

Switching Power Supply

Type SPD 90W

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
- Model specific to meet UL 1310 class 2
- 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. This version is specifically developed to meet UL1310 class 2.

Ordering Key

SP D 24 90 1 B

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

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) Threshold at startup		DC LO LED (VDC) Threshold after startup		Typical Efficiency
				Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD2490	24	92	3.8	22.5	24.5	17.6	19.4	17.0	19.4	85%

Output data

Output voltage accuracy	-0 +1% max (factory adjusted)	Transient recovery time	300µs
Line regulation	± 0.5%	Ripple and noise	50mVpp
Load regulation		Hold up Time Vi = 115VAC	25ms
Non parallel model	± 1%	Hold up time Vi = 230VAC	30ms
Parallel model	± 5%	Minimum load	0%
Temp. coefficient	± 0.3% / °C	Parallel Operation	No

Input data

Rated input voltage	115/230 autoselect	Rated input current	2.0 / 0.8A
Voltage range		Frequency range	47- 63 Hz
AC in, 115	90 - 132VAC	Inrush current	
AC in, 230	186 - 264VAC	Vi = 115VAC	24A
DC in	210 - 370VDC	Vi = 230VAC	48A
		P.F.C.	0.7

Controls and Protections

Input Fuse	T3.15/250VAC internal ¹⁾	Power ready	
Overvoltage Protection	102 - 106%	Threshold at start up (contact closed)	17.6 - 19.4
Output Short Circuit	Current limited	Contact rating at 60VDC	0.3A
Rated Overload Protection	102 - 108%	Insulation	500VDC

¹⁾ Fuse not replaceable by user

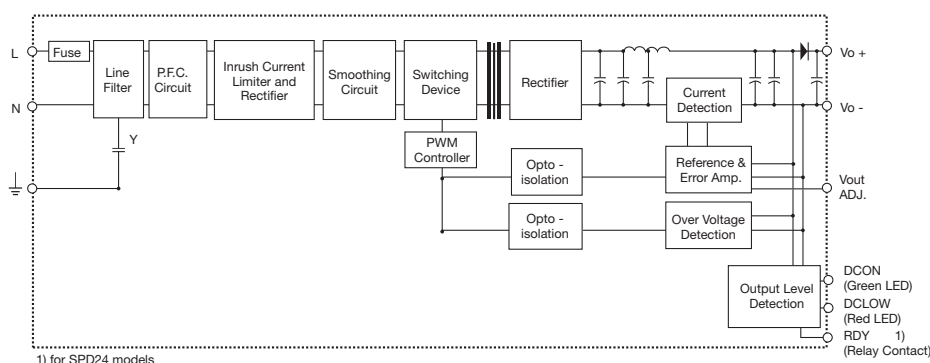
General data (@ nominal line, full load, 25°C)

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	Weight	920g
Cooling	Free air convection		

Approvals and EMC

Insulation voltage I / O	3.000VAC min	CE	EN50081-1
Insulation resistance	100MΩ min		EN55022 class B
UL / cUL	UL508 listed, UL60950-1 Recognized UL1310 class 2		EN61000-3-2
			EN61000-3-3
			EN61000-6-2
			EN61000-6-3
TUV	EN60950-1		EN55024

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	-	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

Derating Diagram

Power out (%)

Temperature °C / °F

Temperature (°C)	Temperature (°F)	Power out (%)
-25	-13	100
-20	-4	100
-15	5	100
-10	14	100
+55	131	100
+60	140	100
+70	158	75
+71	159.8	0

Mechanical Drawings mm (inches)

