

Switching Power Supply Type SPD 120W DIN rail mounting

CARLO GAVAZZI



- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- PFC available
- High efficiency
- Power ready output
- LED indicator for DC power ON
- LED indicator for DC low
- Parallel versions available
- 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.

Ordering Key

SP D 24 120 1 BFP

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

Input type: 1= single phase

Approvals



Optional Features

Description	Code
Plug-in connectors	Bxx
With P.F.C.	xFx
With Parallel function	xxP

Output performances

Model	Rated output Voltage (VDC)	Output Power (W)	Output Current (A)	Voltage Trim Range ¹⁾ (VDC)		DC ON LED (VDC) Threshold at startup		DC LO LED (VDC) Threshold after startup		Typical Efficiency
				Min.	Max.	Min.	Max.	Min.	Max.	
SPD12	12	120	10	11.4	14.5	10	11	10	11.2	84%
SPD24	24	120	5	22.5	30	21	22	20.5	22.5	86%
SPD48	48	120	2.5	45	55	42	44	41	45	87%

¹⁾ N.A. on parallel model. Output voltage is fixed in house, cannot be trimmed by user.

Output data

Output voltage accuracy	± 1% max	Output Voltage accuracy	+1% (factory adjusted)
Line regulation	± 0.5%	Temperature coefficient	± 0.3%/°C
Load regulation		Hold up Time Vi = 115VAC	25ms
Non parallel model	± 1%	Hold up time Vi = 230VAC	30ms
Parallel model	± 5%	Minimum load	5%
Temp. coefficient	± 0.3% / °C	Parallel Operation (only specific models)	3 units max.
Transient recovery time	300µs		
Ripple and noise	50mVpp		

Input data

Rated input voltage	115/230 selectable	Frequency range	47- 63Hz
Voltage range AC in, 115 selected AC in, 230 selected DC in, only 230 selected	93 - 132VAC 186 - 264VAC 210 - 370 VDC	Inrush current Vi= 115VAC Vi= 230VAC	24A 48A
		P.F.C. (optional)	0.7

Controls and Protections

Input Fuse	T4A/250VAC internal ²⁾	Power ready (only SPD 24) Threshold at start up (contact closed)	21.1 - 23.1
Overvoltage Protection	125 - 145%	Threshold after start up (contact open)	20.6 - 19.0
Output Short Circuit	Current limited	Contact rating at 60VDC insulation	0.3A 500VDC
Rated Overload Protection	105-125%		

²⁾ Fuse not replaceable by user

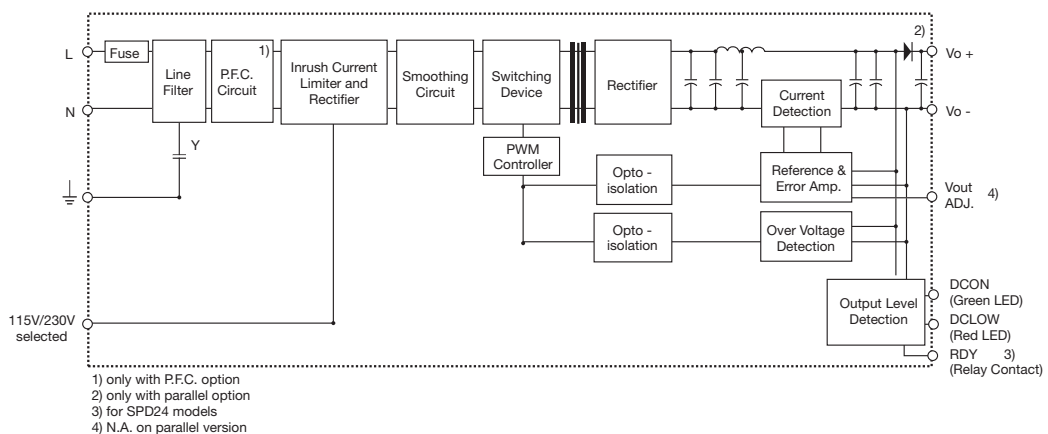
General data (@ nominal line, full load, 25°C)

Ambient temperature	-25°C to 71°C	Switching frequency	80kHz
Derating (>60°C to +71°C)	2.5% / °C	MTBF (MIL-HDBK-217F)	480.000h
Ambient humidity	20 to 95%RH	Case material	Metal (powder painted aluminium)
Storage	-25°C to +85°C	Dimensions L x W x D	125 x 63.5 x 126
Protection degree	IP20	Without P.F.C.	640g
Cooling	Free air convection	With P.F.C.	860g

Approvals and EMC

Insulation voltage I / O	3.000VAC min	CE	EN50081-1 EN55022 class B EN61000-3-2 EN61000-3-3 EN50082-1 EN55024
Insulation resistance	100MΩ min		
UL / cUL	UL508 listed, UL60950-1, Recognized		
TUV	EN60950		

Block diagrams



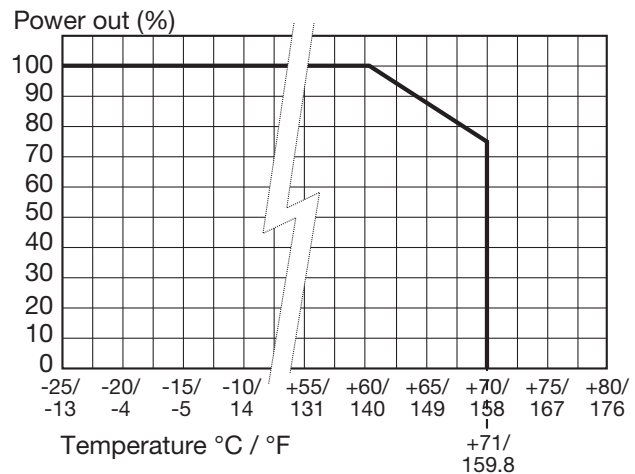
Pin assignement and front controls

Pin No.	Designation	Description
1	RDY (only SPD 24)	DC OK, relay normally open contact
2	RDY (only SPD 24)	DC OK, relay normally open contact
3	+	Positive output terminal
4	+	Positive output terminal
5	-	Negative output terminal
6	-	Negative output terminal
7	GND	Ground terminal to minimise High frequency emissions
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
	115/230	Input voltage selection switch

Installation

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

Derating Diagram



Mechanical Drawings mm (inches)

