

AC-DC ITE Power Module PAA50 Series

Features:

- Ultra Compact Size: 2.92" x 1.85"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +70°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 89%
- EMC Compliant without External Components
- Safety Approval to UL/IEC/EN 62368-1, IEC/EN 60950, TUV IEC/EN60335-1, TUV IEC/EN 61558-2-16
- 3-Year Product Warranty



Description:

The PAA50 series of encapsulated AC/DC modules provide up to 50W of continuous output power in a small 1.9" x 2.9" package. These modules operate over a wide range of ambient temperatures and AC input voltages and frequencies, making them suitable for countless global applications.

Model Number ¹	Max Output Wattage	Output Voltage	Output Current (mA) max	Output Line Regulation	Output Load Regulation	Ripple & Noise (mVp-p)	Max Capacitive Load (μF)	Average Efficiency @ 230VAC
PAA50-12	50W	12V	4167	±2%	±2.5%	120 max	3500	89%
PAA50-13	50W	15V	3333	±2%	±2.5%	150 max	3000	88%
PAA50-14	50W	24V	2083	±2%	±2.5%	240 max	2200	88%

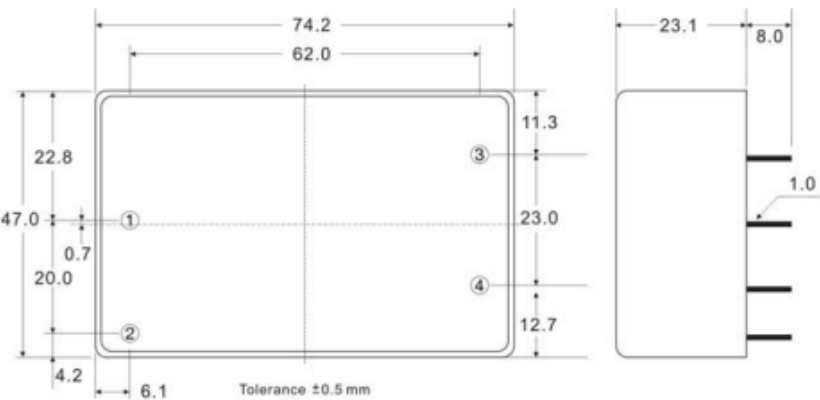
NOTES:

1. Add the letter "C" to the end of the model number for chassis mount option. Ex. "PAA50-12C".
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
3. CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.

Specifications	
Input	
Input Voltage	90-305VAC or 127-430VDC
Input Frequency	47-440Hz
Input Current	1000mA max. (115VAC) / 600mA max. (230VAC)
Inrush Current	45A max. (115VAC) / 90A max. (230VAC)
Leakage Current	0.25mA max. (230VAC)
Output	
Total Output Power	Up to 50W
Voltage Accuracy	±2%
Minimum Load	0%
Line Regulation	±2.5%
Hold Up Time	30ms min. (at 230VAC)
Protection	
Overpower Protection	Hiccup mode, auto-recovery
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, indefinite (auto-recovery)
Isolation	
Input—Output (VAC)	4000V
Environmental	
Operating Temperature	-40°C +70°C (with derating)
Storage Temperature	-40°C +85°C
Temperature Coefficient	±0.05%/°C
Humidity	95% RH
MTBF	>300,000h at 25°C (MIL-HDBK-217F)
Vibration	IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)
Shock	IEC60068-2-6
General Specifications	
Dimensions	2.92 x 1.85 x 0.91 Inches (74.2 x 47.0 x 23.1 mm) Chassis Mount: 2.55 x 4.4 x 1.13 Inches (64.7x111.9x28.6 mm)
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	158g
Cooling Method	Free air convection
Safety	
Agency Approvals	UL/IEC/EN 62368-1, IEC/EN 60950, TUV IEC/EN 60335-1(Chassis Series N/A), IEC/EN 61558-2-16(Chassis Series N/A)
EMC	
EMI (Conducted & Radiated Emissions)	EN 55032 Class B
EMS (Noise Immunity)	EN 55035

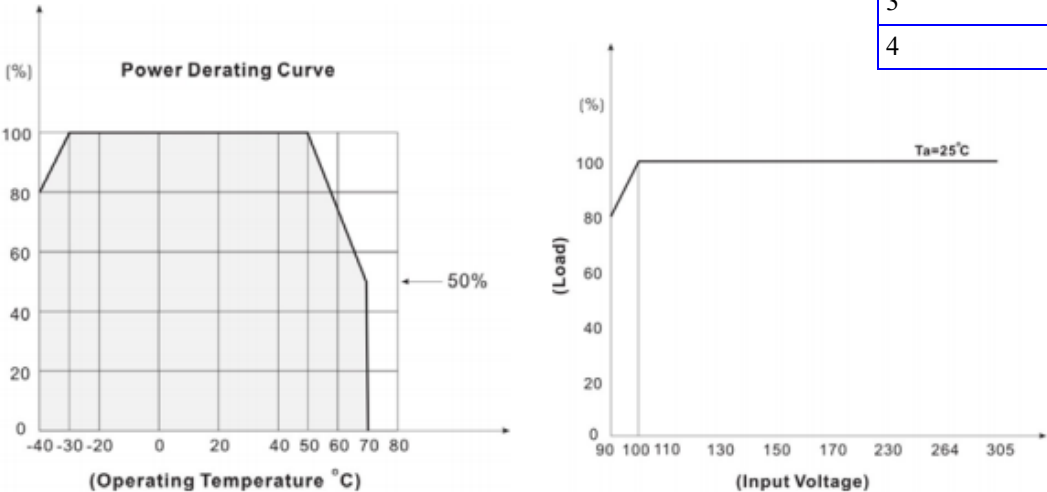
Diagrams

MECHANICAL DIMENSION (Top View)



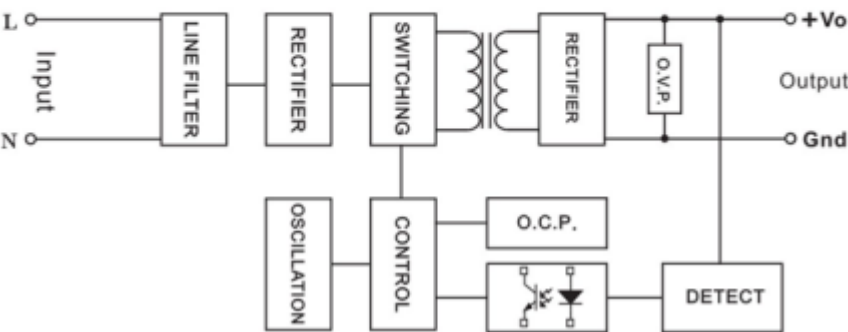
PIN #	FUNCTION
1	AC (N)
2	AC (L)
3	DC (-)
4	DC (+)

DERATING



BLOCK DIAGRAM

Single Output



Chassis Mount



PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT

