

# 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

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

<sup>1)</sup> Fuse not replaceable by user

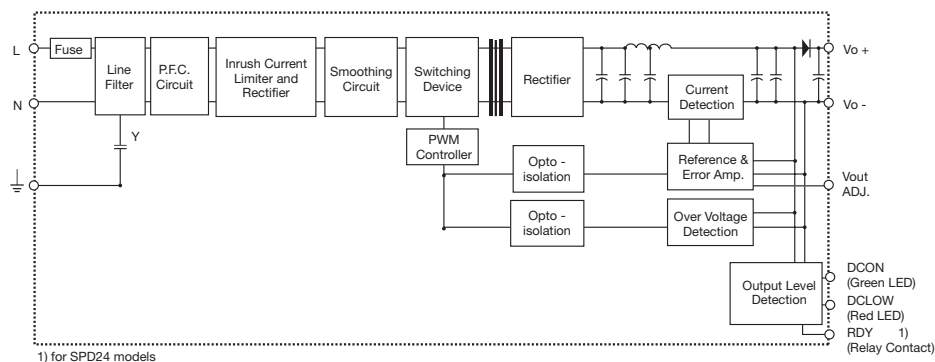
## General data (@ nominal line, full load, 25°C )

<b>Ambient temperature</b>	-25°C to 71°C	<b>Switching frequency</b>	80kHz
<b>Derating (&gt;60°C to +71°C)</b>	2.5% / °C	<b>MTBF (MIL-HDBK-217F)</b>	480.000h
<b>Ambient humidity</b>	20 to 95%RH	<b>Case material</b>	Metal (powder painted aluminium)
<b>Storage</b>	-25°C to +85°C	<b>Dimensions L x W x D</b>	125 x 63.5 x 126
<b>Protection degree</b>	IP20	<b>Weight</b>	920g
<b>Cooling</b>	Free air convection		

## Approvals and EMC

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

## Block diagrams



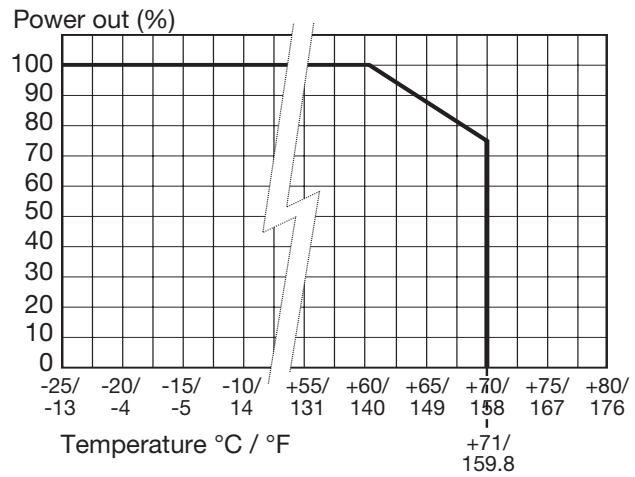
## Pin assignment and front controls

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	-	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

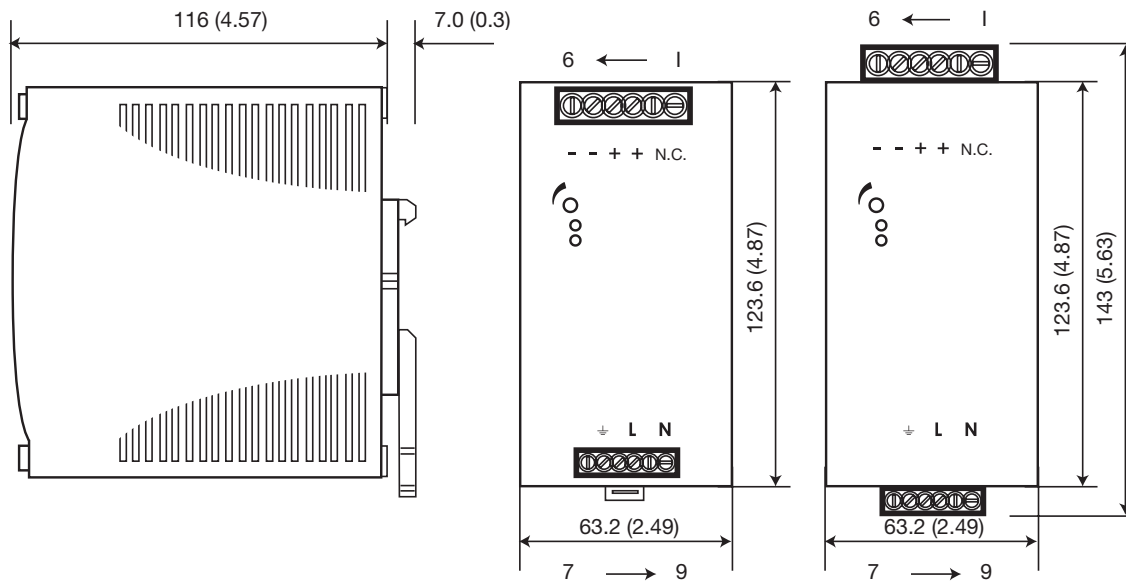
## Installation

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

## Derating Diagram



## Mechanical Drawings mm (inches)



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