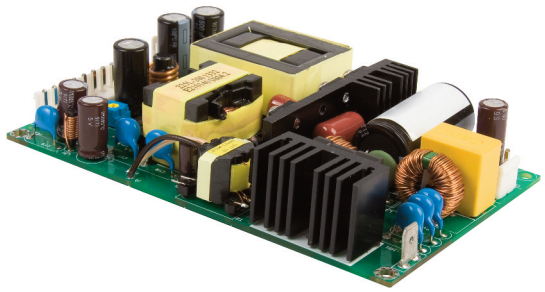
ECP225-A Series

AC-DC Power Supplies

XP Power

225 Watts

- Low 1″ Profile
- High Power Density
- 3″ by 5.0″ Footprint
- 150 W Convention/ 225 W Force Cooled Ratings
- 5 V Standby and 12 V Fan Outputs
- Medical and ITE Approvals
- High Efficiency, up to 94%
- Less than 0.5 W No Load Input Power



The ECP225-A series is designed to minimize the no load power consumption and maximize efficiency to facilitate equipment design to meet the latest environmental legislation. Approved for medical and ITE applications, this range of single output AC/DC power supplies are packaged in an ultra-low profile 1" height with a foot print of just 3.0" by 5.0". The ECP225-A provides up to 225 W force-cooled or 150 W convection-cooled leading to very high power densities of 15 W/in^3 or 10 W/in^3 respectively. A 5 V, 2 A standby output and a 12 V, 500 mA fan supply are included in the design. The power supply contains two fuses and low leakage currents as required by medical applications and is safety approved to operate in a 70 °C ambient. The low profile and safety approvals covering ITE and medical standards along with conducted emissions to EN55011/22 level B allow the versatile ECP225-A series to be used in a vast range of applications.

Dimensions:

ECP225-A:
5.00 x 3.00 x 1.00″ (127.0 x 76.2 x 25.4 mm)

Models & Ratings

Output Voltage	Output Current		Standby Voltage		Fan Output	Efficiency[3]	Model Number[4]
	Convection-cooled	Forced-cooled[1]	Convection-cooled	Forced-cooled			
12.0 V	12.50 A	18.75 A	5 V/1.0 A	5 V/2.0 A	12 V/0.5 A	92%	ECP225PS12-A
15.0 V	10.00 A	15.00 A	5 V/1.0 A	5 V/2.0 A	12 V/0.5 A	92%	ECP225PS15-A
24.0 V	6.25 A	9.38 A	5 V/1.0 A	5 V/2.0 A	12 V/0.5 A	92%	ECP225PS24-A
28.0 V	5.36 A	8.04 A	5 V/1.0 A	5 V/2.0 A	12 V/0.5 A	92%	ECP225PS28-A
48.0 V	3.10 A	4.69 A	5 V/1.0 A	5 V/2.0 A	12 V/0.5 A	92%	ECP225PS48-A

Notes

1. Requires 10 CFM.
2. Measured with 20 MHz bandwidth and 10 µF electrolytic capacitor in parallel with 0.1 µF ceramic capacitor
3. Minimum average efficiencies measured at 25%, 50%, 75% & 100% of 225 W load and 230 VAC input.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	85	115/230	264	VAC	Derate output from 100% at 90 VAC to 90% at 85 VAC
Input Frequency	47	50/60	63	Hz	Agency approval, 47-63 Hz
Power Factor		>0.9			230 VAC, 100% load EN61000-3-2 class A EN6100-2-2 class C > 145W
Input Current - Full Load		2.2/1.1		A	115/230 VAC
Inrush Current		120		A	230 VAC cold start, 25 °C
Earth Leakage Current		80/140	230	µA	115/230 VAC/50 Hz (Typ), 264 VAC/60 Hz (Max)
No load Input Power			0.5	W	When main output is Inhibited
Input Protection	F3.15 A/250 V Internal fuse fitted in line and neutral.				

Output - Main Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage - V1	12		48	VDC	See Models and Ratings table
Initial Set Accuracy			±1	%	50% load, 115/230 VAC
Output Voltage Adjustment-V1	5			%	V1 only via potentiometer. See Mech. Details, Vfan will track
Minimum Load	0			A	
Start Up Delay			2	s	115/230 VAC full load.
Hold Up Time	10	20/13		ms	Min at full load, 115 VAC. Typical at 150W/ 225W
Drift			±0.02	%	After 20 min warm up
Line Regulation			±0.5	%	90-264 VAC
Load Regulation			±0.5	%	0-100% load.
Transient Response			4	%	Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step
Over/Undershoot			7	%	Full load
Ripple & Noise			1	% pk-pk	20 MHz bandwidth and 10 µF electrolytic capacitor in parallel with 0.1 µF ceramic capacitator.
Overvoltage Protection	110		140	%	Vnom, recycle input to reset
Overload Protection	110		170	% I nom	
Short Circuit Protection					Trip & Restart
Temperature Coefficient			0.02	%/°C	
Overtemperature Protection				°C	Measured internally, Auto Resetting
Remote On/Off	Connect pin 3 of CN2 to pin 1 to turn main output off. Connect to pin 2 or leave open to turn main output on.				

Output - Auxilliary Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage		5.0		VDC	
Initial Set Accuracy			±1	%	50% load, 115/230 VAC
Minimum Load	0			A	
Start Up Delay			0.5	s	115/230 VAC full load.
Hold Up Time	300			ms	Min at full load, 115 VAC.
Drift			±0.02	%	After 20 min warm up
Line Regulation			±0.5	%	90-264 VAC
Load Regulation			±0.5	%	0-100% load.
Transient Response			4	%	Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step
Over/Undershoot			5	%	Full load
Ripple & Noise			1	% pk-pk	20 MHz bandwidth and 10 µF electrolytic capacitator in parallel with 0.1 µF ceramic capacitator
Overload Protection		3.0	4.0	A	
Short Circuit Protection					Trip & Restart
Temperature Coefficient			0.02	%/°C	
Overtemperature Protection				°C	Measured internally, Auto Resetting