Switching Power Supply
Type SPD 120W
DIN rail mounting

- **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[1)] Min. VDC	Voltage Trim Range[1)] Max. VDC	DC on LED (VDC) Min.	DC on LED (VDC) Max.	DC low LED (VDC) Min.	DC low LED (VDC) Max.	Typical Efficiency
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
Line regulation	± 0.5%
Load regulation Non parallel model Parallel model	 ± 1% ± 5%
Temp. coefficient	± 0.3% / °C
Transient recovery time	300µs
Ripple and noise	50mVpp

Ouput Voltage accuracy	+1% (factory adjusted)
Temperature coefficient	± 0.3%/°C
Hold up Time Vi = 115Vac **Hold up time Vi = 230Vac**	25ms 30ms
Minimum load	5%
Parallel Operation (only specific models)	3 units max.

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

Input data

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

Controls and Protections

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

* Not replaceable by user.

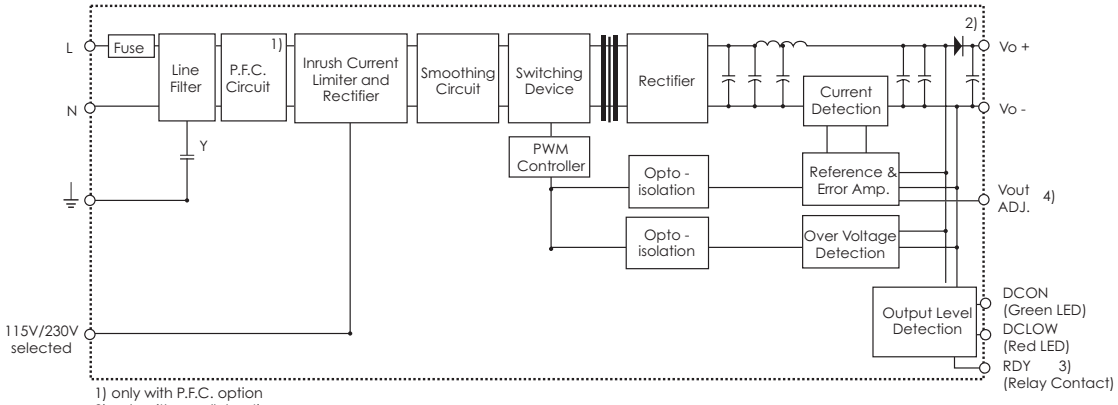
General data (@ nominal line, full load, 25°C)

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

Approvals and EMC

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

Block diagrams



1) only with P.F.C. option
2) only with parallel option
3) for SPD 24
4) N.A. on parallel version

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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

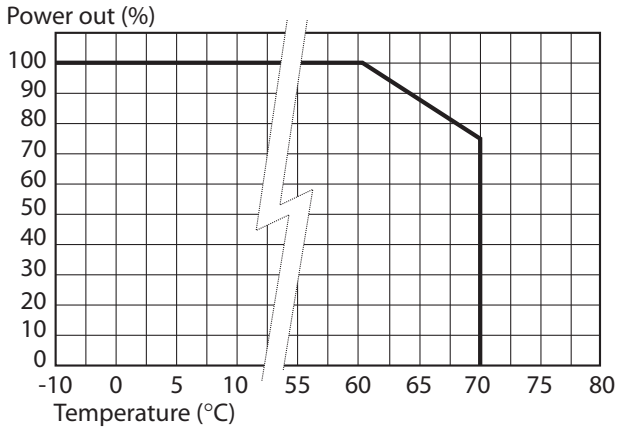
Installation

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