

AC-DC Medical Power Module PAAM30 Series

Features:

- PCB Mountable Switching Power Module
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output and Low Ripple and Low Noise
- <0.15W No Load Input Power
- Isolation Class II
- CE, CB, UL, cUL Approvals
- 3-Year Product Warranty



Description:

The PAAM30 series of encapsulated, single output, through-hole AC/DC modules is specially designed for use in medical applications. This power dense 1.8" x 2.52" platform offers up to 30W of continuous throughput across a wide range of operating temperatures whilst maintaining low emissions and high efficiency.

Model Number ¹	Max Output Wattage	Output Voltage	Output Current (mA) max	Output Line Regulation	Output Load Regulation	Ripple & Noise ² (mVp-p)	Max Capacitive Load (µF)	Average Efficiency @ 115VAC
PAAM30-10	25W	5V	5000	±0.5%	±1%	100	6800	84%
PAAM30-12	30W	12V	2500	±0.5%	±1%	150	1600	89%
PAAM30-13	30W	15V	2000	±0.5%	±1%	150	1200	86%
PAAM30-14	30W	24V	1250	±0.5%	±1%	240	470	86%

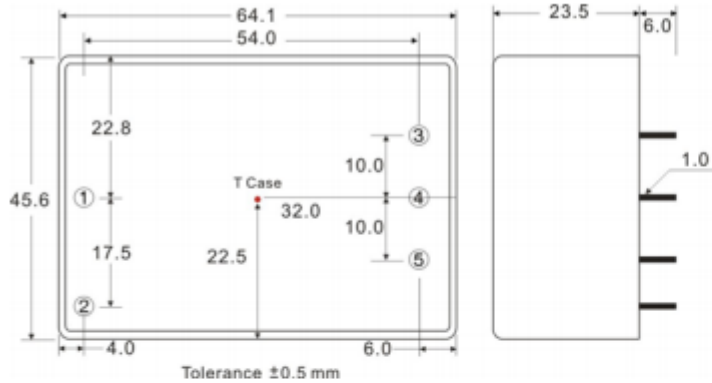
NOTES:

1. Add the letter "C" to the end of the model number for chassis mount option. Ex. "PAAM30-10C".
2. Ripple & Noise measured with 20MHz bandwidth with a 0.1µF ceramic & 47µF electrolytic capacitor across the output.
3. Safety approvals cover input frequencies of 47-63 Hz.
4. Natural convection is about 20LFM (not still air).

Specifications	
Input	
Input Voltage	90-264 VAC or 120-370 VDC, "N" to DC "+"; "L" to DC "-"
Input Frequency	47-440Hz
Input Current	650 mA max. (115 VAC) / 400 mA max. (230 VAC)
Inrush Current	30A max. (115VAC) / 60A max. (230 VAC)
Leakage Current	<0.1mA / 264 VAC (Touch Current)
No Load Input Power (<240 VAC)	<0.15W
External Fuse	3.15 A slow blow type
Output	
Total Output Power	Up to 30W
Voltage Accuracy	±2%
Line Regulation	±0.5%
Load Regulation	±1%
Hold Up Time	10ms min.
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...+80°C
Storage Temperature	-40°C...+90°C
Max Case Operating Temperature	84°C
Temperature Coefficient	±0.05%/°C
Altitude During Operation	5000m
Humidity	Up to 95% RH
MTBF	>250,000h at 25°C (MIL-HDBK-217F)
Atmospheric Pressure	540 hPa to 1060 hPa
General Specifications	
Dimensions	2.52x1.8x0.93 Inches (64.1x45.6x23.5 mm) Chassis Mount: 3.78x2.12x1.14 Inches (96.0x53.9x29.0 mm)
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	135g
Cooling Method	Free air convection

Safety	
Approvals	UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1 (2008), 2 x MOPP IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint), 2 x MOPP
*Consult with TT Electronics for information on additional country safety approvals	
EMC	
EMI (Conducted & Radiated Emissions) EMS (Noise Immunity)	EN55011 Class B EN60601-1-2 4th edition
*EMC filtering occurs internally within the module	

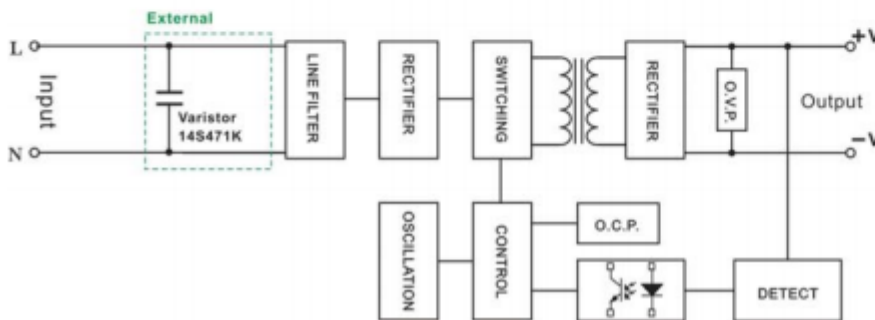
MECHANICAL DIMENSION (Top View) Diagrams



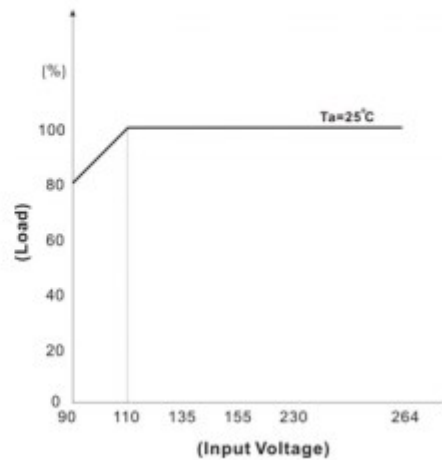
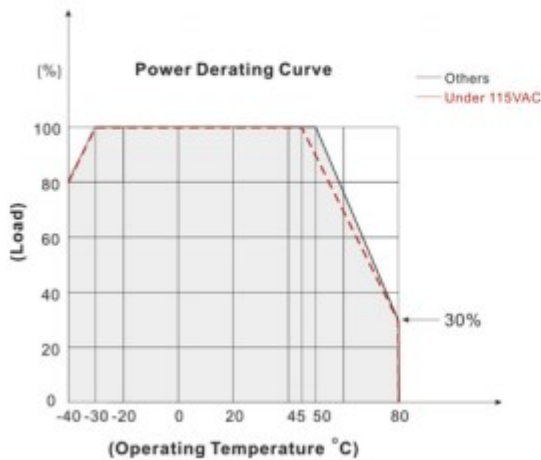
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

BLOCK DIAGRAM

Single Output



DERATING



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

