

# Switching Power Supply Type SPD 30W 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
- CE, TUV approved and cULus Listed

## 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 12 30 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	Output Voltage (VDC)	Output Current (A)	Voltage Trim Range		DC on LED (VDC Min.)	Typical Efficiency
			Min. (VDC)	Max. (VDC)		
SPD05	5	6.0	5	5.5	4	79%
SPD12	12	2.5	12	14	9.6	84%
SPD24	24	1.25	24	28	19.2	86%
SPD48	48	0.625	48	55	37	86%

## Output data

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

## Input data

Rated input voltage	100 - 240	Frequency range	47- 63 Hz
Voltage range		Inrush current	
AC	85 - 264 Vac	Vi = 115Vac	20A
DC	90 - 375 Vdc	Vi = 230Vac	40A

Specifications are subject to change without notice

## Controls and Protections

<b>Overload</b>	110 – 140%	<b>Over voltage protection</b>	<b>VDC</b>	
<b>Input Fuse</b>	T2A/250Vac internal*		<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	$\geq 20V \pm 1V$	SPD24	30	33
Off threshold	$\leq 19.2V \pm 1V$	SPD48	60	66

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

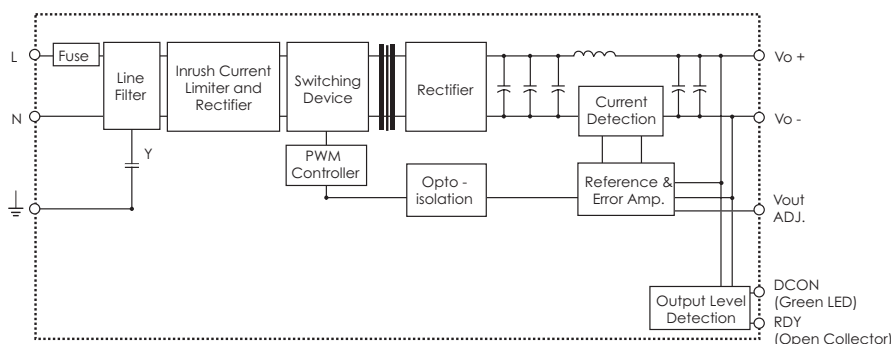
<b>Ambient temperature</b>	-10°C to 71°C	<b>Cooling</b>	Free air convection
<b>Derating (&gt;60°C to +71°C)</b>	2.5%/°C	<b>Switching frequency</b>	50kHz
<b>Ambient humidity</b>	20 ~ 90%RH	<b>MTBF</b>	565.000h
<b>Storage</b>	-25°C to +85°C	<b>Case material</b>	Plastic: PC, UL94-V0
<b>Protection degree</b>	IP20	<b>Dimensions L x W x D</b>	90 x 40.5 x 115
		<b>Weight</b>	290g

## Norms and Standards

<b>Insulation voltage I / O</b>	3.000Vac	<b>CE</b>	EN61000-6-3 - EN55022 Class B EN61000-3-2 - EN61000-3-3 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
<b>Insulation resistance</b>	100Mohm		
<b>UL / cUL</b>	UL508 listed, UL60950-1, UL1310 Class 2 (5V without class 2) Recognised		
<b>TUV</b>	EN60950-1		

\* fuse not replaceable by user

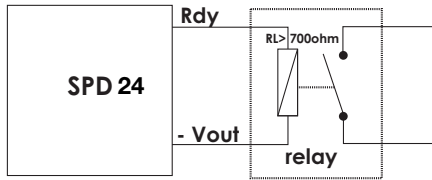
## Block diagrams



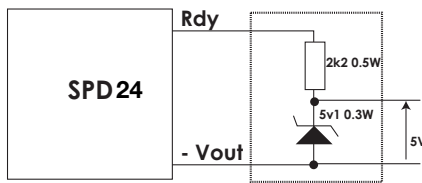
## Pin assignement and front controls

Pin No.	Designation	Description
1	RDY	DC OK output for relay (only on SPD24)
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 )
	Vout ADJ.	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

## Output Rdy Wiring diagram

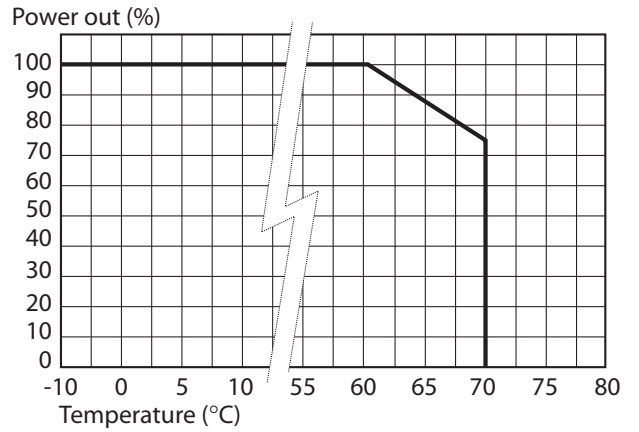


Relay connection diagram

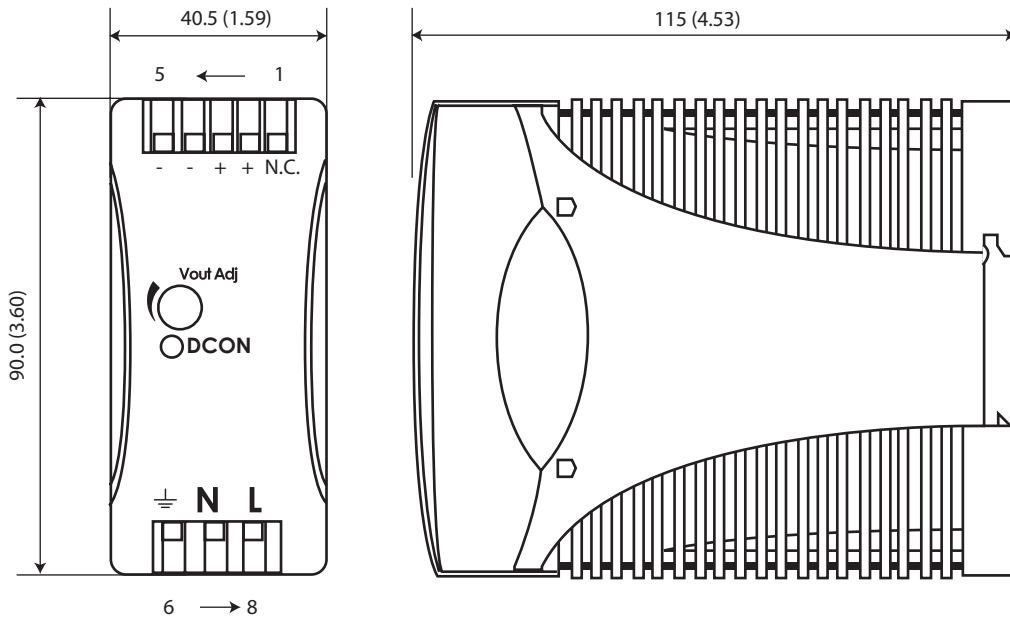


5V signal

## Derating Diagram



## Mechanical Drawings



## 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)