

Medical Low Noise AC/DC Plug & Play Power Supply Series 400W-1200W



Medical
Low Noise

Medical Power Supply

Low Noise 1U size

patents pending



PLUG & PLAY POWER next generation power source

FEATURES

- Low Acoustic Noise 59dBA
- UL60601-1 and EN60601-1 approved
- Less than 300µA leakage current
- 4000VAC isolation
- 1.5V to 58V standard output voltages
- Extra low profile: 1U height (40mm)
- Ultra high efficiency, up to 90%
- Plug & Play Power
 - allows fast custom configuration
 - allow easy logistics
- Reduced system heat dissipation
- Series / Parallel of multiple outputs
- 5V bias standby voltage provided
- Individual output control signals

APPLICATIONS INCLUDE

- Clinical diagnostic equipment
- Medical lasers
- Dialysis equipment
- For Standard applications see Xcite, Xqite

The Xzite family of low noise medically approved power supplies provides up to 1200W in an extremely compact 1U x 260 x 127mm package. Boasting industry leading power density of 15W/in³ and efficiencies of up to 90%, the Xzite family employs an innovative plug & play architecture that allows users to instantly configure a custom power solution in less than 5 minutes!

Ideal for acoustic sensitive medical applications the Xzite family provides unmatched efficiency and high power density, made possible through the combination of low loss technologies and the best field-proven technologies in planar magnetics and surface mount electronics.

The Xzite family consists of 2 powerPac models ranging in power levels from 400W to 1200W. Each model may be populated with up to 6 powerMods selected from the table of powerMods shown below.

All configurations carry full safety agency approvals, UL2601-1, EN60601-1 and are CE marked. For alternative power interfaces contact support@excelsys.com

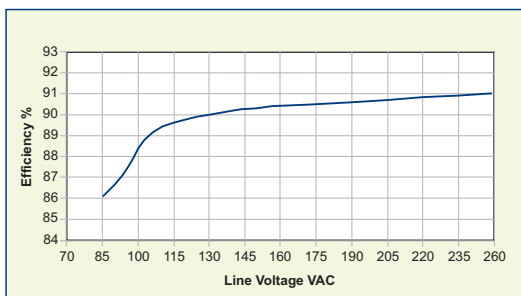
powerMods

MODEL	Vmin	Vnom	Vmax	Imax	Watts
Xg1	1.5	2.5	3.6	50A	125W
Xg2	3.2	5.0	6.0	40A	200W
Xg3	6.0	12.0	15.0	20A	240W
Xg4	12.0	24.0	30.0	10A	240W
Xg5	28.0	48.0	58.0	6A	288W
Xg7	5.0	24.0	28.0	5A	120W
Xg8	v1	5.0	24.0	3A	72W
	v2	5.0	24.0	3A	72W

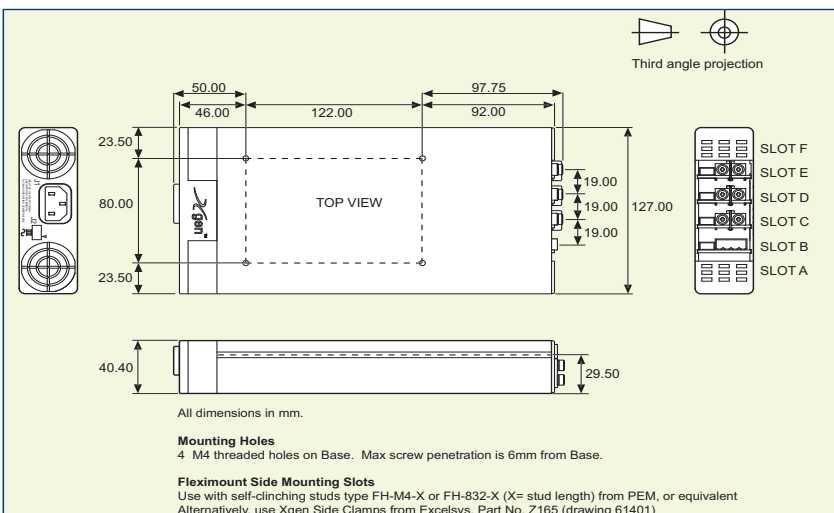
powerPacs

	MODEL	Watts
Xzite	XZA	400W
	XZB	1200W ⁽⁴⁾

EFFICIENCY (typical)



MECHANICAL SPECIFICATIONS



400W-1200W Medical Low Noise AC/DC Plug & Play Power Supply Series

SPECIFICATION applies to configured units consisting of *powerMods* modules plugged into the appropriate *powerPac*

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INPUT					
Parameter	Conditions/Description	Min	Nom	Max	Units
Input Voltage Range	Universal Input	85		264	VAC
		120		380	VDC
Input Frequency Range		47		63	Hz
Power Rating	XZA			400	W
	XZB	Derate linearly from 900W at 120VAC to 600W at 85VAC		1200	W
Input Current	XZA	85VAC in 400W out	7.5		A
	XZB	85VAC in 600W out	11.5		A
Inrush Current	230VAC @ 25°C			25	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing	XZA	250V		F8A HRC	
	XZB	250V		F12A HRC	

OUTPUT					
Parameter	Conditions/Description	Min	Nom	Max	Units
<i>powerMod</i> Power	As per <i>powerMod</i> table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table Electronic: See Xgen Designers' Manual				
Minimum Load			0		A
Line Regulation	For ±10% change from nominal line			±0.1	%
Load & Cross Regulation	For 25% to 75% load change			±0.2	%
Transient Response	For 25% to 75% load change	Voltage Deviation		10	%
			Settling Time		250
Ripple and Noise	20MHz Bandwidth			1.0	% pk-pk
Overvoltage Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom See Designer's Manual for full details	110		120	%
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot				2	%
Turn-on Delay	From AC In / Enable signal			300 / 30	ms
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load. XZA / XZB	20 / 15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC

GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output	4000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 1200W @ 24V		90		%
Safety Agency Approvals	EN60601-1, UL2601-1, CSA601-1 UL File No. E230761				
Leakage Current	250VAC, 60Hz, 25°C			300	µA
Signals	See Xgen Series datasheet				
Bias Supply	Always ON. Current 250mA	4.9	5.0	5.1	VDC
Reliability	Failures per million hours at 25°C and full load			0.98	fpmh
	See Designers' Manual. <i>powerPac</i> excludes fans			0.92	fpmh

EMC					
Parameter	Standard		Level		Units
Emissions					
Conducted	EN55011, EN55022, FCC		Level B		
Radiated	EN55011, EN55022, FCC		Level B		
Harmonic Distortion	EN61000-3-2		Compliant		
Flicker and Fluctuation	EN61000-3-3		Compliant		
Immunity					
Electrostatic Discharge	EN61000-4-2		Level 4		
Radiated RFI	EN61000-4-3		Level 3		
Fast Transients - burst	EN61000-4-4		Level 4		
Input Line Surges	EN61000-4-5		Class 4		
Conducted RFI	EN61000-4-6		10		V/m
Voltage Dips	EN61000-4-11 (EN5024)		10		ms

ENVIRONMENTAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
Operating Temperature		-20		+70	°C
Storage Temperature		-40		+85	°C
Derating	1.6% per °C above 40°C. See Designers Manual for full deratings				
Relative Humidity	Non-condensing	5		95	%RH
Acoustic Noise	Background noise 28.6dBA, Noise measured 1m from unit		59		dBA
Shock	3000 Bumps, 10G (16ms) half sine				
Vibration	1.5G	10		200	Hz

- NOTES**
1. This product is not intended for use as a stand alone unit and must be installed by qualified personnel.
 2. The specifications contained herein are believed to be correct at time of publication and are subject to change without notice.
 3. All specifications at nominal input, full load, 25°C unless otherwise stated.
 4. See Xgen Designers Manual for detailed power ratings

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