



Low Acoustic Noise Power Supply

Ultra-high efficiency 1U size

patents pending



PLUG & PLAY POWER next generation power source

FEATURES

- Low Acoustic Noise 59dBA
- 1.5V to 58V standard output voltages
- All outputs fully floating
- 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
- Few electrolytic capacitors (all long life)
- Visual LED indicators
- Series / Parallel of multiple outputs
- 5V bias standby voltage provided
- Individual output control signals

APPLICATIONS INCLUDE

- Audio Equipment
- Test and measurement
- Telecommunications
- For Medical applications, See Xzite

The Xqite family of low acoustic noise 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 Xqite 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 applications such as audio applications, the Xqite 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 Xqite 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, UL60950, EN60950 and are CE marked. For alternative power interfaces contact support@excelsys.com

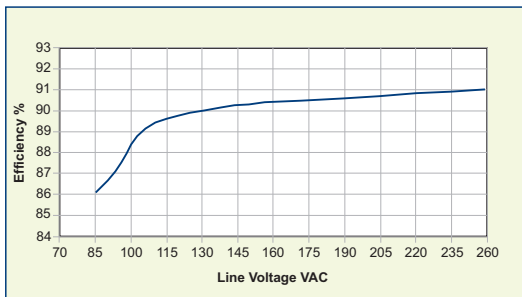
powerMods

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	28.0	3A	72W
	v2	5.0	24.0	28.0	3A	72W

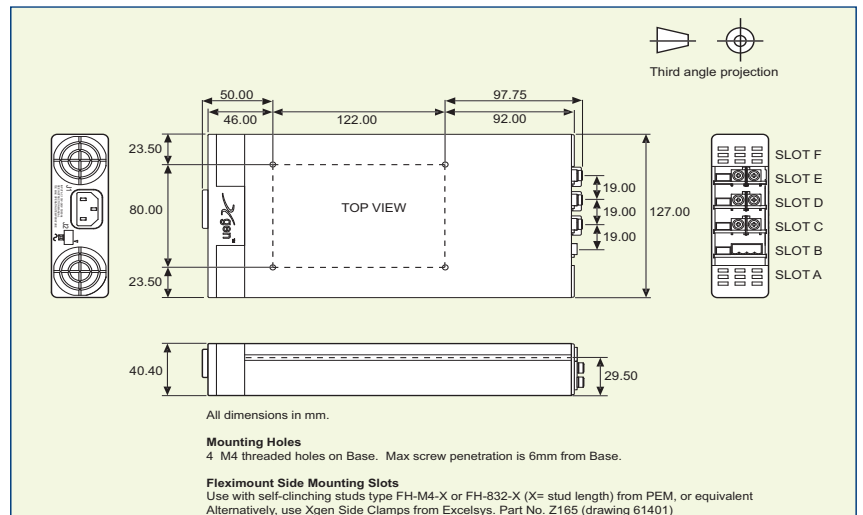
powerPacs

	MODEL	Watts
Xqite	XQA	600W
	XQB	900W
	XQC	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**

Low Acoustic Noise

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	XQA			400	W
	XQB			900	W
	XQC	Derate linearly from 1200W at 120VAC to 850W at 85VAC		1200	W
Input Current	XQA	85VAC in 400W out	7.5		A
	XQB	85VAC in 850W out	11.5		A
	XQC	85VACin 1200W ouot	11.5		A
Inrush Current	230VAC @ 25°C			25	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing	XQA	250V		F8A HRC	
	XQB	250V		F12A HRC	
	XQC	250V		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. XQA / XQB & XQC	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	3000 1500			VAC VAC
Efficiency	230VAC, 1200W @ 24V		90		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
Leakage Current	250VAC, 60Hz, 25°C			1.5	mA
Signals	See Xgen Designer's Manual for full details				
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>		0.98	fpmh
		<i>powerPac</i>		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 (EN55024)		10		ms

ENVIRONMENTAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
Operating Temperature		-20		+70	°C
Storage Temperature		-40		+85	°C
Derating	See Xgen Designers Manual 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.
 6. Conformal Coating Option: Consult factory for details.

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