

Switching Power Supply Type SPDM 120W Medium DIN Rail Mounting

CARLO GAVAZZI



- Universal AC, DC input range (90Vac~264Vac, 127Vdc~370Vdc)
- High efficiency up to 88%
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-20°C~70°C)
- LED DC OK indication
- Ultra-slim, 45mm width

Product Description

The Switching power supplies SPDM 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. In particular SPDM Series are Power Supplies with

have equal power at smaller size respect to SPD Series. The greater compactness is achieved thanks to the limited energy loss, that automatically generates greater effectiveness. This specific SPDM Series 120W Compact are available only with 24VDC Output Voltage.

Ordering Key

SP D M 24 120 1

Model _____
Mounting (D = Din rail) _____
Medium width _____
Output voltage _____
Output power _____
Single phase input type _____

Approvals



Output Performance

MODEL NO.	Output Voltage (VDC)	Voltage Trim Range (VDC)		Output power (W)	Max. output current (A)	Typical efficiency
SPDM241201	24	24	28	120	5	88%

Output Data

All specifications are at nominal values, full load, 25°C unless otherwise noted

Ripple & noise 0° ~ 70°C (32° ~ 158°F) 0° ~ -25°C (32° ~ -13°F)	≤120mV ≤240mV	Hold up Time 115Vac 230Vac	≥10mS ≥20mS
Voltage accuracy	±1.0%	Temperature Coefficient	±0.03%/°C
Line regulation	±0.5%	Overshoot and Undershoot	<5.0%
Load regulation	±1.0%	Power boost	No
Set-up Time 230Vac 115Vac	<1.2S <2.5mS	Parallel function	No

Input Data

Rated input voltage	90Vac~264Vac 127Vdc~370Vdc	Inrush Current (Typical cold start)	
Voltage range	90Vac~264Vac	115Vac	<20A
Frequency range	47Hz-63Hz	230Vac	<35A
Efficiency (Typical)	88%	Leakage Current	
AC Current (max.)		Input—output	<0.25mA
115Vac	<2.25A	Input—PG	<3.5mA
230Vac	<1.3A	PFC	No

Control and Protections

Over Load	5.25 ~ 6.5A, constant current	Short Circuit	Shut down, auto recovery
Over voltage	29~33V shut down, Need to be restarted.		
Over temperature	100±5°C Detected on power transistor heatsink; Shut down, auto recovery when normal temperature is restored		

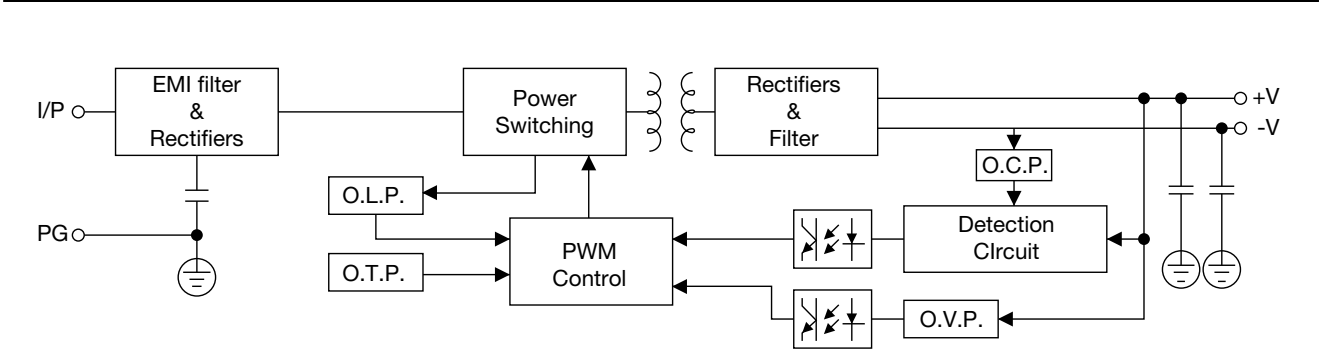
General Data

Operating temperature	-20°C ~ +70°C	Dimensions HxDxW mm	124x119x45 mm (4.88" x 4.69" x 1.77")
Ambient humidity		Weight	780g (1.72lb)
Operating	20% ~ 90%RH No condensing	Packing	
Storage Temperature	-40°C ~ +85°C (-40° ~ 185°F)	Single package	850g (1.87lb), 150 x 57 x 147mm (5.91" x 2.24" x 5.79")
MTBF (MIL-HDBK-217F)	More than 300,000Hrs (25°C, Full load)	Carton	24 units, 21Kg (46.3lb)
Cooling method	Free air convection		

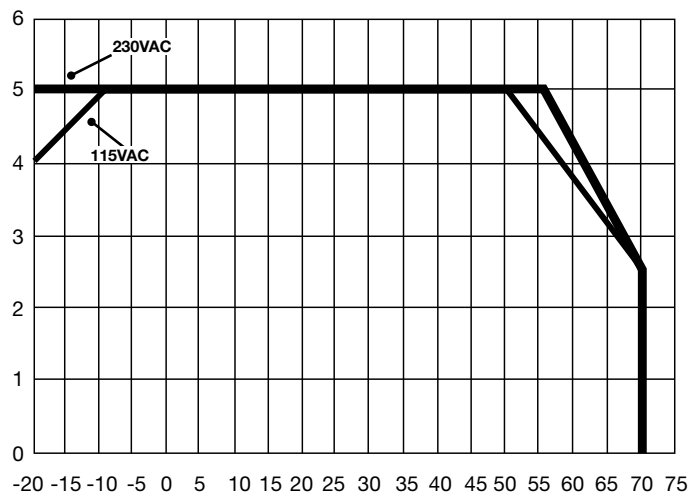
Norms and Standard

LVD Directive	2014/35/EU	Isolation Resistance	≥100M ohms
Withstand Voltage		EMC Directive	2004/108/EC
Primary-Secondary	3.0KVac; ≤10mA.	EMC	EN55022:2010+AC:2011
Primary-PG	2.5KVac; ≤10mA.		EN55024:2010+A1:2015
Secondary-PG	0.5KVac ≤10mA.		EN61000-3-2:2014
			EN61000-3-3:2013

Block Diagram



Derating Curve



Pin Assignement and Front Controls

PIN NO.	Designation	Description
1		Ground this terminal to minimize high frequency emissions
2	N	Input terminals (neutral conductor, no polarity with DC input)
3	L	Input terminals (phase conductor, no polarity with DC input)
4, 5, 6	V+	Positive output terminal
7, 8, 9	V-	Negative output terminal
	Vout Adj.	Trimmer-potentiometer for Vout adjustment
	DC status	LED indication of power supply output status