Switching Power Supply
Type SPD 120W 3 phases
DIN rail mounting

- **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 88%**
- **Power ready output**
- **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 24 120 3

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

Input type: 3 = three phase
(or single phase 400/500VAC[3])

Approvals

Output performances

Model	Rated output Voltage (VDC)	Output Power (W)	Output Current (A)[1]	Voltage Trim Range		DC OK Thereshold at startup (VDC)		DC low LED Thereshold after startup(VDC)		Typical Efficiency
				Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD12	12	120	10 (7.5)	11.4	14.5	10.0	11.2	10.0	11.2	87%
SPD24	24	120	5 (3.75)	22.5	28.5	17.6	19.4	17.6	19.4	88%

[1] When powered with three phases input; with biphase input value is in the brackets.

Output data

Line regulation	± 1%	**Temperature Coefficient**	+0.02% / °C
Load regulation	± 1%	**Hold up time Vi = 230VAC**	20ms
Ouput Voltage accuracy	from 0 to +1% (factory adjusted)	**Minimum load**	0%
Ripple and Noise	100mV	**Parallel Operation**	NO

Input data

Rated input voltage	400/500VAC	**Frequency range**	47- 63 Hz
Voltage range		**Inrush current**	10A
AC in	340 - 575VAC[3]	**P.F.C. Vi= 500VAC, Io nom.**	0.6
DC in	480 - 820VDC		
Rated input current (380/500)	0.5A / 0.35A		

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

Controls and Protections

Input Fuse	1.0A/600VAC internal/phase[4]
Overvoltage Protection SPD12 SPD24	14.5 – 17.4VDC 30 – 33VDC
Output Short Circuit Continous	Current limit
Rated Overload Protection	115 - 135%

Power ready output (only SPD 24) Threshold voltages Contact rating at 60VDC insulation	17.6 - 19.4VDC 0.3A 500VDC
Overtemperature	100 - 110°C (shutdown with auto-restart when temperature is back to normal)

[4] Not replaceable by user.

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

Ambient temperature	-25°C to 71°C
Derating (>61°C to +71°C)	2.5%/°C
Ambient humidity	20 - 95%RH
Storage temperature	-25°C to +85°C
Dimensions L x W x D Screw terminal type	123.6 x 74.3 x 112 mm 4.87 x 2.93 x 4.41 inches

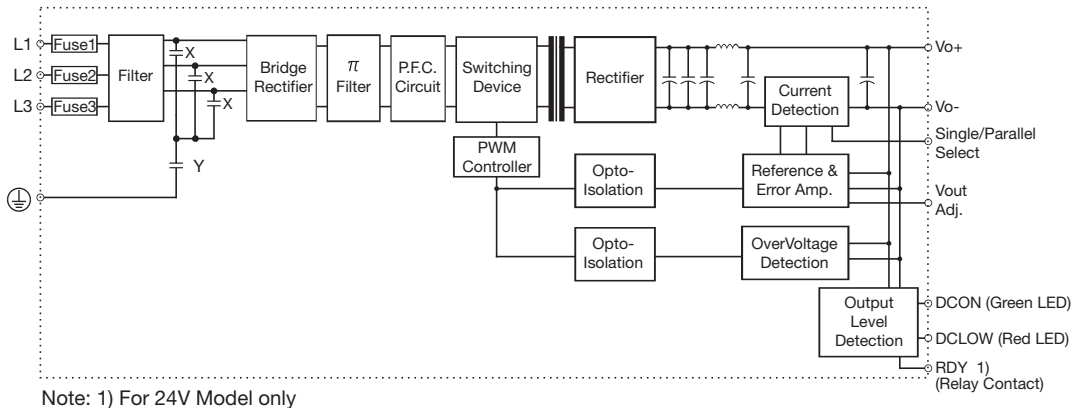
Cooling	Free air convection
MTBF (MIL-HDBK-217F)	n.a.
Case material	Metal (powder painted aluminium)
Weight	800g / 28.22oz
Protection degree	IP20

Approvals and EMC

Insulation voltage I/O	3.000VAC
Insulation resistance I/O @ 500VDC	100MΩ
UL / cUL	UL508 listed, UL60950-1, Recognized
TUV	EN60950-1

CE	EN61000-6-3 EN55022 class B EN61000-3-2 EN61000-3-3 EN61000-6-2 EN55024

Block diagrams



Note: 1) For 24V Model only

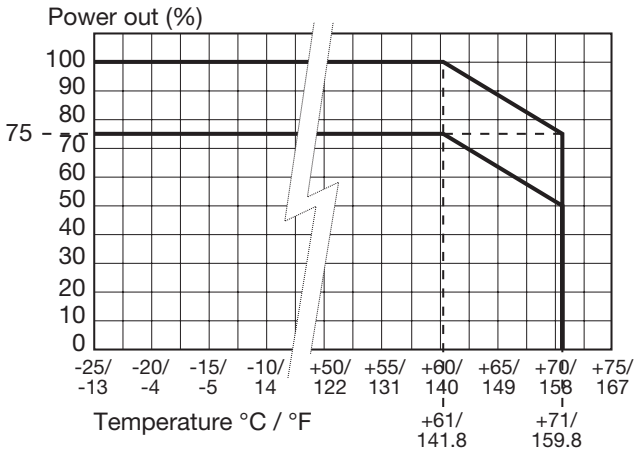
Pin assignement and front controls

Pin No.	Designation	Description
1	V+	Positive output terminal
2	V+	Positive output terminal
3	V-	Negative output terminal
4	V-	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

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