Switching Power Supply Type SPD 120W New DIN rail mounting

- **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**
- **Parallel versions standard**
- **Compact dimensions**
- **UL, cUL listed and TUV/CE approved**
- **Class I Div 2 Groups A, B, C, D 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. Then version features PFC and parallel function as standard.

Ordering Key

SP D 24 120 1 B N

- **Model**
- **Mounting (D = Din rail)**
- **Output voltage**
- **Output power**
- **Input type**
- **Optional features**
- **New Type**

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) Thereshold at start-tup		DC LO LED (VDC) Thereshold after startup		Typical Efficiency
				Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD12120	12	120	10	11.4	14.5	10	11.2	10	11.2	84%
SPD24120	24	120	5	22.5	28.5	17.6	19.4	17.6	19.4	86%
SPD48120	48	120	2.5	45.0	55.0	37.0	43.0	37.0	43.0	87%

Output Data

Output voltage accuracy	- 0 +1% max (factory adjusted)
Line regulation	± 0.5%
Load regulation Non parallel mode Parallel mode	 ± 1% ± 5%
Temp. coefficient	± 0.03% / °C
Transient recovery time	2ms

Ripple and noise Vi nom, Io nom BW = 20Mhz	50mVpp
Hold up Time Vi = 115VAC **Hold up time Vi = 230VAC**	25ms 30ms
Minimum load	0%
Parallel Operation	3 units max.

Input Data

Rated input voltage	115/230VAC autoselect
Voltage range	
AC in, 115	90 - 132VAC
AC in, 230	180 - 264VAC
DC in	210 - 370VDC
Rated input current	2.2 / 0.83A
Input current	Vi 90 / 180 VAC
2.8 / 1.4A max	

Frequency range	47- 63 Hz
Inrush current	
Vi= 115VAC	24A
Vi= 230VAC	48A
P.F.C.	
Passive 230VAC Io nom	0.7
Leakage current	
Input-Output	0.25mA Max.
Input-Fg	3.5mA Max.

Controls and Protections

Input Fuse	T3.15/250VAC internal[1)]
Overvoltage Protection	
Vi nom 0.8 Ionom	30 - 33VDC
Output Short Circuit	Current limited

Rated Overload Protection	110 - 145%
Power ready (only SPD 24)	
Threshold at start up (contact closed)	17.6 - 19.4VDC
Contact rating at 60VDC	0.3A
Insulation	500VDC

[1)] Fuse not replaceable by user

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

Ambient temperature	-35°C to 71°C
Derating (>60°C to +71°C)	2.5% / °C
Ambient humidity	20 to 95%RH
Storage temperature	-40°C to +85°C
Protection degree	IP20
Cooling	Free air convection
Switching frequency	55kHz
MTBF (MIL-HDBK-217F)	450.000h

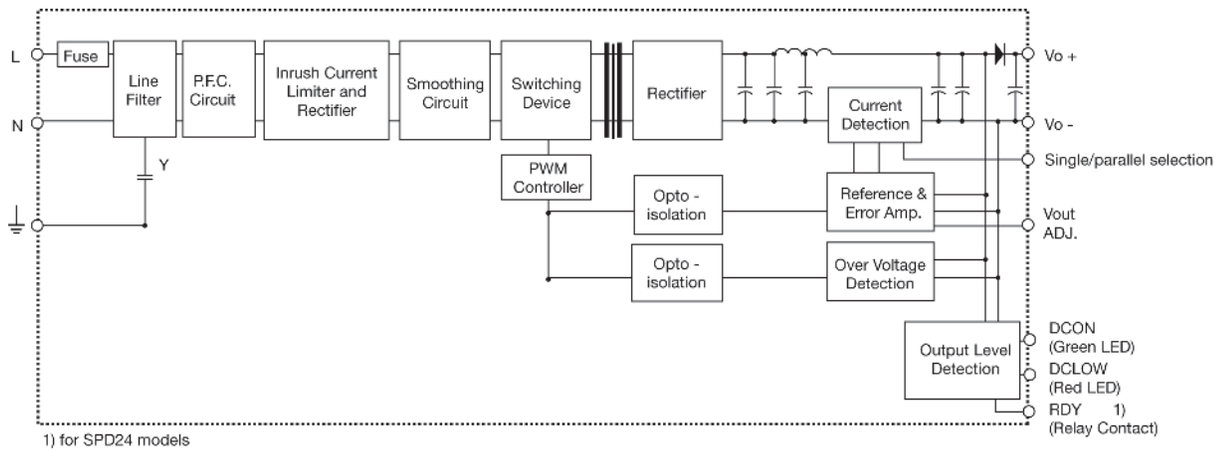
Case material	Metal (powder painted aluminium)
Dimensions L x W x D	
Screw terminal type	124.5 x 64 x 126
Detachable connector type	143.5 x 64 x 126
Weight	920g

Approvals and EMC

Insulation voltage I / O	3.000VAC min
Insulation resistance	100MΩ min
UL / cUL	UL508 listed, UL60950-1 Recognized
TUV	EN60950-1
ISA	12.12.01 Class I Div 2 Groups A, B, C, D

CE	EN50081-1 EN55022 class B EN61000-3-2 EN61000-3-3 EN61000-6-2 EN61000-6-3 EN55024

Block Diagrams



1) for SPD24 models

Pin Assignement and Front Controls

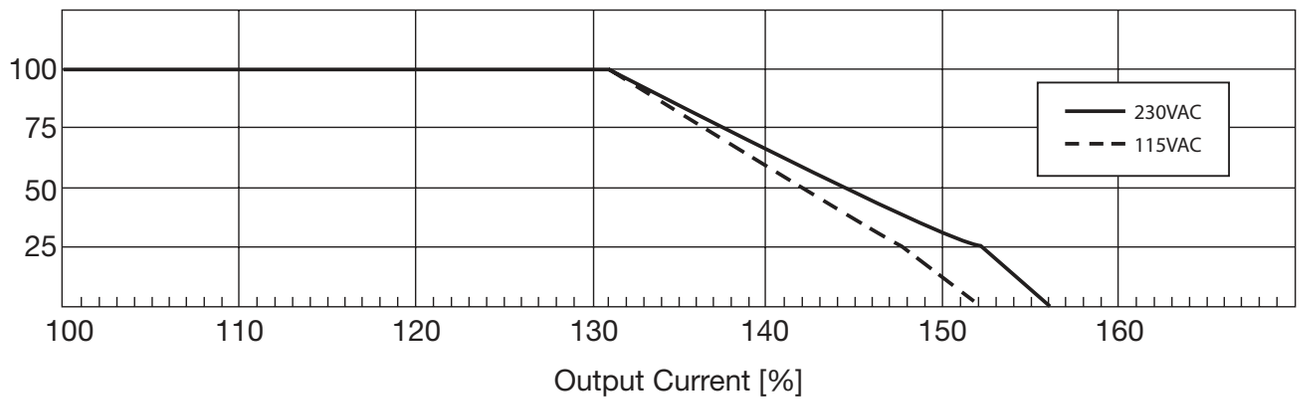
Pin No.	Designation	Description
1	RDY	DC OK, relay normally open contact
2	RDY	DC OK, relay normally open contact
3	+	Positive output terminal
4	+	Positive output terminal
5	-	Negative output terminal
6	-	Ground terminal to minimise High frequency emissions
7	GND	Negative output terminal
8	L	Phase input (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
	S/P	Single/parallel selection switch

Installation

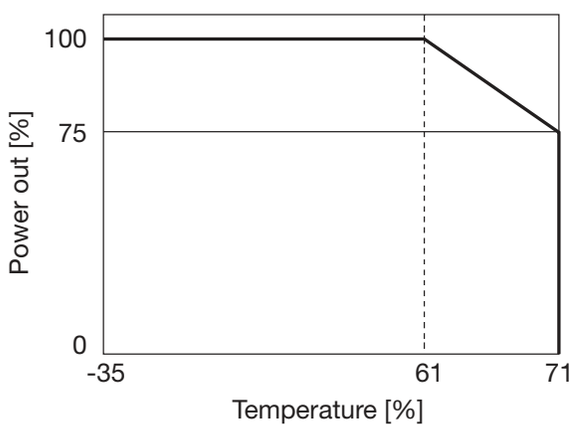
Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Screw terminals	10-24AWG flexible or solid cable 8mm stripping recommend
Max. torque for screws terminals	
Input terminals	1.008Nm (9.0lb-in)
Output terminals	0.616Nm (5.5lb-in)

Plug-in connectors	10-24AWG flexible or solid cable 7mm stripping recommend
Max. torque for plug-in terminals	
Input terminals	0.784Nm (7.0lb-in)
Output terminals	0.784Nm (7.0lb-in)

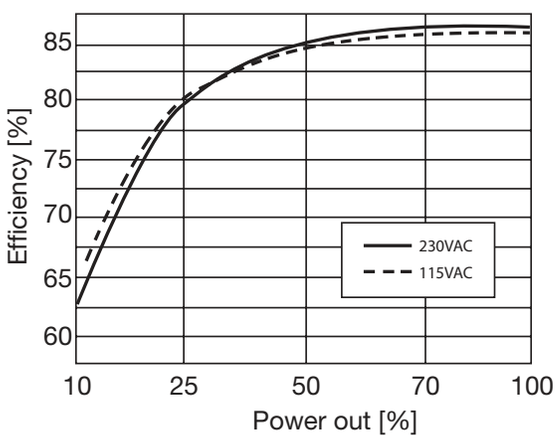
Typ. Current Limited Curve



Derating Diagram



Typ. Efficiency Curve



Mechanical Drawings mm (inches)