

# Switching Power Supply

## Type SP D 24-60

### DIN Rail mounting

**CARLO GAVAZZI**



- Universal AC Input Full range
- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- High efficiency
- LED indicator for power on
- Power Ok output
- TUV approved and cULus Listed

### 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 24-60 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
Spring connectors	B

### Output data

Output nominal voltage	24Vdc*	Transient recovery time	300i s
Current	2.5A	Ripple and noise	50mVpp
Output voltage range	24 to 28Vdc	Efficiency typ.	86%
Line regulation	± 1%	Output Voltage accuracy	± 2%
Load regulation	± 2%	Temperature coefficient	± 0.02%/°C
		Hold up Time Vi = 115Vac	20ms
		Hold up time Vi = 230Vac	75ms

### Input data

Rated input voltage	100 - 240	Frequency range	47 - 63Hz
Voltage range		Inrush current	
AC	85 - 264Vac	Vi = 115Vac	21A
DC	120 - 370Vdc	Vi = 230Vac	42A

\* 5Vdc, 12Vdc and 48Vdc available upon request



## Controls and Protections

Overload	105 – 125%	Output Short Circuit	Hiccup mode
Input Fuse	T2A/250Vac internal	Power ready	20 – 24Vdc

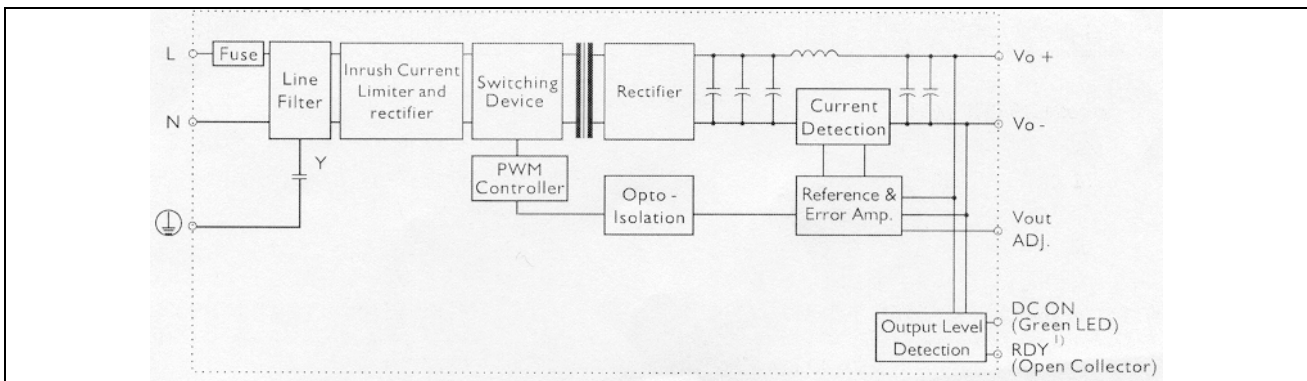
## General data (@ nominal line, full load, 25°C )

Ambient temperature	-10°C to 50°C	Cooling	Free air convection
Case temperature V/I nom	+85°C	Switching frequency	50kHz
Derating (>50°C to +71°C)	2%/°C	MTBF (MIL-HDBK-217F)	167.000h
Ambient humidity	<90%RH	Case material	Plastic
Storage	-25°C to 85°C	Dimensions L x W x D	90 x 40.5 x 115
		Weight	360g

## Approvals and EMC

Insulation voltage I / O	3.000Vac	CE EMI	EN50081-1 / EN55022 Class B
Insulation resistance	100Mohm		
UL / cUL	UL1950, UL508 listed, Class 2	CE EMS	EN50082-1 / EN55024
TUV	EN60950		

## Block diagram

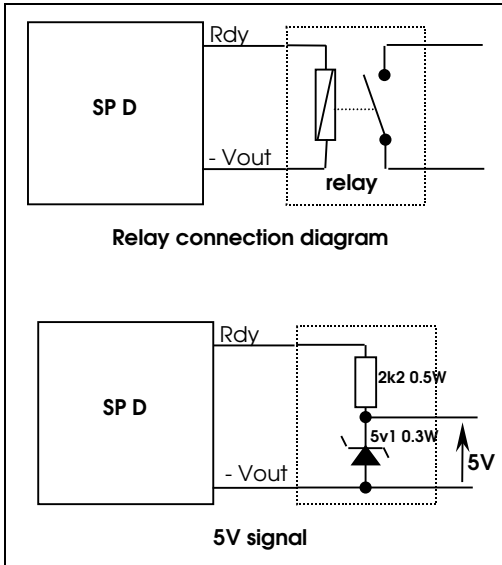


## Pin assignement and front controls

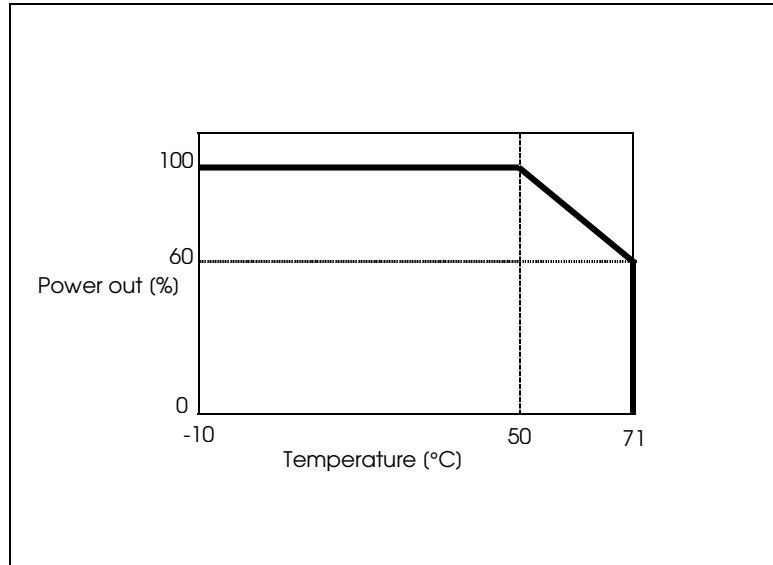
Pin No.	Designation	Description
1	RDY	DC OK, output for relay ( only on 24Vdc models)
2	+	Positive output terminal
3	+	Positive output terminal
4	-	Negative output terminal
5	-	Negative output terminal
6	GND	Ground terminal to minimise High frequency emissions
7	N	Neutral input ( no polarity with DC input )
8	L	Phase input ( no polarity with DC input )
	Vout ADJ	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED



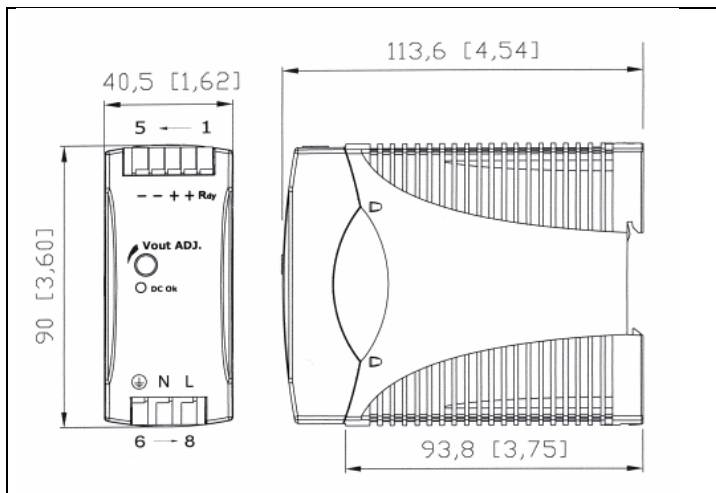
### Output Rdy Wiring diagram



### Derating Diagram



### Mechanical Drawings



### Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Connector size range	Solid: 0.2 – 2mm <sup>2</sup> (AWG24-14) (use copper conductors only)