

# Switching Power Supply Type SPD 120W New DIN rail mounting

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- 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

## 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 startup		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)	Transient recovery time	300µs
Line regulation	± 0.5%	Ripple and noise	50mVpp
Load regulation		Hold up Time Vi = 115VAC	25ms
Non parallel model	± 1%	Hold up time Vi = 230VAC	30ms
Parallel model	± 5%	Minimum load	0%
Temp. coefficient	± 0.3% / °C	Parallel Operation	3 units max.

## Input data

<b>Rated input voltage</b>	115/230 autoselect	<b>Frequency range</b>	47- 63 Hz
<b>Voltage range</b>		<b>Inrush current</b>	
AC in, 115	90 - 132VAC	Vi= 115VAC	24A
AC in, 230	186 - 264VAC	Vi= 230VAC	48A
DC in	210 - 370VDC	<b>P.F.C.</b>	0.7
<b>Rated input current</b>	2.8 / 1.4A		

## Controls and Protections

<b>Input Fuse</b>	T3.15/250VAC internal <sup>1)</sup>	<b>Power ready</b> (only SPD 24)	
<b>Overvoltage Protection</b>	125 – 145%	Threshold at start up (contact closed)	17.6 - 19.4
<b>Output Short Circuit</b>	Current limited	Contact rating at 60VDC	0.3A
<b>Rated Overload Protection</b>	110 - 145%	Insulation	500VDC

<sup>1)</sup> Fuse not replaceable by user

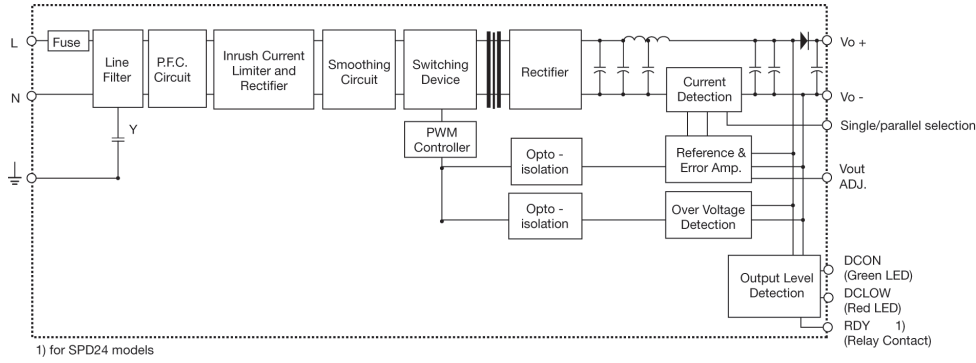
## General data (@ nominal line, full load, 25°C )

<b>Ambient temperature</b>	-35°C to 71°C	<b>Switching frequency</b>	80kHz
<b>Derating (&gt;60°C to +71°C)</b>	2.5% / °C	<b>MTBF (MIL-HDBK-217F)</b>	480.000h
<b>Ambient humidity</b>	20 to 95%RH	<b>Case material</b>	Metal (powder painted aluminium)
<b>Storage</b>	-35°C to +85°C	<b>Dimensions L x W x D</b>	125 x 63.5 x 126
<b>Protection degree</b>	IP20	<b>Weight</b>	920g
<b>Cooling</b>	Free air convection		

## Approvals and EMC

<b>Insulation voltage I / O</b>	3.000VAC min	<b>CE</b>	EN50081-1
<b>Insulation resistance</b>	100MΩ min		EN55022 class B
<b>UL / cUL</b>	UL508 listed, UL60950-1 Recognized		EN61000-3-2
<b>TUV</b>	EN60950-1		EN61000-3-3
			EN61000-6-2
			EN61000-6-3
			EN55024

## Block diagrams



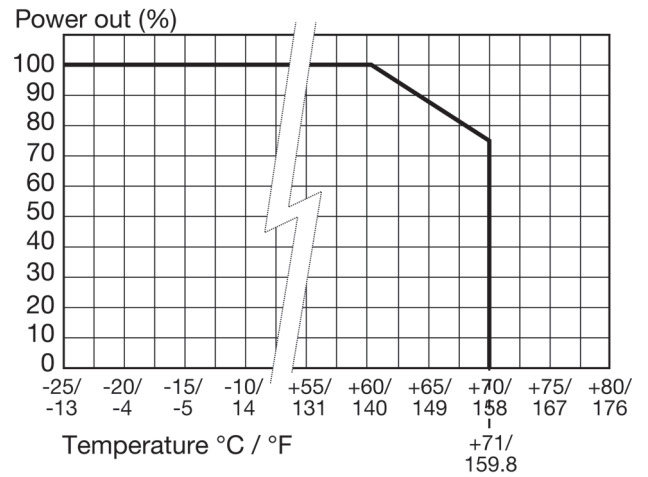
## Pin assignement and front controls

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

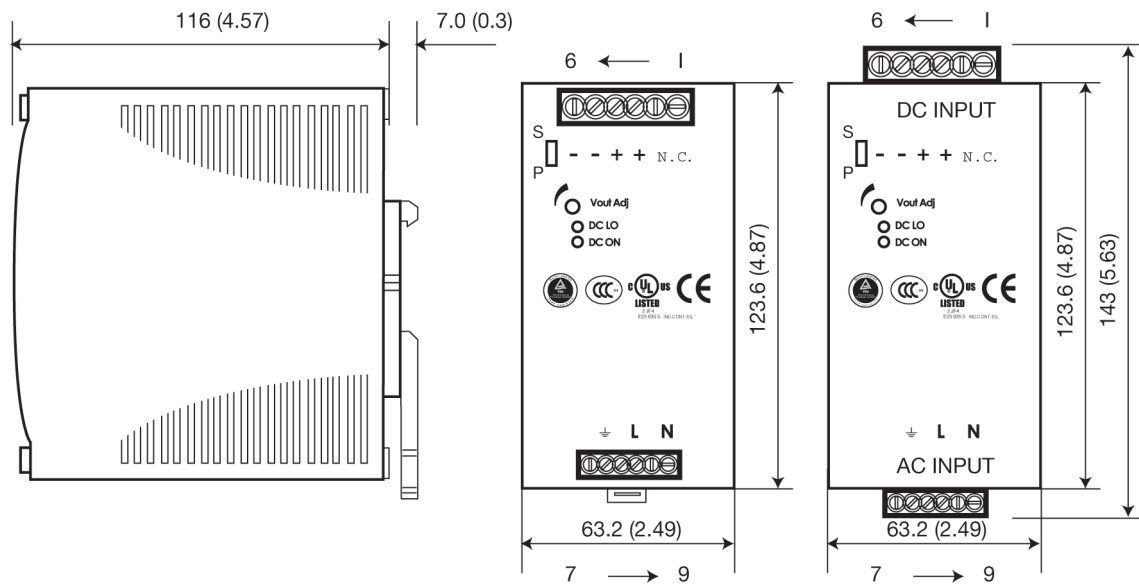
## Installation

<b>Ventilation and cooling</b>	Normal convection All sides 25mm free space for cooling is recommended
<b>Screw terminals</b>	10-24AWG flexible or solid cable 8mm stripping recommend
<b>Max. torque for screws terminals</b>	
Input terminals	1.008Nm (9.0lb-in)
Output terminals	0.616Nm (5.5lb-in)
<b>Plug-in connectors</b>	10-24AWG flexible or solid cable 7mm stripping recommend
<b>Max. torque for plug-in terminals</b>	
Input terminals	0.784Nm (7.0lb-in)
Output terminals	0.784Nm (7.0lb-in)

## Derating Diagram



## Mechanical Drawings mm (inches)



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