

Switching Power Supply

Type SP D 24-120

DIN Rail mounting

CARLO GAVAZZI



- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- PFC available
- High efficiency
- Power ready output
- 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 data

Output nominal voltage	24Vdc*	Transient recovery time	300i s
Current	5A	Ripple and noise	50mVpp
Output voltage range	22.5 to 30Vdc	Efficiency typ.	87%
Line regulation	± 0.5%	Output Voltage accuracy	+1% (factory adjusted)
Load regulation		Temperature coefficient	± 0.3%/°C
Non parallel model	± 1%	Hold up Time Vi = 115Vac	25ms
Parallel model	± 5%	Hold up time Vi = 230Vac	30ms
DC indicator ON	21 – 22Vdc	Minimum load	5%
DC indicator LOW	20.5 – 22.5Vdc	Parallel Operation (only specific models)	3 units max.

* 12Vdc and 48Vdc available upon request

Specifications are subject to change without notice



Input data

Rated input voltage	115 – 230 selectable	Frequency range	47 – 63Hz
Voltage range		Inrush current	
AC in, 115 selected	93 – 132Vac	$V_i = 115\text{Vac}$	24A
AC in, 230 selected	186 – 264Vac	$V_i = 230\text{Vac}$	48A
DC in, only 230 selectable	210 – 370Vdc	P.F.C. (optional)	0.7

Controls and Protections

Input Fuse	T4A/250Vac internal	Power ready (24V only)	
Oversvoltage protection	125 – 145%	Threshold at start up	21.1 – 23.1
Output Short circuit	Current limit	Threshold after start up	19.0 – 20.6
		Contact rating at 60Vdc insulation	0.3A 500Vdc

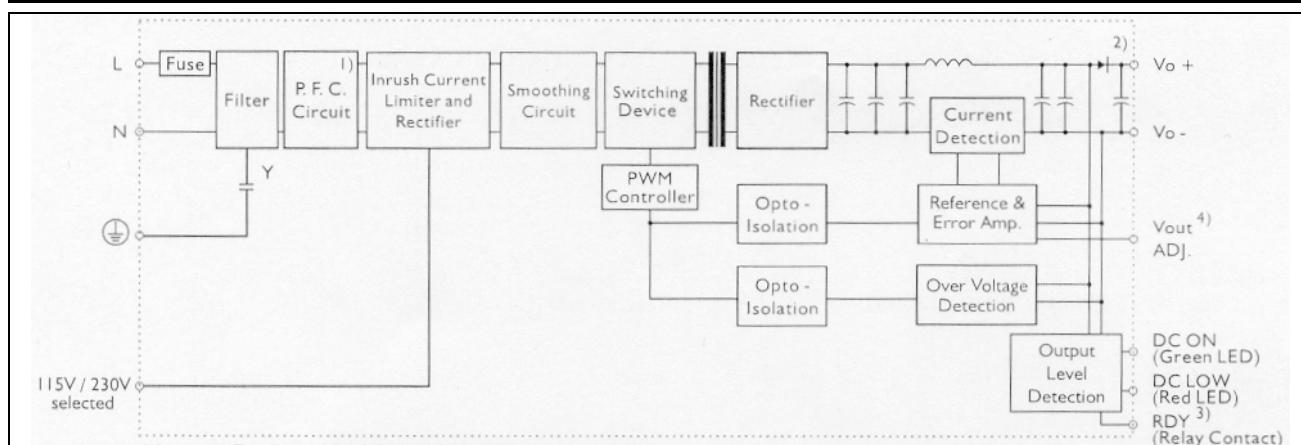
General data (@ nominal line, full load, 25°C)

Ambient temperature	-10°C to +50°C	Cooling	Free air convection
Case temperature V/I nom	+90°C	Switching frequency	80kHz
Derating (>50°C to +70°C)	1.5%/°C	MTBF (MIL-HDBK-217F)	200.000h
Ambient humidity	<95%RH	Case material	Metal
Storage	-25°C to 85°C	Dimensions L x W x D	125 x 63.5 x 126
		Weight	
		Without P.F.C.	640g
		With P.F.C.	860g

Approvals and EMC

Insulation voltage I / O	3.000Vac	CE	EN50081-1
Insulation resistance	100Mohm		EN50082-2
UL / cUL	UL508 listed, Class 2		EN61000-4-2 / 4-3/4-4/4-5/4-6/4-8
TUV	EN60950		

Block diagram





Pin assignement 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	-	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	Operation LED
	DC LO	LOW DC out LED
	Vout Adj.	Trimmer for fine output voltage adjustment
	115/230	Input voltage selection switch

Installation

VENTILATION / COOLING:

- Normal air convection
- 25mm of free space along all sides to allow good cooling

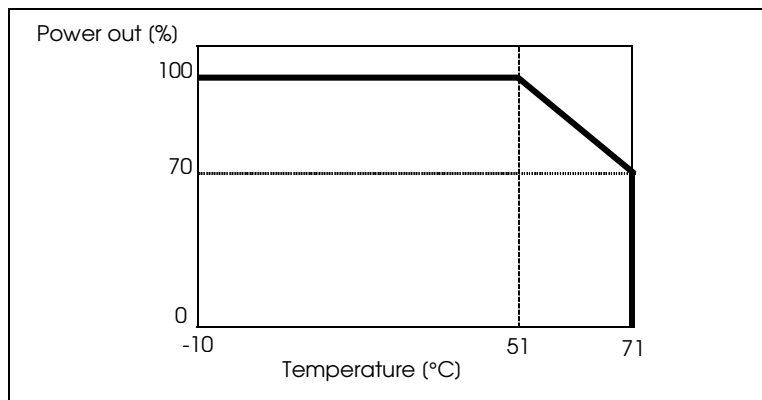
SCREW CONNECTIONS:

- 10-24AWG Flexible or solid cable. 8mm stripping recommended

PLUG IN CONNECTORS:

- 10-24AWG Flexible or solid cable. 7mm stripping recommended

Derating Diagram



Mechanical Drawings

