

# Switching Power Supply Type SPD 60W DIN rail mounting

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- Universal AC input full range
- Installation on DIN rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- Class 2 output
- High efficiency
- LED indicator for DC power ON
- Power Ok output
- CE, TUV approved and cULus Listed

## Product Description

The Switching power supplies and compact dimensions and performance are a must. SPD series are specially designed to be used in all automation application where the installation is on a DIN rail

## Ordering Key

**SP D 24 60 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
Spring connectors	B

## Output performances

Model	Rated output Voltage (VDC)	Output Power (W)	Output Current (A)	Voltage Trim Range		DC ON LED (VDC) Threshold at startup Min.	Typical Efficiency
				Min. VDC	Max. VDC		
SPD05	5	50	10.0	5	5.5	4	79%
SPD12	12	60	5.0	12	14	9.6	86%
SPD24	24	60	2.5	24	28	19.2	89%
SPD48	48	60	1.25	48	55	37	89%

## Output data

Line regulation	± 0.5%	Output Voltage accuracy	± 2%
Load regulation	± 0.5%	Temperature coefficient	± 0.02%/°C
Minimum load	0	Hold up Time Vi = 115VAC	20ms
Turn on time (full resistive load)	1.0s max	Hold up time Vi = 230VAC	30ms
Transient recovery time	300µs	Voltage fall time (I <sub>o</sub> nom)	150ms max
Ripple and noise	50mVpp	Voltage rise time at full resistive load	150ms max

## Input data

Rated input voltage	100 - 240	Frequency range	47- 63 Hz
Voltage range AC	85 - 264 VAC	Inrush current Vi = 115VAC	30A
DC	90 - 375 VDC	Vi = 230VAC	60A

## Controls and Protections

<b>Overload</b>	110 – 150%	<b>Over voltage protection</b>	<b>VDC</b>		
<b>Input Fuse</b>	T2A/250VAC internal <sup>1)</sup>		<b>Min.</b>	<b>Max.</b>	
<b>Output Short Circuit</b>	Fold forward		SPD5	6	6.8
<b>Power ready output (only SPD 24)</b>			SPD12	15	16.5
On threshold	≥ 20V ± 1V	SPD24	30	33	
Off threshold	≤ 19.2V ± 1V	SPD48	60	66	

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

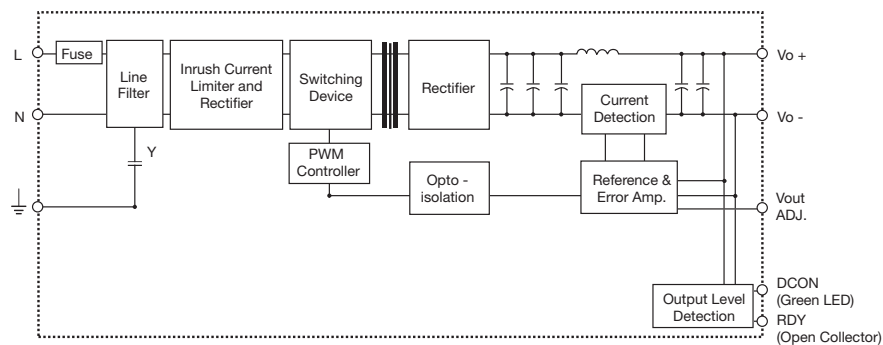
## General data (@ nominal line, full load, 25°C )

<b>Ambient temperature</b>	-25°C to 71°C	<b>Cooling</b>	Free air convection
<b>Derating (&gt;60°C to +71°C)</b>	2.5%/°C	<b>MTBF (MIL-HDBK-217F)</b>	500.000h
<b>Ambient humidity</b>	20 ~ 90%RH	<b>Case material</b>	Plastic: PC, UL94-V0
<b>Storage</b>	-25°C to +85°C	<b>Dimensions L x W x D</b>	90 x 40.5 x 115
<b>Protection degree</b>	IP20	<b>Weight</b>	360g

## Norms and Standards

<b>Insulation voltage I / O</b>	3.000VAC min	<b>CE</b>	EN61000-6-3 - EN55022
<b>Insulation resistance</b>	100MΩ min		Class B
<b>UL / cUL</b>	UL508 listed, UL1950, UL1310 Class 2 (5V without class 2) Recognized		EN61000-3-2 - EN61000-3-3
<b>TUV</b>	EN60950		EN61000-6-2 - EN550241
			EN61000-4-2 - EN61000-4-3
			EN61000-4-4 - EN61000-4-5
			EN61000-4-6 - EN61000-4-8
			EN61000-4-11

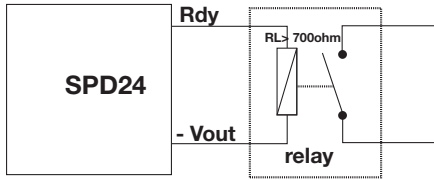
## Block diagrams



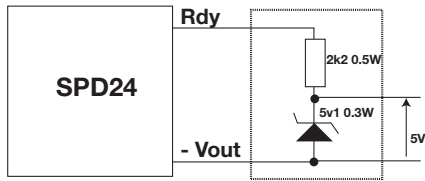
## Pin assignment and front controls

Pin No.	Designation	Description
1	<b>RDY</b>	DC OK, output for relay (only on SPD 24)
3	<b>+</b>	Positive output terminal
4	<b>+</b>	Positive output terminal
5	<b>-</b>	Negative output terminal
6	<b>-</b>	Negative output terminal
7	<b>GND</b>	Ground terminal to minimise High frequency emissions
8	<b>L</b>	Phase input ( no polarity with DC input )
9	<b>N</b>	Neutral input ( no polarity with DC input )
	<b>Vout ADJ.</b>	Trimmer for fine output voltage adjustment
	<b>DC ON</b>	DC output ready LED

## Output Rdy Wiring diagram

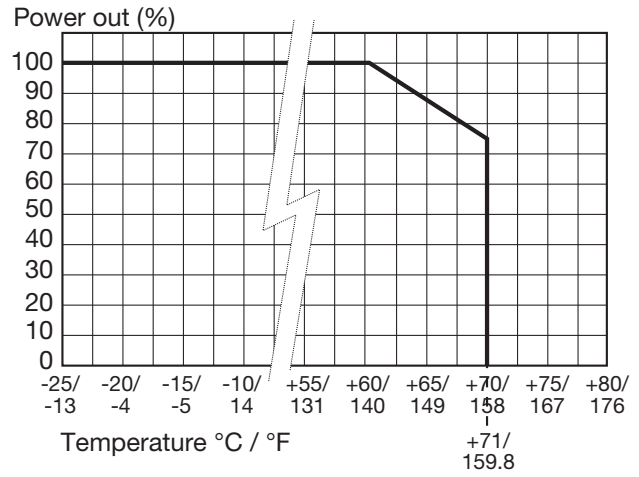


Relay connection diagram



5V signal

## Derating Diagram



## Installation

<b>Ventilation and cooling</b>	Normal convection All sides 25mm free space for cooling is recommended
<b>Connector size range</b>	Solid: 0.2 – 2mm <sup>2</sup> (AWG24-14) (use copper conductors only)
<b>Max. torque for terminal</b>	
Input terminals	0.56Nm (5.0lb-in)
Output terminals	0.56Nm (5.0lb-in)

## Mechanical Drawings mm (inches)

