

# Switching Power Supply Type SPDM 120W Medium DIN Rail Mounting

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- 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

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

## Input Data

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

## Control and Protections

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

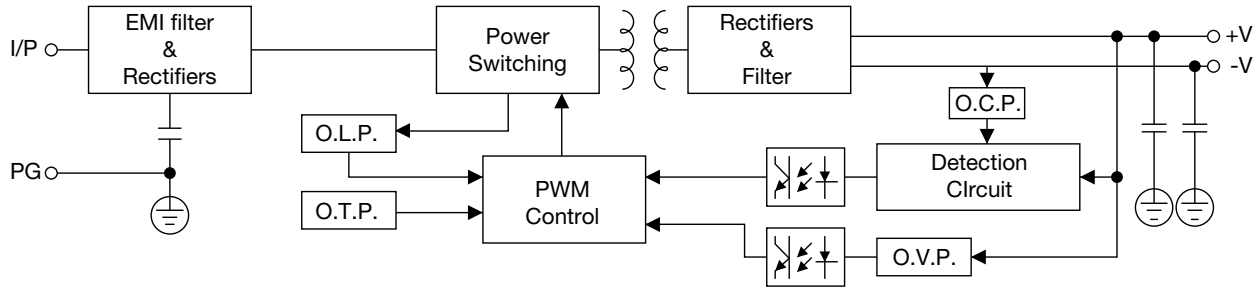
## General Data

<b>Operating temperature</b>	-20°C ~ +70°C	<b>Dimensions HxDxW mm</b>	124x119x45 mm (4.88" x 4.69" x 1.77")
<b>Ambient humidity</b>		<b>Weight</b>	780g (1.72lb)
Operating	20% ~ 90%RH No condensing	<b>Packing</b>	
<b>Storage Temperature</b>	-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")
<b>MTBF (MIL-HDBK-217F)</b>	More than 300,000Hrs (25°C, Full load)	<b>Carton</b>	24 units, 21Kg (46.3lb)
<b>Cooling method</b>	Free air convection		

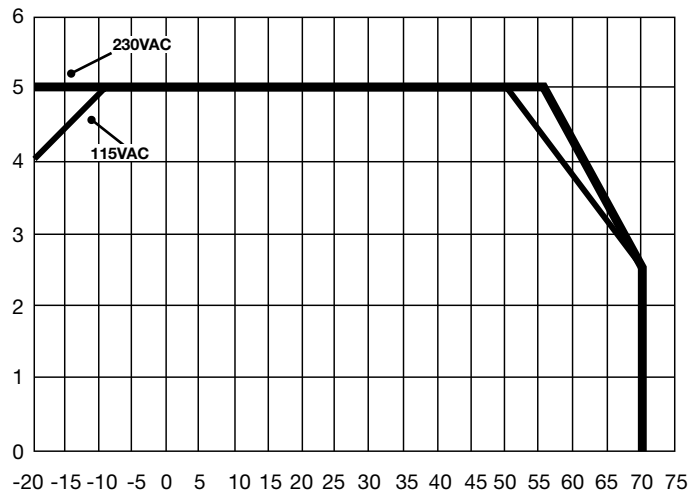
## Norms and Standard

<b>LVD Directive</b>	2014/35/EU	<b>Isolation Resistance</b>	≥100M ohms
<b>Withstand Voltage</b>		<b>EMC Directive</b>	2004/108/EC
Primary-Secondary	3.0kVac; ≤10mA.	<b>EMC</b>	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 Assignment 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

## Mechanical Drawing

