

Switching Power Supply Type SPD 480W 3 phases DIN rail mounting

CARLO GAVAZZI



- Universal AC 3 phases input full range
- Can also be used as single phase 480VAC
- Installation on DIN rail 7.5 or 15mm
- PFC as standard
- High efficiency up to 91%
- Power ready output
- Parallel connection feature
- Compact dimensions
- UL, cUL listed and TUV/CE

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 24 480 3

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

Input type: 3 = three phase
(or single phase 400/500VAC³⁾)

Approvals



Output performances

Model	Rated output Voltage (VDC)	Output Power (W)	Output Current (A) ¹⁾	Voltage Trim Range ²⁾		DC OK Threshold at startup (VDC)		DC low LED Threshold after startup(VDC)		Typical Efficiency
				Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD24			20 (15)	22.5	28.5	17.6	19.4	17.6	19.4	90%
SPD48			10 (7.5)	47.0	56.0	37.0	43.0	37.0	43.0	91%

¹⁾ When powered with three phases input; with biphasic input value is in the brackets.

²⁾ When S/P switch is set to parallel, it is not possible to trim output voltage.

Output data

Line regulation	± 1%	Temperature Coefficient	+0.02% / °C
Load regulation		Hold up time $V_i = 230V_{ac}$	20ms
Non parallel mode	± 1%	Minimum load	0%
Parallel mode	± 5%	Parallel Operation (only with S/P switch on "P" position)	2 units max.
Output Voltage accuracy	from 0 to +1% (factory adjusted)		
Ripple and Noise	100mV		

Input data

Rated input voltage	400/500VAC	Frequency range	47- 63 Hz
Voltage range		Inrush current	15A
AC in	340 - 575VAC ³⁾ MAX *	P.F.C. $V_i = 500V_{AC}$, I_o nom.	0.7
DC in	480 - 820VDC MAX *		
Rated input current (380/500)	1.4A / 1.0A		

³⁾ Biphasic or triphase input (biphase can be: L1 L2, L2 L3 or L1 L3.
Note: when used as biphasic, the maximum output power is 75% of rated power.

*not suitable with 600 V applications



Controls and Protections

Input Fuse	3.15A/250VAC internal/phase ⁴	Power ready output (only SPD 24)	
Overvoltage Protection SPD24	30 – 33VDC	Threshold voltages	17.6 – 19.4VDC
SPD48	60 – 68VDC	Contact rating at 60Vdc insulation	0.3A 500VDC
Output Short Circuit		Overtemperature	100 - 110°C (shutdown with auto-restart when temperature is back to normal)
Continuous	Current limit		
Discontinuous	Delay 3s shut-down, after 30s Auto-restart		
Rated Overload Protection	115 - 135%		

⁴ Not replaceable by user.

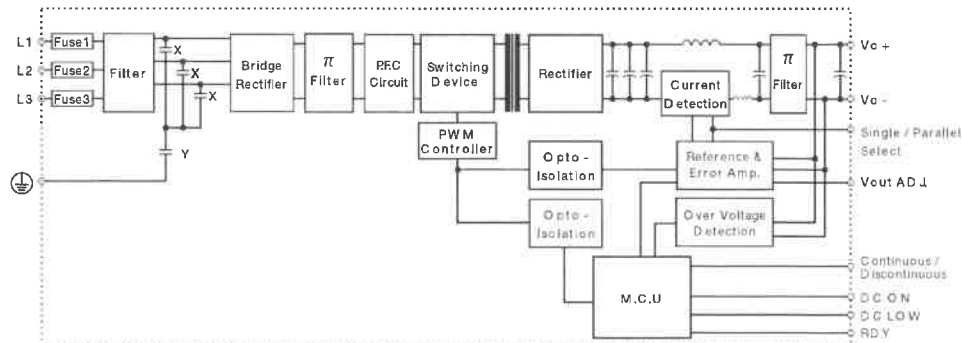
General data (@ nominal line, full load, 25°C)

Ambient temperature	-25°C to 71°C	Cooling	Free air convection
Derating (>61°C to +71°C)	2.5%/°C	MTBF (MIL-HDBK-217F)	n.a.
Ambient humidity	20 - 95%RH	Case material	Metal (powder painted aluminium)
Storage	-25°C to +95°C	Weight	1750g / 61.73oz
Dimensions L x W x D		Protection degree	IP20
Screw terminal type	124 x 150 x 118 mm 1.88 x 5.91 x 4.65 inches		

Approvals and EMC

Insulation voltage I/O	3.000VAC	CE	EN61000-6-3 EN55022 class B EN61000-3-2 EN61000-3-3 EN61000-6-2 EN55024
Insulation resistance I/O @ 500VDC	100MΩ		
UL / cUL	UL508 listed, UL60950-1, Recognized		
TUV	EN60950-1		

Block diagrams





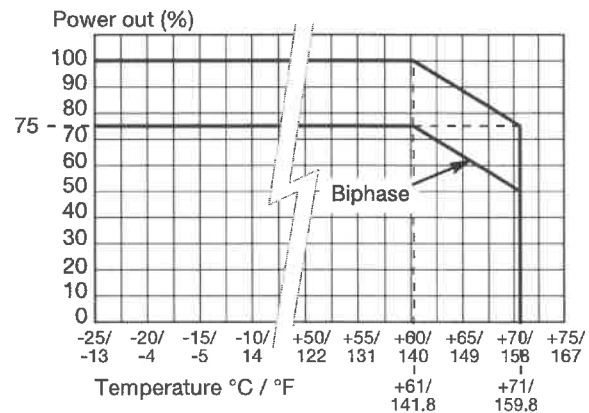
Pin assignment and front controls

Pin No.	Designation	Description
1	+	Positive output terminal
2	+	Positive output terminal
3	-	Negative output terminal
4	-	Negative output terminal
5	GND	Ground terminal to minimise High frequency emissions
6	L1	Input terminals
7	L2	Input terminals
8	L3	Input terminals
9	RDY	A normal open relay contact for DC ON level control
10	RDY	A normal open relay contact for DC ON level control
	DC ON	DC output ready LED
	DC LO	DC low indicator LED
	Vout ADJ.	Trimmer for fine output voltage adjustment
	S/P	Single / parallel selection switch
	C/D	Continuous / Discontinuous

Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Screw connections	10-24AWG flexible or solid cable 8mm stripping recommend
Max. torque for screws terminals	
Input terminals	1.008Nm (9.0lb-in)
Output terminals	0.616Nm (5.5lb-in)

Derating Diagram



Mechanical Drawings mm/inches

