

Switching Power Supply

Type SPD 30W

DIN rail mounting

CARLO GAVAZZI



- Universal AC input full range
- Installation on DIN rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- Class 2 output
- High efficiency
- LED indicator for DC power ON
- CE, 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.

Approvals



Ordering Key

SP D 12 30 1 B

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

Input type: 1= single phase

Optional Features

Description	Code
Spring 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 Min.	Typical Efficiency
				Min. VDC	Max. VDC		
SPD05	5	30	6.0	5	5.5	4	79%
SPD12	12	30	2.5	12	14	9.6	84%
SPD24	24	30	1.25	24	28	19.2	86%
SPD48	48	30	0.625	48	55	37	86%

Output data

Line regulation	± 0.5% max	Output Voltage accuracy	± 2%
Load regulation	± 0.5% max	Temperature coefficient	± 0.02%/°C
Minimum load	0	Hold up Time Vi = 115VAC	20ms min
Turn on time (full resistive load)	1.0s max	Hold up time Vi = 230VAC	30ms min
Transient recovery time	300µs	Voltage fall time (I _o nom)	150ms max
Ripple and noise (bw=20Mhz)	50mVpp	Voltage rise time at full resistive load	150ms max

Input data

Rated input voltage	100 - 240	Frequency range	47- 63 Hz
Voltage range		Inrush current	
AC	85 - 264VAC	Vi = 115VAC	20A
DC	90 - 375 VDC	Vi = 230VAC	40A

Controls and Protections

Overload	110 – 140%	Over voltage protection	VDC	
Input Fuse	T2A/250VAC internal ¹⁾		Min.	Max.
Output Short Circuit	Fold forward	SPD5	6	6.8
Power ready output (only SPD 24)		SPD12	15	16.5
On threshold	$\geq 20V \pm 1V$	SPD24	30	33
Off threshold	$\leq 19.2V \pm 1V$	SPD48	60	66

¹⁾ Fuse not replaceable by user

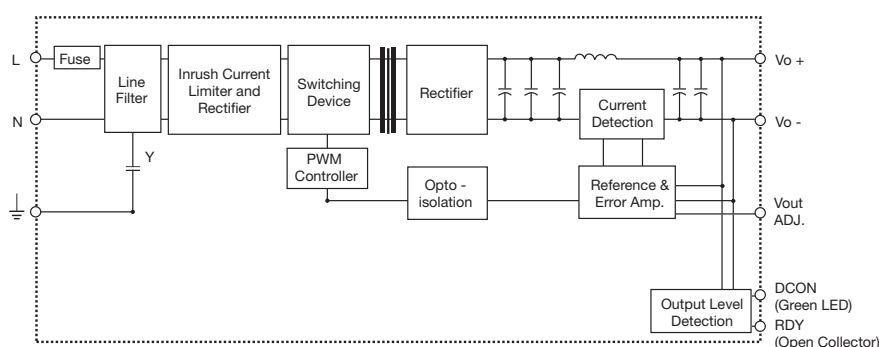
General data (@ nominal line, full load, 25°C)

Ambient temperature	-25°C to 71°C	Cooling	Free air convection
Derating (>60°C to +71°C)	2.5%/°C	Switching frequency	50kHz
Ambient humidity	20 ~ 90%RH	MTBF	565.000h
Storage	-25°C to +85°C	Case material	Plastic: PC, UL94-V0
Protection degree	IP20	Dimensions L x W x D	90 x 40.5 x 115
		Weight	290g

Norms and Standards

Insulation voltage I / O	3.000VAC	CE	EN61000-6-3 - EN55022 Class B
Insulation resistance	100MΩ		EN61000-3-2 - EN61000-3-3
UL / cUL	UL508 listed, UL60950-1, UL1310 Class 2 (5V without class 2) Recognized		EN61000-6-2 - EN550241
TUV	EN60950-1		EN61000-4-2 - EN61000-4-3
			EN61000-4-4 - EN61000-4-5
			EN61000-4-6 - EN61000-4-8
			EN61000-4-11

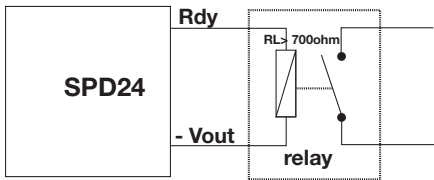
Block diagrams



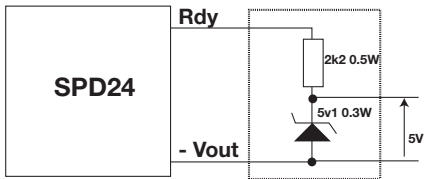
Pin assignment and front controls

Pin No.	Designation	Description
1	RDY	DC OK output for relay (only on SPD24)
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)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

Output Rdy Wiring diagram

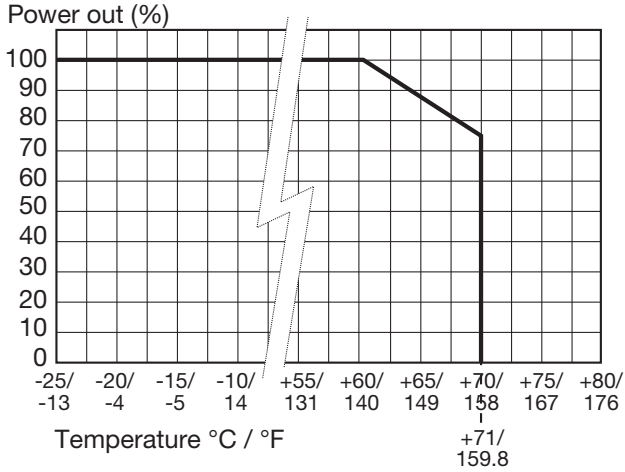


Relay connection diagram



5V signal

Derating Diagram



Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Connector size range	Solid: 0.2 – 2mm² (AWG24-14) (use copper conductors only)
Max. torque for terminal	
Input terminals	0.56Nm (5.0lb-in)
Output terminals	0.56Nm (5.0lb-in)

Mechanical Drawings mm (inches)

