

# Modular Switching Power Supply Type SPM 4 DIN rail mounting

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- Single DIN module
- Universal input 90/264VAC – 120/370VDC
- High efficiency up to 86%
- Short circuit protection
- Overload protection
- Internal input filter
- LOW voltage LED indicator
- UL Class 2 Output

## Product Description

SPM Modular switching power supplies are specifically designed in order to satisfy both the Automation and the Building automation requirements. The four DIN modules PS is capable of up to 60W of output power. Its high efficiency prevents excess of heat in the installation place.

## Ordering Key

**SPM 4 - 24 1**

Series \_\_\_\_\_  
 Number of DIN modules \_\_\_\_\_  
 Output Voltage \_\_\_\_\_  
 Phases (only single phase) \_\_\_\_\_

## Approvals



\* only 12, 15, 24VDC

## Output performances

Model	Input Voltage	Output Power	Output Voltage	Current	Typical Efficiency
SPM4-051	90~264Vac	35W	5Vdc	7.0A	80%
SPM4-121	90~264Vac	54W	12Vdc	4.5A	84%
SPM4-151	90~264Vac	60W	15Vdc	4.0A	85%
SPM4-241	90~264Vac	60W	24Vdc	2.5A	86%

## Output data

Line regulation	1% max.		Transient recovery time (50% load step changed)	1ms	
Load regulation	1%			DC ON indicator	Min.
Output Voltage accuracy	±1%		5V		3Vdc
Ripple and Noise	50mV		12V	9Vdc	-
Temperature Coefficient	±0.02%/°C (±0.0112%/°F)		15V	11Vdc	-
Hold up time	Vi = 115Vac	5V and 12V: 16ms	24V	20Vdc	-
	Vi = 230Vac	15V and 24V: 12ms	DC LOW indicator	Min.	Max.
Minimum load	0%		5V	3.2Vdc	3.7Vdc
Voltage trim range	Min.	Max.	12V	8.8Vdc	9.3Vdc
	5V	5.5Vdc	15V	12Vdc	12.5Vdc
	12V	14Vdc	24V	21.5Vdc	22Vdc
	15V	16.5Vdc			
24V	28Vdc				



## Input data

<b>Rated input voltage</b>	100/240VAC
<b>Voltage range</b>	
AC in	90 - 264 Vac
DC in	120 - 370 Vdc
<b>Line frequency</b>	47 - 63Hz
<b>Inrush current</b>	
Vi= 115Vac	Typ: 25A Max: 30A
Vi= 230Vac	Typ: 50A Max: 60A

\* Not replaceable by user

## Controls and Protections

<b>Input Fuse</b>	T2A/250Vac internal*
<b>Output Short Circuit</b>	Fold forward
<b>Rated Overload Protection</b>	110-150%

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

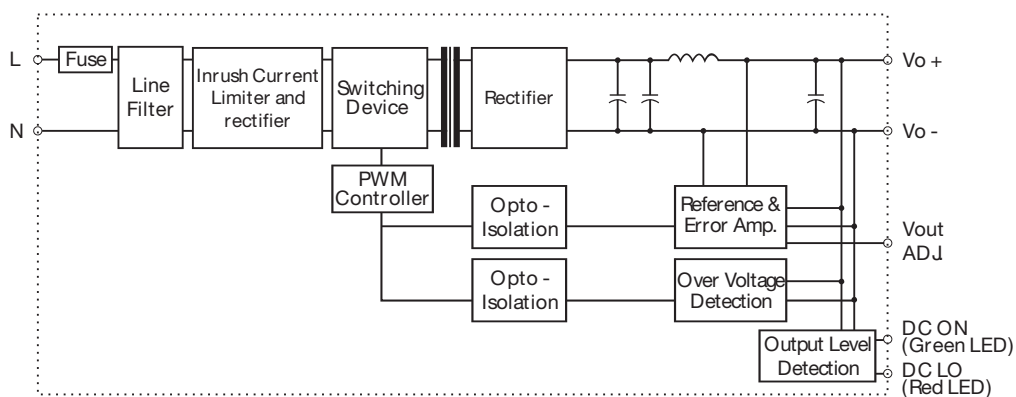
<b>Insulation voltage</b>	3.000Vac	<b>Cooling</b>	Free air convection
<b>Insulation resistance</b>	100MΩ	<b>Case material</b>	Plastic (PC-UL94-V0)
<b>Ambient temperature</b>	-25°C to 71°C (-13°F to 159.8°F)	<b>Weight</b>	250g
<b>Derating (&gt;61°C to +71°C)</b>	2.5%/°C (1.4%/°F)	<b>Protection degree</b>	IP20
<b>Ambient humidity</b>	90%RH		
<b>Storage temperature</b>	-25°C to +85°C (-13°F to 185°F)		
<b>Dimensions L x W x D mm</b>	91 x 70.5 x 55.5		
<b>Dimensions L x W x D inches</b>	3.582 x 2.756 x 2.185		

## Approvals

<b>UL / cUL</b>	file: E258355 file: E258395 file: E258396	UL508 listed, UL1310 Class 2 power supply, (only 12V, 15V, 24V models), UL60950-1 Recognized
<b>TUV</b>		EN60950-1

<b>CE</b>	EN61000-6-3, EN55022 class B, EN61000-3-2, EN61000-3-3, EN61000-6-2, EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
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## Block diagrams



## Pin assignement and front controls

Pin No.	Designation	Description
1	+	Positive output terminal
2	+	Positive output terminal
3	-	Negative output terminal
4	-	Negative output terminal
5	L	Input terminal (phase conductor, no polarity @ DC input)
6	N	Input terminal (neutral conductor, no polarity @ DC input)
P1	Vout Adj.	Trimmer-potentiometer for Vout adjustment
LED1	DC ON	Operation indicator LED
LED2	DC LOW	DC LOW indicator LED

## Installation

### VENTILATION / COOLING:

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

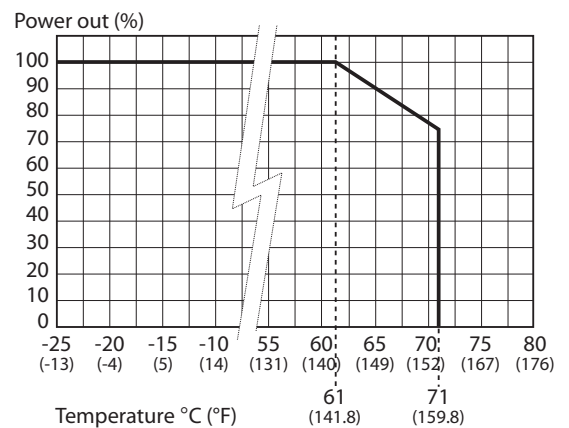
### CONNECTOR SIZE RANGE:

- Solid: 0.2-2.0,mm<sup>2</sup> (AWG24-14)  
(user copper conductors only)

## Construction

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safety and firmly on the rail; no tools required even to remove.

## Derating Diagram



## Mechanical Drawings

