Switching Power Supply
Type SPD 90W
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**
- **Model specific to meet UL 1310 class 2**
- **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.
This version is specifically developed to meet UL1310 class 2.

Ordering Key

SP D 24 90 1 B

Model
Mounting (D = Din rail)
Output voltage
Output power
Input type
Optional features

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.	
SPD2490	24	92	3.8	22.5	24.5	17.6	19.4	17.0	19.4	85%

Output data

Output voltage accuracy	-0 +1% max (factory adjusted)
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
Hold up Time Vi = 115VAC **Hold up time Vi = 230VAC**	25ms 30ms
Minimum load	0%
Parallel Operation	No

Input data

Rated input voltage	115/230 autoselect
Voltage range AC in, 115 AC in, 230 DC in	 90 - 132VAC 186 - 264VAC 210 - 370VDC
Rated input current	2.0 / 0.8A
Frequency range	47- 63 Hz
Inrush current Vi= 115VAC Vi= 230VAC	 24A 48A
P.F.C.	0.7

Controls and Protections

Input Fuse	T3.15/250VAC internal[1)]
Overvoltage Protection	102 - 106%
Output Short Circuit	Current limited
Rated Overload Protection	102 - 108%

Power ready	
Threshold at start up (contact closed)	17.6 - 19.4
Contact rating at 60VDC	0.3A
Insulation	500VDC

[1)] Fuse not replaceable by user

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

Ambient temperature	-25°C to 71°C
Derating (>60°C to +71°C)	2.5% / °C
Ambient humidity	20 to 95%RH
Storage	-25°C to +85°C
Protection degree	IP20
Cooling	Free air convection

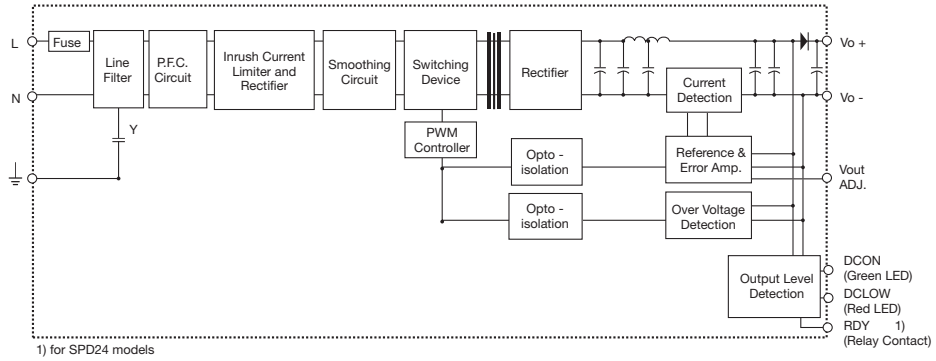
Switching frequency	80kHz
MTBF (MIL-HDBK-217F)	480.000h
Case material	Metal (powder painted aluminium)
Dimensions L x W x D	125 x 63.5 x 126
Weight	920g

Approvals and EMC

Insulation voltage I / O	3.000VAC min
Insulation resistance	100MΩ min
UL / cUL	UL508 listed, UL60950-1 Recognized UL1310 class 2
TUV	EN60950-1

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

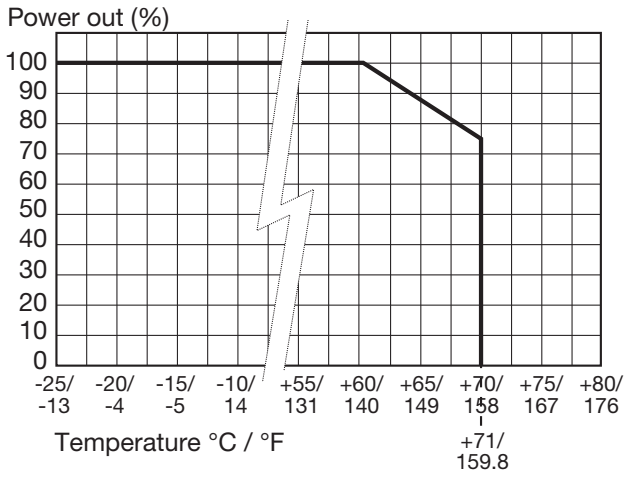
Pin assignement and front controls

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	-	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

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)

Derating Diagram



Mechanical Drawings mm (inches)