

xzite

Medical Power Supply Low Acoustic Noise 1U size

patents pending



genSeries

Medical Low Acoustic Noise

PLUG & PLAY POWER next generation power source

FEATURES

- Low Acoustic Noise 59dBA
- EN60601-1 3rd Edition Approved
- Less than 600µA 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 acoustic 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 3 *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

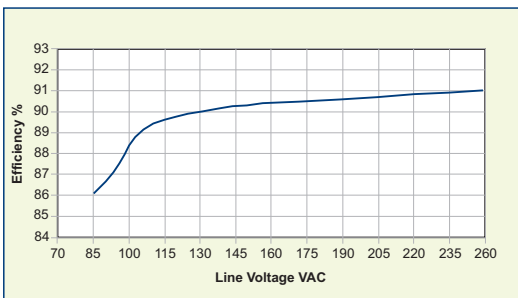
powerMods

MODEL	Vmin	Vnom	Vmax	I _{max}	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

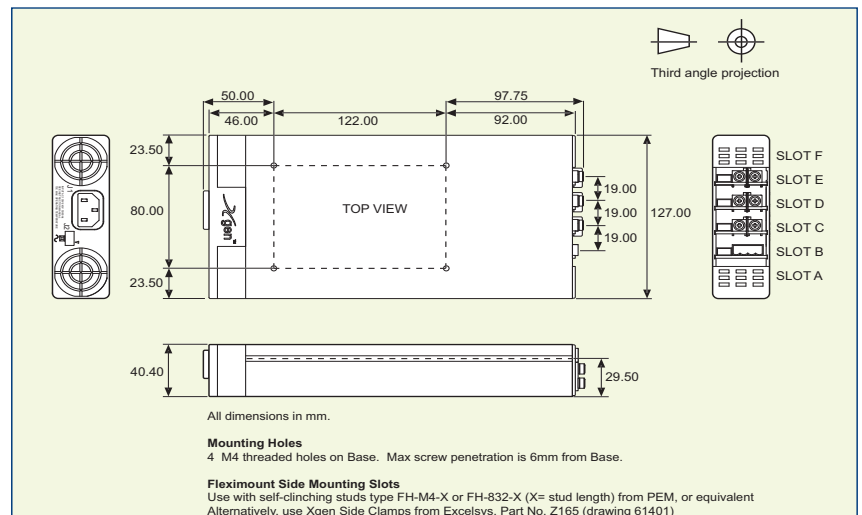
powerPacs

	MODEL	Watts
Xzite	XZA	600W
	XZB	900W
	XZC	1200W

EFFICIENCY (typical)



MECHANICAL SPECIFICATIONS



Note: Please refer to the larger version of this diagram on page 42

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

INPUT						
Parameter	Conditions/Description	Min	Nom	Max	Units	
Input Voltage Range	Universal Input	85 120		264 380	VAC VDC	
Input Frequency Range		47		63	Hz	
Power Rating XZA XZB XZC	Derate linearly from 900W at 120VAC to 600W at 85VAC Derate linearly from 900W at 120VAC to 600W at 85VAC			400 900 1200	W W W	
Input Current XZA XZB XZC	85VAC in 400W out 85VAC in 600W out 85VAC in 600W out		7.5 11.5 11.5		A A A	
Inrush Current	230VAC @ 25°C			25	A	
Undervoltage Lockout	Shutdown	65		74	VAC	
Fusing XZA XZB XZC	250V 250V 250V		F8A HRC F12A HRC F12A HRC			
OUTPUT						
Parameter	Conditions/Description	Min	Nom	Max	Units	
powerMod 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 Settling Time			10 250	μs	
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			600 / 30	ms	
Rise Time	Monotonic			5	ms	
Hold-up Time	For nominal output voltages at full load. XZA / XZB & XZC	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 Input to Chassis	4000 1500			VAC 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			600	μA	
Signals	See Xgen Series datasheet					
Bias Supply	Always ON. Current 250mA	4.8	5.0	5.2	VDC	
Reliability	Failures per million hours at 25°C and full load See Designers' Manual. <i>powerPac</i> excludes fans		<i>powerMod</i> <i>powerPac</i>	0.98 0.92	fpmh 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 (EN55024)		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 (Section 12, pages 37-38)					
Relative Humidity	Non-condensing	5		95	%RH	
Acoustic Noise	Background noise 28.6dBA, Noise measured 10cm 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.
 5. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.

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