Switching Power Supply
Type SPD 5W
DIN rail mounting

APOELMOS



- Universal AC input full range
- Installation on DIN rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- High efficiency
- LED indicator for DC power ON
- LED indication for DC low
- Internal input filter
- CE, TUV approved and cULus Listed

Product Description

The Switching power supplies SPD 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.

Ordering Key

SP D 12 05 1 B

- Model
- Mounting (D = Din rail)
- Output voltage
- Output power
- Input Type
- Optional features

Input type: 1= single phase

Approvals

Optional Features

Description	code
Spring connectors	B

Output performances

Model	Output Current (A)	Voltage Trim Range Min. (VDC)	Voltage Trim Range Max. (VDC)	DC on LED (VDC Min.)	DC low LED (VDC Min.)	Typical Efficiency
SPD05	1.0	4.5	5.75	4.5	3.75	69%
SPD12	0.42	10.8	13.8	10.8	9	72%
SPD15	0.34	13.5	17.25	13.5	11.25	72%
SPD24	0.21	21.6	28.8	21.6	18	72%

Output data

Line regulation	± 1%	Ouput Voltage accuracy	± 1%
Load regulation	± 2%	Temperature coefficient	± 0.02%/°C
Minimum load	0%	Hold up Time Vi = 115Vac	30ms
Transient recovery time	300 µs	Hold up time Vi = 230Vac	130ms
Ripple and noise	50mVpp		

Input data

Rated input voltage	100 - 240	Frequency range	47- 63 Hz
Voltage range		Inrush current	
AC	90 - 265 Vac	Vi= 115Vac	10A
DC	120 - 370 Vdc	Vi= 230Vac	18A

Specifications are subject to change without notice

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Controls and Protections

Overload	110 – 135%	Dc out On, indicator	>10.8Vdc
Output Short Circuit	Hiccup mode	Overvoltage Protection	125 – 145%
Input Fuse	T2A/250Vac internal*	Dc out low, indicator	9 – 10.8Vdc

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

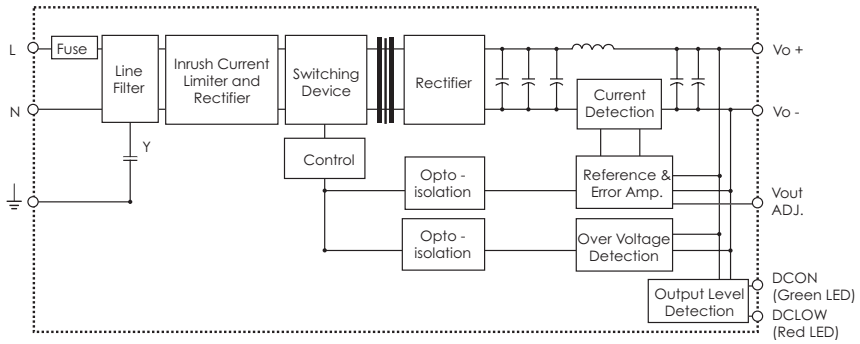
Ambient temperature	-10°C to 71°C	MTBF (MIL-HDBK-217F)	830.000h
Cooling	Free air convection	Ambient humidity	20 - 95%RH
Switching frequency	100kHz	Case material	Plastic: PC, UL94-V0
Derating (>60°C to +71°C)	2.5%/°C	Storage	-25°C to +85°C
Protection degree	IP20	Dimensions L x W x D	90 x 22.5 x 115
		Weight	115g

Approvals and EMC

Insulation voltage I / O	3.000Vac	CE	EN50081-1 / EN55022 Class B EN50082-1 / EN55024 EN61000-3-2 EN61000-3-3
Insulation resistance	100Mohm		
UL / cUL	UL508, UL60950-1 listed, UL1310 Class 2 Recognised		
TUV	EN60950		

* fuse not replaceable by user

Block diagrams



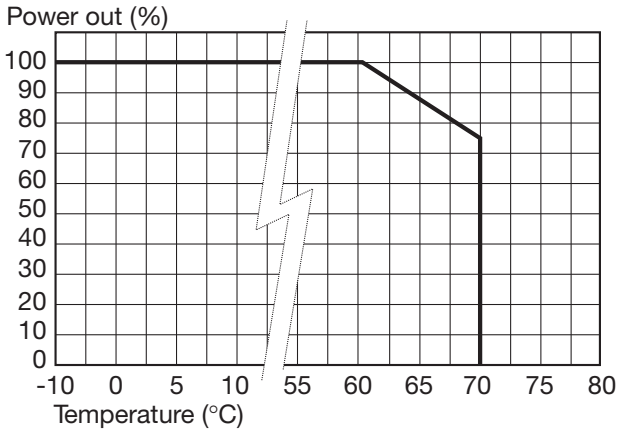
Pin assignement and front controls

Pin No.	Designation	Description
1	V+	Positive output terminal
2	V-	Negative output terminal
3	GND	Ground terminal to minimise High frequency emissions
4	N	Neutral input (no polarity with DC input)
5	L	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

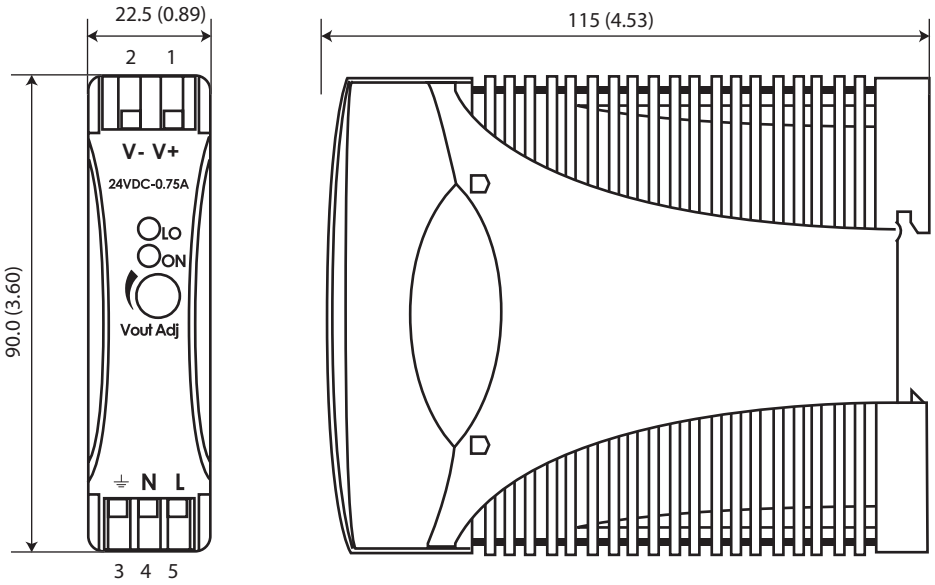
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Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Connector size range	Solid: 0.2 – 2mm² (AWG24-14) (use copper conductors only)

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