

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) Threshold at start-up		DC LO LED (VDC) Threshold 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)	Ripple and noise	50mVpp
Line regulation	± 0.5%	Vi nom, Io nom BW = 20Mhz	25ms
Load regulation	± 1%	Hold up Time Vi = 115VAC	30ms
Non parallel mode	± 5%	Hold up time Vi = 230VAC	0%
Parallel mode	± 5%	Minimum load	3 units max.
Temp. coefficient	± 0.03% / °C	Parallel Operation	
Transient recovery time	2ms		



Input Data

Rated input voltage	115/230VAC autoselect	Frequency range	47- 63 Hz
Voltage range AC in, 115 AC in, 230 DC in	90 - 132VAC 180 - 264VAC 210 - 370VDC	Inrush current Vi= 115VAC Vi= 230VAC	24A 48A
Rated input current	2.2 / 0.83A	P.F.C. Passive 230VAC lo nom	0.7
Input current 2.8 / 1.4A max	Vi 90 / 180 VAC	Leakage current Input-Output Input-Fg	0.25mA Max. 3.5mA Max.

Controls and Protections

Input Fuse	T3.15/250VAC internal ¹⁾	Rated Overload Protection Power ready (only SPD 24)	110 - 145%
Overvoltage Protection Vi nom 0.8 Ionom	30 - 33VDC	Threshold at start up (contact closed)	17.6 - 19.4VDC
Output Short Circuit	Current limited	Contact rating at 60VDC Insulation	0.3A 500VDC

¹⁾ Fuse not replaceable by user

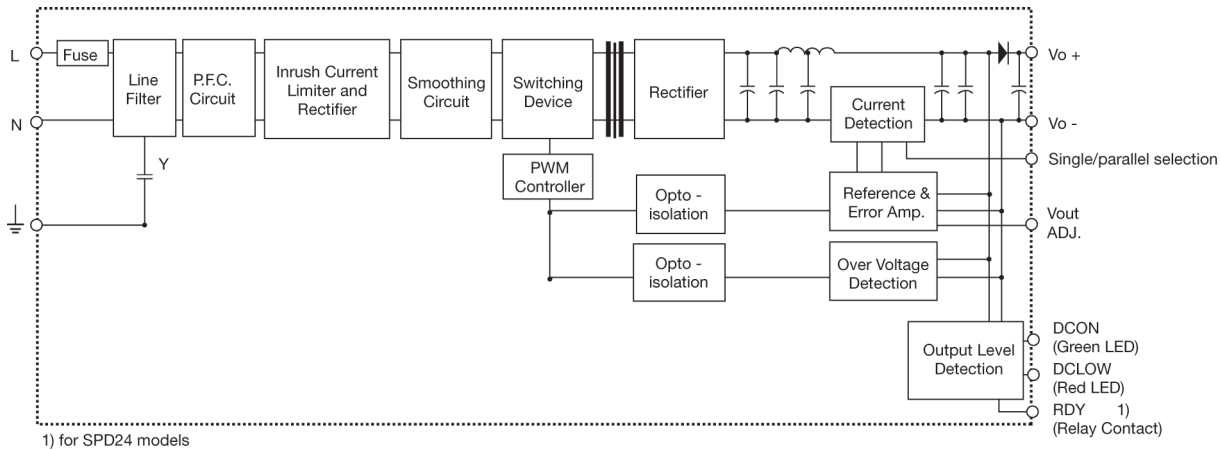
General Data (@ nominal line, full load, 25°C)

Ambient temperature	-35°C to 71°C	Case material	Metal (powder painted aluminium)
Derating (>60°C to +71°C)	2.5% / °C	Dimensions L x W x D Screw terminal type Detachable connector type	124.5 x 64 x 126 143.5 x 64 x 126
Ambient humidity	20 to 95%RH	Weight	920g
Storage temperature	-40°C to +85°C		
Protection degree	IP20		
Cooling	Free air convection		
Switching frequency	55kHz		
MTBF (MIL-HDBK-217F)	450.000h		

Approvals and EMC

Insulation voltage I / O	3.000VAC min	CE	EN50081-1
Insulation resistance	100MΩ min		EN55022 class B
UL / cUL	UL508 listed, UL60950-1 Recognized		EN61000-3-2
TUV	EN60950-1		EN61000-3-3
ISA	12.12.01 Class I Div 2 Groups A, B, C, D		EN61000-6-2
			EN61000-6-3
			EN55024

Block Diagrams



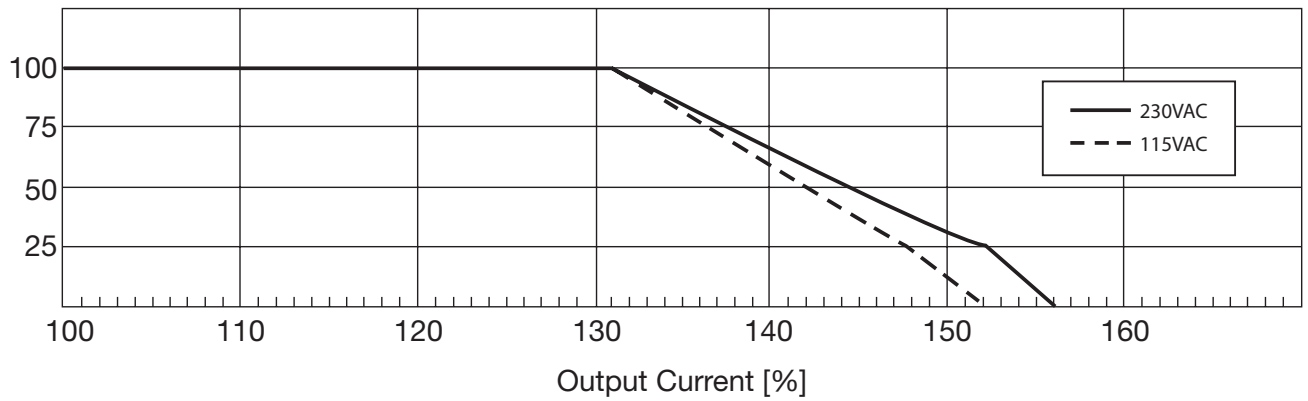
Pin Assignment and Front Controls

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

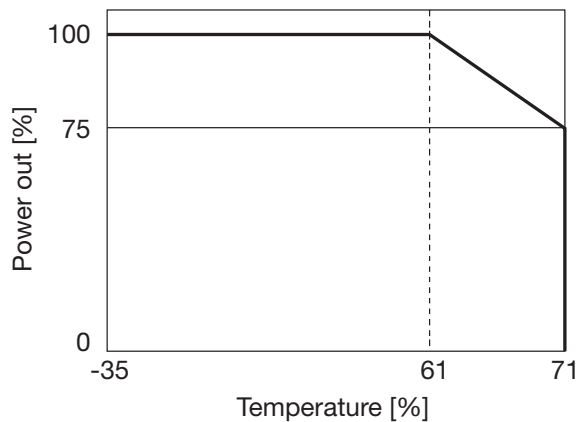
Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended	Plug-in connectors	10-24AWG flexible or solid cable 7mm stripping recommend
Screw terminals	10-24AWG flexible or solid cable 8mm stripping recommend	Max. torque for plug-in terminals	Input terminals Output terminals
Max. torque for screws terminals	Input terminals Output terminals		0.784Nm (7.0lb-in) 0.784Nm (7.0lb-in)

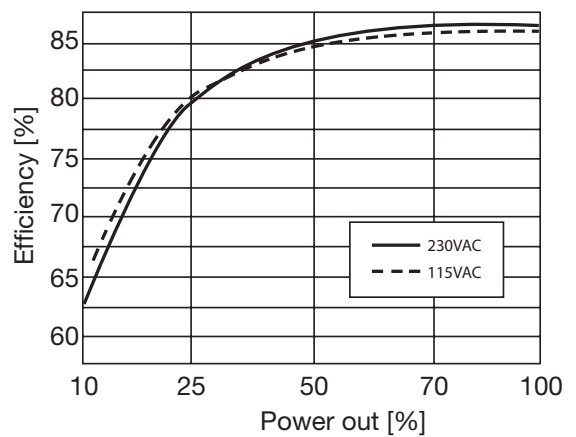
Typ. Current Limited Curve



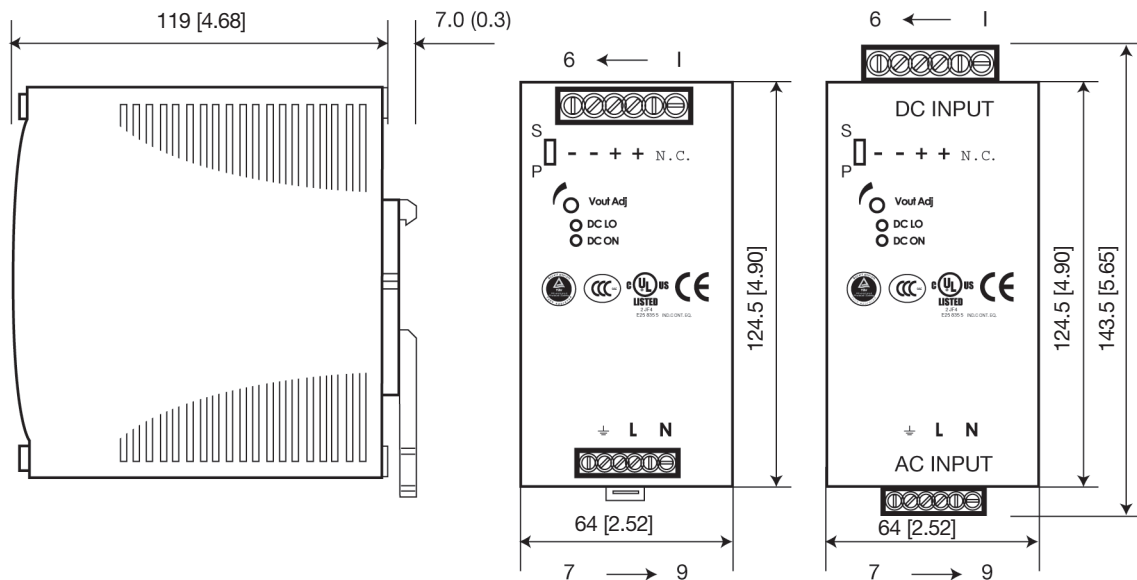
Derating Diagram



Typ. Efficiency Curve



Mechanical Drawings mm (inches)



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