

Modular Switching Power Supply

Type SPM 3

DIN rail mounting

CARLO GAVAZZI



- Single DIN module
- Universal input 90/264VAC – 120/370VDC
- High efficiency up to 83%
- 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 three DIN modules PS is capable of up to 30W of output power. Its high efficiency prevents excess of heat in the installation place.

Ordering Key

SPM 3 - 24 1

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

Approvals



Class 2

Output Performances

Model	Input Voltage VAC	Output Power (W)	Output Voltage VDC	Current (A)	Typical Efficiency
SPM3-051	90~264	15	5	3.0	74%
SPM3-121	90~264	25	12	2.1	82%
SPM3-151	90~264	30	15	2.0	83%
SPM3-241	90~264	30	24	1.3	83%

Output Data

Line regulation	1% max.		Transient recovery time (50% load step changed)	1ms	
Load regulation	1%		DC ON indicator	Min.	Max.
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	25ms	24V	20VDC	-
	Vi = 230VAC	100ms	DC LOW indicator	Min.	Max.
Minimum load	0%		5V	3.2VDC	3.7VDC
Voltage trim range	Min.	Max.	12V	8.8VDC	9.3VDC
5V	5VDC	5.5VDC	15V	12VDC	12.5VDC
12V	12VDC	14VDC	24V	21.5VDC	22VDC
15V	13.5VDC	16.5VDC	Short circuit alarm	Beep sound	
24V	24VDC	28VDC			



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: 20A Max: 25A
Vi= 230VAC	Typ: 40A Max: 50A

¹⁾ Fuse not replaceable by user

Controls and Protections

Input Fuse	T2A/250VAC internal ¹⁾
Output Short Circuit	Fold forward
Rated Overload Protection	110-150%

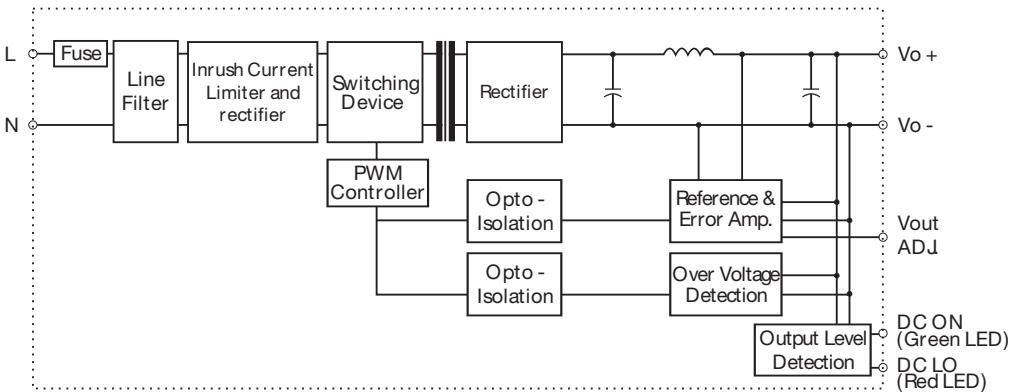
General Data (@ nominal line, full load, 25°C)

Insulation voltage	3.000VAC	Dimensions L x W x D mm	91 x 52 x 55.5
Insulation resistance	100MΩ	L x W x D inches	3.582 x 2.047 x 2.185
Ambient temperature	-25°C to 71°C (-13°F to 159.8°F)	Cooling	Free air convection
Derating (>61°C to +71°C)	2.5%/°C (1.4%/°F)	Case material	Plastic (PC-UL94-V0)
Ambient humidity	90%RH	Weight	185g
Storage temperature	-25°C to 85°C (-13°F to 185°F)	Protection degree	IP20

Approvals

UL / cUL	file: E258355 file: E258395 file: E258396	UL508 listed, UL1310 Class 2 power supply, 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 Assignment 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 LO	DC LOW indicator LED

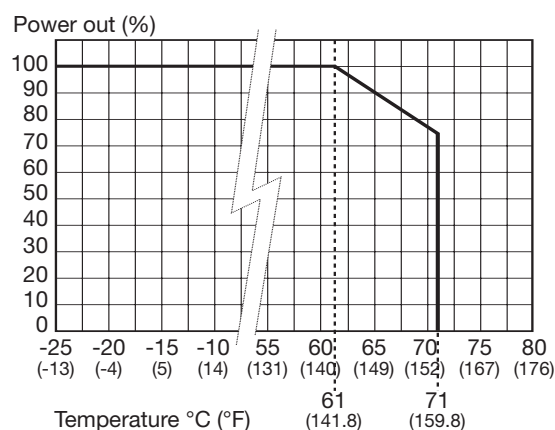
Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Screw terminals	24-14AWG flexible or solid cable (user copper conductors only)
Max. torque for terminals Input terminals Output terminals	0.56Nm (5.0lb-in) 0.56Nm (5.0lb-in)

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 (mm)

