Metal (powder painted aluminium)
Storage temperature	-40°C to +85°C	Dimensions L x W x D	125 x 63.5 x 126
Protection degree	IP20	Weight	920g
Cooling	Free air convection		

Approvals and EMC

Insulation voltage I / O	3.000VAC min	CE	EN50081-1 EN55022 class B EN61000-3-2 EN61000-3-3 EN61000-6-2 EN61000-6-3 EN55024
Insulation resistance	100MΩ min		
UL / cUL	UL508 listed, UL60950-1 Recognized		
TUV	EN60950-1		



Block Diagrams



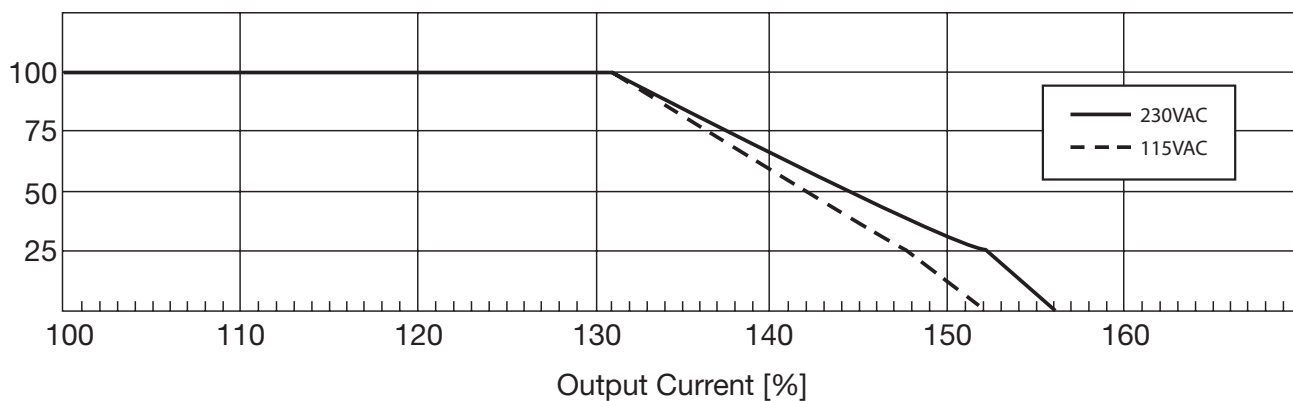
Pin Assignment and Front Controls

Pin No.	Designation	Description
1	RDY	DC OK, relay normally open contact
2	RDY	DC OK, relay normally open contact
3	+	Positive output terminal
4	+	Positive output terminal
5	-	Negative output terminal
6	-	Ground terminal to minimise High frequency emissions
7	GND	Negative output terminal
8	L	Phase input (no polarity with DC input)
9	N	Neutral input (no polarity with DC input)
	DC ON	DC output ready LED
	DC LO	DC low indicator LED
	Vout ADJ.	Trimmer for fine output voltage adjustment
	S/P	Single/parallel selection switch

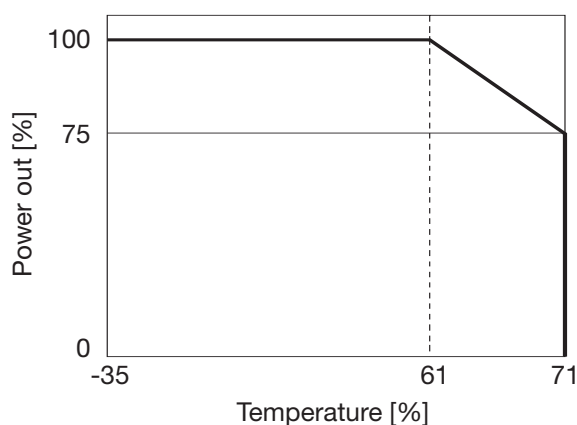
Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended	Plug-in connectors	10-24AWG flexible or solid cable 7mm stripping recommend
Screw terminals	10-24AWG flexible or solid cable 8mm stripping recommend	Max. torque for plug-in terminals	Input terminals 0.784Nm (7.0lb-in) Output terminals 0.784Nm (7.0lb-in)
Max. torque for screws terminals	Input terminals 1.008Nm (9.0lb-in) Output terminals 0.616Nm (5.5lb-in)		

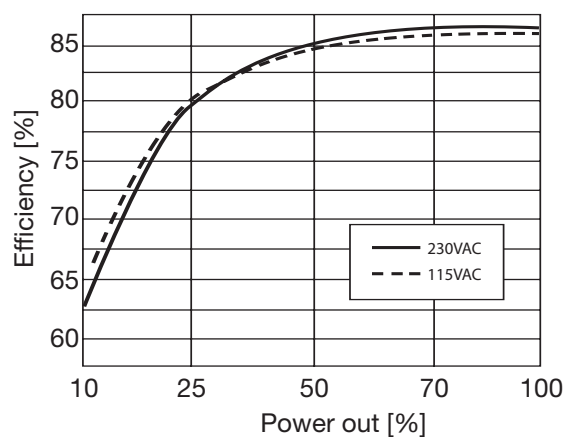
Typ. Current Limited Curve



Derating Diagram



Typ. Efficiency Curve



Mechanical Drawings mm (inches)

