

# Switching Power Supply Type SPD 120W DIN rail mounting

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- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- PFC available
- High efficiency
- Power ready output
- LED indicator for DC power ON
- LED indicator for DC low
- Parallel versions available
- 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.

## Ordering Key

**SP D 24 120 1 BFP**

Model \_\_\_\_\_  
Mounting ( D = Din rail ) \_\_\_\_\_  
Output voltage \_\_\_\_\_  
Output power \_\_\_\_\_  
Input Type \_\_\_\_\_  
Optional features \_\_\_\_\_

Input type: 1= single phase

## Approvals



## Optional Features

Description	code
Plug-in connectors	Bxx
With P.F.C.	xFx
With Parallel function	xxP

## Output performances

Model	Rated output Voltage (VDC)	Output Current (A)	Voltage Trim Range <sup>1)</sup>		DC on LED (VDC)		DC low LED (VDC)		Typical Efficiency
			Min. VDC	Max. VDC	Min.	Max.	Min.	Max.	
SPD12	12	10	11.4	14.5	10	11	10	11.2	84%
SPD24	24	5	22.5	30	21	22	20.5	22.5	86%
SPD48	48	2.5	45	55	42	44	41	45	87%

## Output data

Output voltage accuracy	± 1% max	Output Voltage accuracy	+1% (factory adjusted)
Line regulation	± 0.5%	Temperature coefficient	± 0.3%/°C
Load regulation		Hold up Time Vi = 115Vac	25ms
Non parallel model	± 1%	Hold up time Vi = 230Vac	30ms
Parallel model	± 5%	Minimum load	5%
Temp. coefficient	± 0.3% / °C	Parallel Operation (only specific models)	3 units max.
Transient recovery time	300µs		
Ripple and noise	50mVpp		

<sup>1)</sup>N.A. on parallel model. Output voltage is fixed in house, cannot be trimmed by user.

Specifications are subject to change without notice

## Input data

<b>Rated input voltage</b>	115/230 selectable	<b>Frequency range</b>	47- 63 Hz
<b>Voltage range</b>		<b>Inrush current</b>	
AC in, 115 selected	93 - 132 Vac	Vi= 115Vac	24A
AC in, 230 selected	186 - 264 Vac	Vi= 230Vac	48A
DC in, <b>only 230 selected</b>	210 - 370 Vdc	<b>P.F.C. (optional)</b>	0.7

## Controls and Protections

<b>Input Fuse</b>	T4A/250Vac internal*	<b>Power ready (only SPD 24)</b>	
<b>Overvoltage Protection</b>	125 – 145%	Threshold at start up (contact closed)	21.1-23.1
<b>Output Short Circuit</b>	Current limited	Threshold after start up (contact open)	20.6-19.0
<b>Rated Overload Protection</b>	105-125%	Contact rating at 60Vdc insulation	0.3A 500Vdc

\* Not replaceable by user.

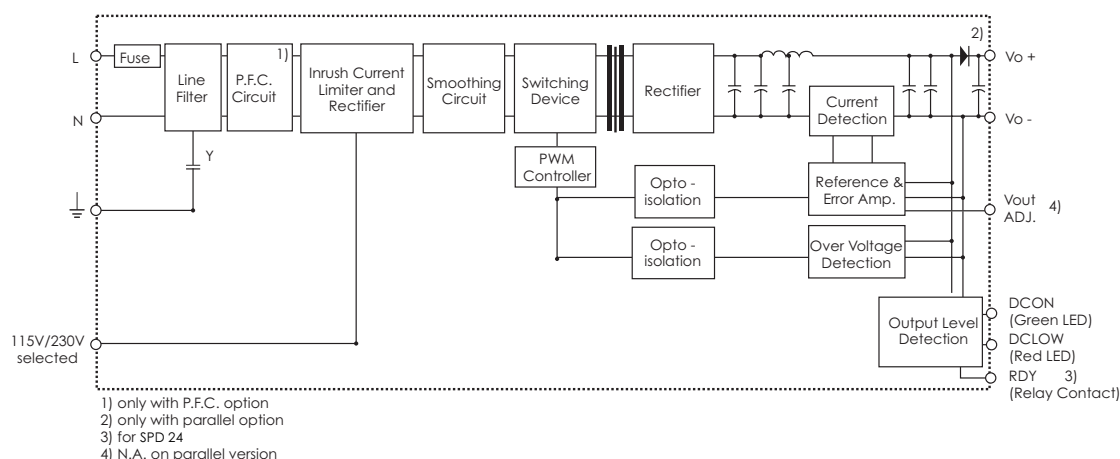
## General data (@ nominal line, full load, 25°C )

<b>Ambient temperature</b>	-10°C to 71°C	<b>Cooling</b>	Free air convection
<b>Derating (&gt;60°C to +71°C)</b>	2.5% / °C	<b>Switching frequency</b>	80kHz
<b>Ambient humidity</b>	20 to 95%RH	<b>MTBF (MIL-HDBK-217F)</b>	480.000h
<b>Storage</b>	-25°C to +85°C	<b>Case material</b>	Metal (powder painted aluminium)
<b>Protection degree</b>	IP20	<b>Dimensions L x W x D</b>	125 x 63.5 x 126
		Without P.F.C.	640g
		With P.F.C.	860g

## Approvals and EMC

<b>Insulation voltage I / O</b>	3.000Vac min	<b>CE</b>	EN50081-1
<b>Insulation resistance</b>	100Mohm min		EN55022 class B
<b>UL / cUL</b>	UL508 listed, UL60950-1, Recognised		EN61000-3-2
<b>TUV</b>	EN60950		EN61000-3-3
			EN50082-1
			EN55024

## Block diagrams



## Pin assignement and front controls

Pin No.	Designation	Description
1	RDY (only SPD 24)	DC OK, relay normally open contact
2	RDY (only SPD 24)	DC OK, relay normally open contact
3	+	Positive output terminal
4	+	Positive output terminal
5	-	Negative output terminal
6	-	Negative output terminal
7	GND	Ground terminal to minimise High frequency emissions
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
	115/230	Input voltage selection switch

## Installation

### VENTILATION / COOLING:

- Normal air convection
- 25mm of free space along all sides to allow good cooling

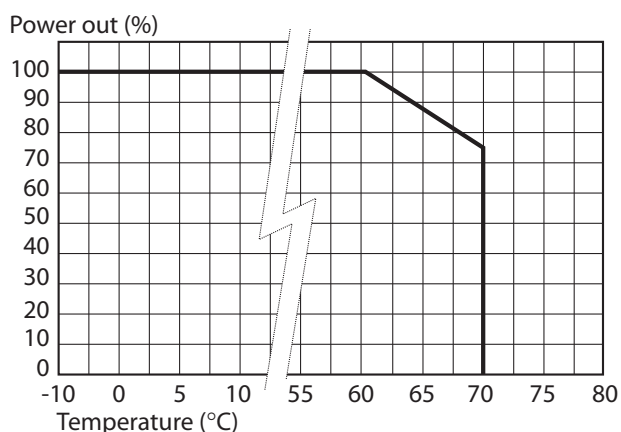
### SCREW CONNECTIONS:

- 10-24AWG Flexible or solid cable. 8mm stripping recommended

### PLUG IN CONNECTORS:

- 10-24AWG Flexible or solid cable. 7mm stripping recommended

## Derating Diagram



## Mechanical Drawings

