

Modular Switching Power Supply Type SPM 1 DIN rail mounting

CARLO GAVAZZI



- Single DIN module
- Universal input 90/264VAC – 120/370VDC
- High efficiency up to 80%
- 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 single DIN module PS is capable of up to 10W of output power. Its high efficiency prevents excess of heat in the installation place.

Ordering Key

SPM 1 - 24 1

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

Approvals



Output performances

Model	Input Voltage	Output Power	Output Voltage	Current	Typical Efficiency
SPM1-051	90~264Vac	7.5W	5Vdc	1.50A	74%
SPM1-121	90~264Vac	10W	12Vdc	0.83A	78%
SPM1-151	90~264Vac	10W	15Vdc	0.67A	78%
SPM1-241	90~264Vac	10W	24Vdc	0.42A	80%

Output data

Line regulation	1% max.	DC ON indicator	Min.	Max.	
Load regulation	1%		5V	3Vdc	-
Output Voltage accuracy	±1%		12V	9Vdc	-
Ripple and Noise	50mV		15V	11Vdc	-
Temperature Coefficient	±0.02%/°C (±0.0112%/°F)		24V	20Vdc	-
Hold up time	Vi = 115Vac	5V and 12V: 10ms	DC LOW indicator	Min.	Max.
	Vi = 230Vac	15V and 24V: 60ms		5V	3.2Vdc
Minimum load	0%	12V	12V	8.8Vdc	9.3Vdc
Transient recovery time	(50% load step changed)	1ms	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: 10A Max: 15A
Vi= 230Vac	Typ: 20A Max: 30A

* Not replaceable by user

Controls and Protections

Input Fuse	T1A/250Vac internal*
Output Short Circuit	Fold forward
Rated Overload Protection	110-160%

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	60g
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 18 x 55.5		
Dimensions L x W x D inches	3.582 x 0.709 x 2.185		

Approvals

UL / cUL file: E258355
 file: E258395
 file: E258396

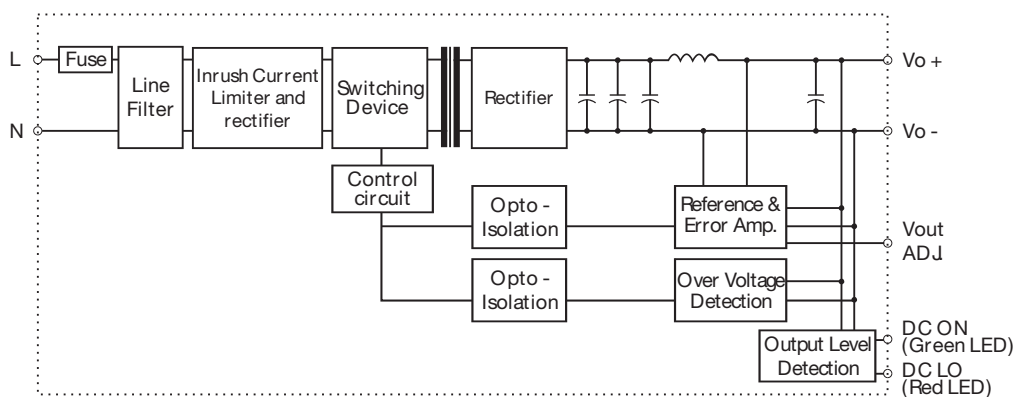
UL508 listed,
 UL1310 Class 2 power supply,
 UL60950-1 Recognized

CE

TUV EN60950-1

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

Block diagrams



Pin assignement and front controls

Pin No.	Designation	Description
1	+	Positive output terminal
2	-	Negative output terminal
3	L	Input terminal (phase conductor, no polarity @ DC input)
4	N	Input terminal (neutral conductor, no polarity @ DC input)
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

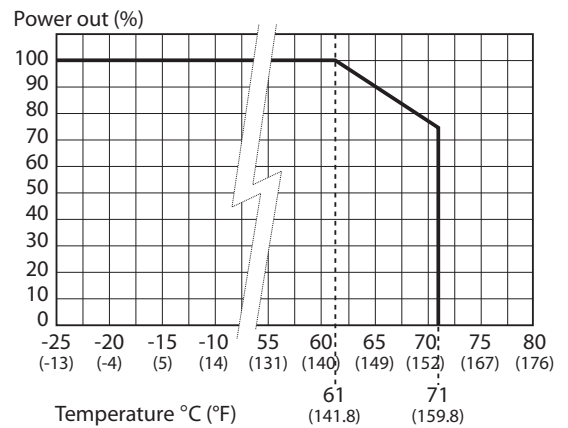
CONNECTOR SIZE RANGE:

- Solid: 0.2-2.0,mm² (AWG24-14)
 (user copper conductors only)

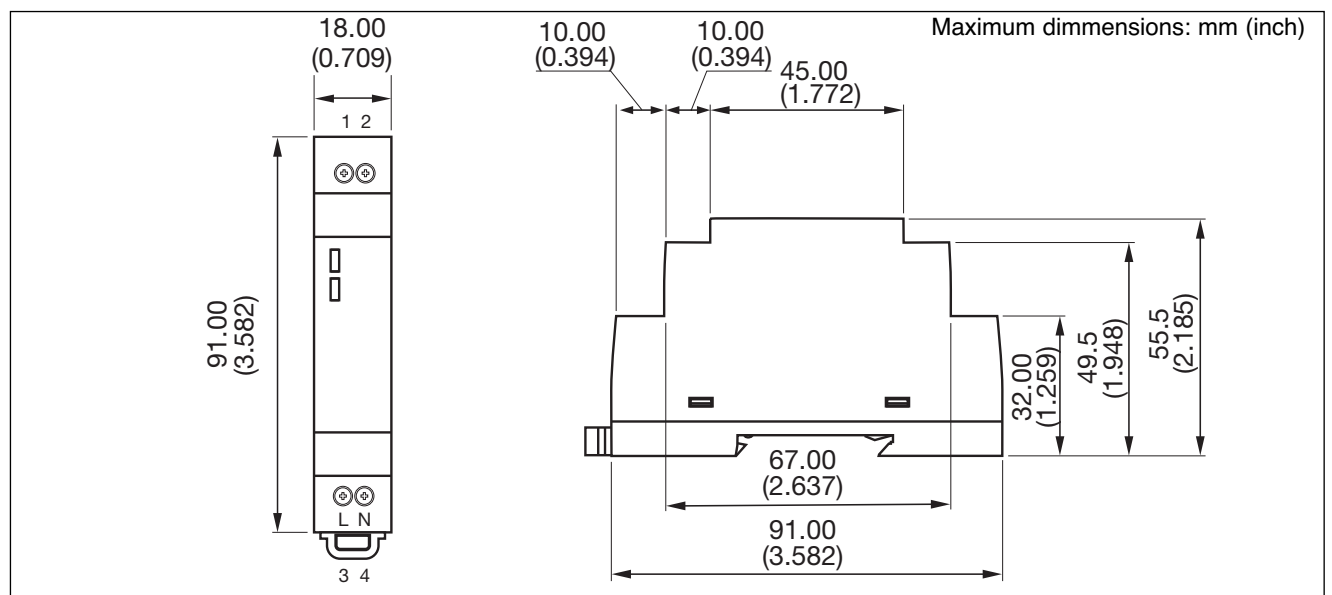
Construction

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 (mm)



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