

# Modular Switching Power Supply

## Type SPM 4

### DIN rail mounting

CARLO GAVAZZI



- 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 application 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.	
Load regulation	1%	
Output Voltage accuracy	±1%	
Ripple and Noise	50mV	
Temperature Coefficient	±0.02%/°C (±0.0112%/°F)	
Hold up time	Vi = 115Vac	5V and 12V: 16ms 15V and 24V: 12ms
	Vi = 230Vac	60ms
Minimum load	0%	
Voltage trim range	Min.	Max.
5V	5Vdc	5.5Vdc
12V	12Vdc	14Vdc
15V	13.5Vdc	16.5Vdc
24V	24Vdc	28Vdc

Transient recovery time (50% load step changed)	1ms	
DC ON indicator	Min.	Max.
5V	3Vdc	-
12V	9Vdc	-
15V	11Vdc	-
24V	20Vdc	-
DC LOW indicator	Min.	Max.
5V	3.2Vdc	3.7Vdc
12V	8.8Vdc	9.3Vdc
15V	12Vdc	12.5Vdc
24V	21.5Vdc	22Vdc



Input data

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

\* Not replaceable by user

Controls and Protections

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

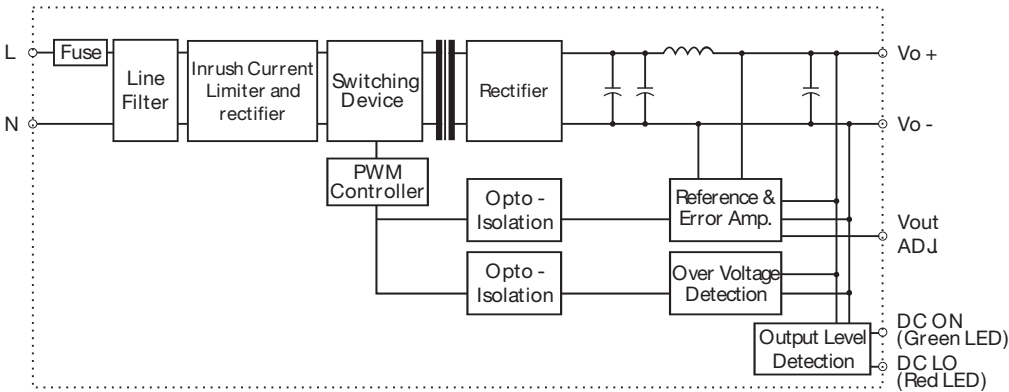
General data (@ nominal line, full load, 25°C )

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

Approvals

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

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

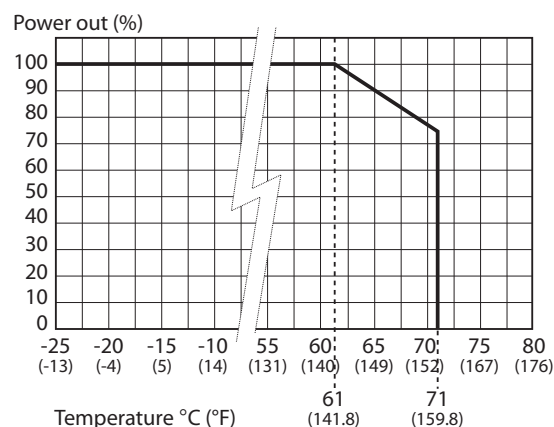
### CONNECTOR SIZE RANGE:

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

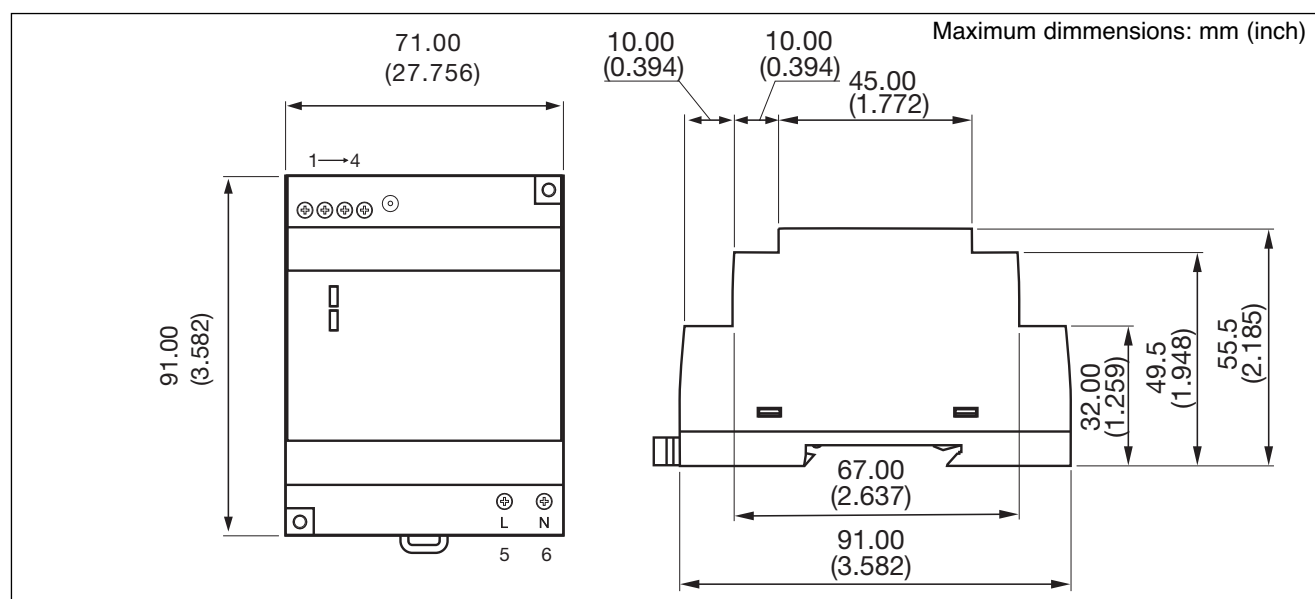
## Construction

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

## Derating Diagram



## Mechanical Drawings



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Authorized Distributor

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[SPM4051](#) [SPM4241](#) [SPM4121](#) [SPM4151](#)