

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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gen series catalogue

The Modular Power Solution of Choice for Mission Critical Applications

- Highest Efficiency
- Highest Reliability
- Highest Power Density



Xgen Product Selector

The Xgen series of user configurable power supplies with its unique plug and play architecture allows system designers to define and build 'instant' custom power solutions with industry leading 17W/in³ power density and up to 90% efficiency.

Xgen powerPacs

The application specific 4 slot and 6 slot *powerPacs* provide up to 12 isolated DC outputs from 200W up to 1340W. The table below summarises the *powerPacs* by application and power level. Please refer to the specific product datasheets for full specifications.

Application	Slots	200W	400W	600W	700W	750W	800W	900W	1000W	1200W	1340W
Standard	4 Slot	XLA	XLB	XLC		XLD					
	6 Slot		XCA		XCB				XCC	XCD	XCE
Medical	4 Slot	XMA	XMB	XMC		XMD					
	6 Slot		XVA		XVB				XVC	XVD	XVE
Low Noise Standard	4 Slot	XKA	XKB	XKC							
	6 Slot			XQA				XQB		XQC	
Low Noise Medical	4 Slot	XRA	XRB	XRC							
	6 Slot			XZA				XZB		XZC	
Ultra Quiet Standard	4 Slot	XTA	XTB								
	6 Slot		XBA	XBB			XBC				
Ultra Quiet Medical	4 Slot	XNA	XNB								
	6 Slot		XWA	XWB			XWC				
Hi-Temp	6 Slot		XHA	XHB							

Xgen powerMods

High Efficiency Plug and Play DC output modules to provide a wide range of DC output voltages from 1.0V up to 58.0V.

MODEL	Vm	in	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	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

Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information.





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Section 1.1 About Excelsys

Your Global Partner for Mission Critical Modular Power Supplies

Excelsys Technologies brings over 20 years experience of modular power supply development and applications support in our revolutionary Xgen series of products. We serve original equipment manufacturers globally from our head office in Ireland, our additional sales offices in USA and China and our network of qualified and experienced distributors in over 30 countries worldwide. Together we have established Excelsys as the brand of choice for customers seeking the highest performing, most reliable and most cost efficient modular power solutions available in the market.

Serving Your Markets, Delivering Your Solutions...

Whatever your application, our dedicated teams of Sales and Applications Engineers are ready to assist you in defining and implementing the optimum modular power solution to meet your custom requirements. Some of the industries where Excelsys have demonstrated success include:



MEDICAL

Medical power supply design and manufacturing demands the highest safety and quality standards. The medically certified solutions in the Xgen Platform are the solutions of choice for variety of applications including:

Clinical Diagnostic Equipment • Medical Lasers • X-ray Machines • CT-Scanners • MRI Scanners Dialysis Equipment • Skin Treatment and Regeneration • Cryotherapy Equipment • Cancer Treatment Equipment



INDUSTRIAL

Excelsys Technologies designs and manufactures power supplies that meet the rigorous demands of the industrial sector. Our products are ideal for a variety of industrial, automation and test & measurement applications including:

Industrial Lasers • Optical Inspection Equipment • Electronic Microscopes • Printer & Paper Binder Equipment • Wafer Fabrication • High-End Camera Equipment • Industrial Cutting Equipment



COMMUNICATIONS

The Xgen range of modular power supplies meet the high reliability and stringent space requirements (1U) of the communications electronics sector and are used across a wide number of applications including:

Wireless Telephony Equipment ● Bulk Power System ● Base Stations ● Data Communications



MILITARY

Excelsys designs and manufactures COTS (Commercial Off The Shelf) power supplies that meet the high reliability and often harsh operating environments of the military electronics industry and are ideal for use in a variety of applications including:

Radar Systems • Data Acquisition (Ground Based and Mobile) • Communications Equipment Test & Measurement Equipment

Excelsys: Our commitment to you...

As a global supplier of modular power supplies, Excelsys combines the latest technology, management methods and a total customer service philosophy to provide the best performing and highest reliability solutions for your business.

Working closely with both our customers and channel partners we are committed to ensuring our products provide the lowest total cost of power supply ownership over the life of your system.





Section 1.2 Overview

The Xgen series brings OEM power supplies to a new paradigm, combining technical excellence with logistics simplicity to provide the world's most flexible, high efficiency, high reliability modular power supply. Xgen continues the Excelsys tradition of providing an instant, no compromise power solution for any application where a unique set of voltage and current requirements is needed.

The Xgen power supply is the most flexible modular power supply in the world. This power supply family ranges in power from 200W to 1340W and is used throughout various industries including Medical, Industrial, Communications and Military.

Need a custom power supply in a hurry?

CUSTOM POWER

Xgen is a true Plug & Play multiple-output power supply. Any one of more than 30 million configurations can be assembled anywhere, in under 5 minutes, from standard, volume-produced modules. This is the new-paradigm: a custom power supply available in 5 minutes from standard parts.

Too much heat generated in your equipment?

Difficult to maintain your equipment at the right temperature?

EFFICIENCY

Xgen has industry unrivalled efficiency, exceeding 90%. This means that less than half of the amount of waste heat is created in comparison to conventional multiple output power sources with efficiencies of 80% and lower. It also guarantees increased system reliability.

Not enough space available in your equipment?

Is space at a premium, making design and manufacture difficult and compromised?

SPACE

Xgen has industry unrivalled power density for a full functionality AC/DC power supply, at 17W/in^{*}. You can get 1340W of multiple-output power source in 1U rack space. Its high power density minimises weight and maximises available space in your design for other components and general accessibility.

Looking for a cost-effective long term solution for all your power supply requirements?

COST-EFFECTIVE

Xgen is configured from standard subassemblies that are manufactured in volume in our world class manufacturing facility. This allows Excelsys to provide you with all the benefits of Xgen at a world class competitive price. Contact Excelsys or one of our distributors for details.

Worried about meeting all relevant standards - EMC, Safety, etc?

STANDARD APPROVALS





Xgen series models are fully compliant with all relevant standards. Standard parts meets the requirements EN60950, UL60950, CSA22.2, EN61000-3-x and EN61000-4-x. Additionally our medically approved range meet the requirements of EN60601 and UL60601 3rd edition for medical applications.









tPLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- · Few electrolytic capacitors (all long life)
- · Visual LED indicators
- 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Industrial machines
- · Test and measurement
- Automation equipment
- Printing
- Telecommunications

The XL family of power supplies provides up to 750W in a slimline 1U package. Providing up to 8 isolated outputs, the XL family is the most flexible power supply in its class and brings affordable configurable power to the 200-750W market.

The slimline product boasts unrivalled power density saving valuable system space. Combined with ultra high efficiencies, the XL family provides system designers with flexible instant solutions that significantly shorten design-in time and simplify integration.

The XL family consists of 4 *powerPac* models in 200W, 400W, 600W and 750W power levels. Each *powerPac* model may be populated with up to 4 *powerMods* selected from the table of *powerMods* shown below.

All configurations carry full safety agency approvals, UL60950, EN60950 and are CE marked.

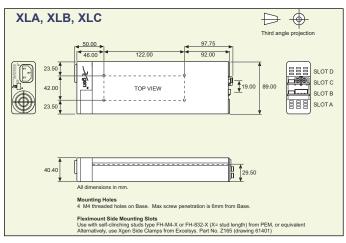
powerMods

MODEL	Vr	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	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

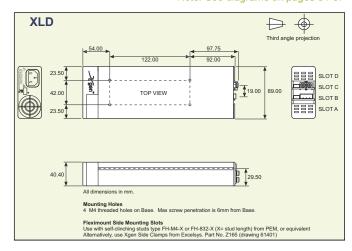
powerPacs

	MODEL	Watts
	XLA	200W
	XLB	400W
×	XLC	600W
	XLD	750W

MECHANICAL SPECIFICATIONS



Note: See diagrams on pages 34-37





INPUT	Canditional Decariation	- 11	N	Mari	
Parameter Input Voltage Range	Conditions/Description Universal Input 47-63Hz. Contact factory for 440Hz operation	Min 85	Nom	Max 264	Units
input voitage Range	Oniversal input 47-03Hz. Contact factory for 440Hz operation	120		380	VAC
Power Rating	XLA:200W, XLB:400W, XLC:600W, XLD:750W	120		300	VDC
	See Section 4.11 for line voltage deratings				
Input Current XLA	85VAC in 200W out		4.0		Α
XLB	85VAC in 400W out		6.0		Α
XLC	85VAC in 400W out		7.5		Α
XLD	85VAC in 525W out		7.5		Α
Inrush Current	230VAC, 25°C			50	Α
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XLA	250V 5 x 20mm		F5A HRC		
XLB	250V 5 x 20mm		F6.3A HRC		
XLC, XLD	250V 5 x 20mm		F8A HRC		
OUTPUT					
	Conditions/Description				
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
	Electronic: See Section 4.6		_		
Minimum Load			0		Α
Line Regulation	For ±10% change from nominal line			±0.1	%
Load Regulation	For 25% to 75% load change			±0.2	%
Cross Regulation	For 25% to 75% load change Voltage Deviation			±0.2	%
Transient Response	, , , , , , , , , , , , , , , , , , ,			250	
Ripple and Noise	Settling Time 20MHz 100mV or 1.0% pk-pk			200	μs
Overvoltage Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	%
	See Section 4.6	110			/3
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot				2	%
Turn-on Delay	From AC In / Enable signal XLA, XLB, XLC			600 / 30	ms
-	From AC In / Enable signal XLD			1000/30	ms
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load XLA, XLB, XLC/XLD	20/15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
Isolation Voltage	Input to Output	3000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 750W @ 24V		89		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
Leakage Current	250VAC, 60Hz, 25°C			1.5	mA
Signals	See Section 4.9				
Bias Supply	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
Reliability	Failures per million hours at 25°C and full load powerMod			0.98	fpmh
	See Section 4.12. powerPac excludes fans powerPac			0.92	fpmh
EMC					
Parameter	Standard		Level		Unit
Emissions					
Conducted	EN55011, EN55022, FCC		Level B		
Radiated	EN55011, EN55022, FCC		Level B		
Harmonic Distortion	EN61000-3-2 Class A		Compliant		
Flicker & Fluctuation	EN61000-3-3		Compliant		
Immunity	ENC4000 4 0		110		
Electrostatic Discharge	EN61000-4-2		Level 2		-
Radiated Immunity Fast Transients-Burst	EN61000-4-3		Level 3		
	EN61000-4-4		Level 3		
Input Line Surges	EN61000-4-5		Level 3		
Conducted Immunity Voltage Dips	EN61000-4-6 EN61000-4-11		Level 3 Compliant		
	□ 140 1000 -11 -11		Compilant		
ENVIRONMENTAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
		-20		+70	°C
Operating Temperature		4.0		+85	°C
Operating Temperature Storage Temperature		-40			
Operating Temperature Storage Temperature Derating	See Section 4.11 for full temperature deratings				
Operating Temperature Storage Temperature Derating Relative Humidity	Non-condensing	5		95	%RH
Operating Temperature Storage Temperature Derating Relative Humidity Shock Vibration					%RF

- 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.
- All specifications at nominal input, full load, 25°C unless otherwise stated.
 XLD: 800W peak for 1s; Duty cycle 7%. powerMod output power must not exceed normal ratings.
- 5. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 6. Conformal Coating option: See Sections 3.1 and 4.10 for details.
- 7. For section references above go to the Xgen Designers Manual.









PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- EN60601-1 3rd edition approved
- · Less than 300µA leakage current
- 150µA option available
- 4000VAC isolation
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- Few electrolytic capacitors (all long life)
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- Radiological imaging
- · Clinical diagnostics
- · Medical lasers
- Clinical chemistry

The XM family of medically approved power supplies provides up to 750W in a slimline 1U package. The XM family carries the latest safety agency approvals to EN60601-1 and UL60601-1 3rd Edition, meeting the stringent creepage and clearance requirements in this compact package. Providing up to 8 isolated outputs, the XM family is the most flexible power supply in its class and brings affordable configurable power to the 200-750W medical market.

The XM family consists of 4 *powerPac* models in 200W, 400W, 600W and 750W power levels. Each *powerPac* model may be populated with up to 4 *powerMods* selected from the table of *powerMods* shown below. Simply select your appropriate *powerPac* and *powerMods* to get your instant custom power solution.

This slimline product boasts unrivalled power density, providing significant system space savings. Combined with ultra-high efficiencies, the XM family provides system designers with flexible instant solutions that significantly shorten system design-in time.

powerMods

MODEL	Vr	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	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
	XMA	200W
≥	XMB	400W
\overline{X}	XMC	600W
	XMD	750W

MECHANICAL SPECIFICATIONS

Third angle projection

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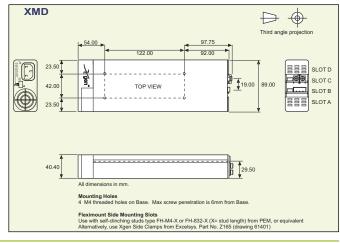
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Note: See diagrams on pages 34-37





INPUT Parameter	Conditions/Description	Min	Nom	Max	Unit
nput Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85	Nom	264	VAC
ilput voltage Range	Oniversal input 47-03/12. Contact factory for 440/12 operation	120		380	VDC
Power Rating	XMA:200W, XMB:400W, XMC:600W, XMD:750W	120		300	VDC
	See Section 4.11 for line voltage deratings				
Input Current XMA	85VAC in 200W out		4.0		Α
XMB	85VAC in 400W out		6.0		Α
XMC	85VAC in 400W out		7.5		Α
XMD	85VAC in 525W out		7.5		A
Inrush Current	230VAC, 25°C		7.0	50	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XMA	250V 5 x 20mm	00	F5A HRC	/	VAC
XMB	250V 5 x 20mm		F6.3A HRC		
XMC, XMD	250V 5 x 20mm		F8A HRC		
•	250 7 3 % 2011111		TOATIKO		
DUTPUT					
Parameter	Conditions/Description	Min	Nom	Max	Unit
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
	Electronic: See Section 4.6				
Minimum Load			0		Α
Line Regulation	For ±10% change from nominal line			±0.1	%
Load Regulation	For 25% to 75% load change			±0.2	%
Cross Regulation				±0.2	%
Transient Response	For 25% to 75% load change Voltage Deviation			10	%
	Settling Time			250	μs
Ripple and Noise	20MHz 100mV or 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	110		120	%
	See Section 4.6			-	'-
Remote Sense	Max. line drop compensation. (except Xq7, Xq8)			0.5	VDC
Overshoot	(٥/,٥٥٥ / ١٠٠٠)			2	%
Turn-on Delay	From AC In / Enable signal XMA, XMB, XMC			600 / 30	ms
rum-on belay	From AC In / Enable signal XMD			1000/30	ms
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load XMA,XMB, XMC/XMD	20/15			
Output Isolation	Output to Output / Output to Chassis	500 / 500			ms VDC
•	Output to Output / Output to Chassis	300 7 300			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
Isolation Voltage	Input to Output	4000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 750W @ 24V		89		%
Safety Agency Approvals	EN60601-1, UL60601-1 3rd Edition, CSA601-1 UL File no. E230761				
Leakage Current	250VAC, 60Hz, 25°C			300	μA
	250VAC, 60Hz, 25°C Option 04			150	μA
Signals	See Section 4.9				P
Bias Supply	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
Reliability	Failures per million hours at 25°C and full load powerMod		0.0	0.98	fpmh
. tonubinty	See Section 4.12. powerPac excludes fans powerPac			0.92	fpml
EMC	production production and production product				,
EMC Parameter	Standard		Level		Unit
	Standard		Level		Office
Emissions			Level B		
	ENEE044 ENEE022 ECC		I EVELK		
Conducted	EN55011, EN55022, FCC				
Conducted Radiated	EN55011, EN55022, FCC		Level B		
Conducted Radiated Harmonic Distortion	EN55011, EN55022, FCC EN61000-3-2 Class A		Level B Compliant		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation	EN55011, EN55022, FCC		Level B		
Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3		Level B Compliant Compliant		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2		Level B Compliant Compliant Level 2		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Level B Compliant Compliant Level 2 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Level B Compliant Compliant Level 2 Level 3 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Level B Compliant Compliant Level 2 Level 3 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	May	Unit
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	Max	
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	-20	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	°C
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description		Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		Unit:
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	-20 -40	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	°C
Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst nput Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Derating Relative Humidity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	-20	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	°C
Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity Shock	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing 3000 Bumps, 10G (16ms) half sine	-20 -40 5	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85 95	°C °C %RF
Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst nput Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Derating Relative Humidity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	-20 -40	Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	°C

- 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.
- All specifications at nominal input, full load, 25°C unless otherwise stated.
 XMD: 800W peak for 1s; Duty cycle 7%. powerMod output power must not exceed normal ratings.
- 5. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 6. For section references above go to the Xgen Designers Manual.









PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- · Low Acoustic noise 39.8dBA
- · Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- · Few electrolytic capacitors (all long life)
- · Visual LED indicators
- 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- Audio Equipment
- Test and measurement
- Telecommunications

The XK family of low acoustic noise power supplies provides up to 600W in a slimline 1U x 260mm x 89mm package. Providing up to 8 isolated outputs, the XK family is the most flexible power supply in its class and brings affordable configurable power to the 200-600W market.

Ideal for acoustic sensitive applications, the XK boasts unrivalled power density saving valuable system space. Combine with ultra high efficiencies, the XK family provides system designers with flexible instant solutions that significantly shorten and simplify system design-in time.

The XK family consists of 3 *powerPac* models in 200W, 400W and 600W power levels. Each *powerPac* model may be populated with up to 4 *powerMods* selected from the table of *powerMods* shown below.

All configurations carry full safety agency approvals, UL60950, EN60950 and are CE marked.

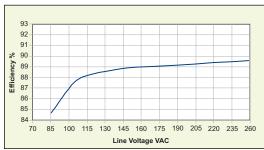
powerMods

MODEL	Vi	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	48.0	58.0	6A	288W
Xg7		5.0	24.0	28.0	5A	120W
Xg8 v1		5.0	24.0	28.0	ЗА	72W
V2		5.0	24.0	28.0	3A	72W

powerPacs

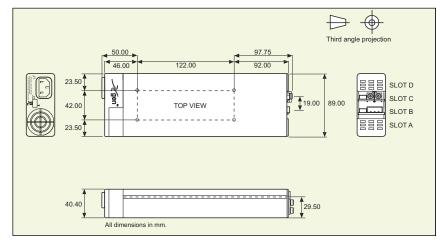
	MODEL	Watts
	XKA	200W
X	XKB	400W
	XKC	600W

EFFICIENCY (typical)



MECHANICAL SPECIFICATIONS

Note: See diagrams on pages 34-37





INPUT Parameter	Conditions/Description	Min	Nom	Max	Units
nput Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85	Nom	264	VAC
iiput voitage Raiige	Offiversal input 47-05Hz. Contact factory for 440Hz operation	120		380	VAC
Power Rating	XKA:200W, XKB:400W, XKC:600W	120		000	VDO
3	See Section 4.11 for line voltage deratings				
Input Current XKA	85VAC in 200W out		4.5		Α
XKB	85VAC in 400W out		5.5		Α
XKC	85VAC in 400W out		7.5		Α
Inrush Current	230VAC, 25°C			50	Α
Undervoltage Lockout	Shutdown	65	554 UDO	74	VAC
Fusing XKA	250V 5 x 20mm		F5A HRC		
XKB XKC	250V 5 x 20mm 250V 5 x 20mm		F6.3A HRC F8A HRC		
	250V 5 X 2011111		FOATIRC		
OUTPUT					
Parameter	Conditions/Description	Min	Nom	Max	Units
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
Minimum Lood	Electronic: See Section 4.6		0		Α.
Minimum Load Line Regulation	For ±10% change from pominal line		0	±0.1	A %
Line Regulation Load Regulation	For ±10% change from nominal line For 25% to 75% load change			±0.1 ±0.2	%
Cross Regulation	1 of 2070 to 1070 load offatige			±0.2 ±0.2	%
Transient Response	For 25% to 75% load change Voltage Deviation			10.2	%
	Settling Time			250	μs
Ripple and Noise	20MHz 100mV or 1.0% pk-pk			-	1
Overvoltage Protection	Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	%
	See Section 4.6				
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot	First AO In (Firstly of			2	%
Turn-on Delay	From AC In / Enable signal			600 / 30	ms
Rise Time	Monotonic			5	ms
Hold-up Time Output Isolation	For nominal output voltages at full load	20 500 / 500			ms VDC
•	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output	3000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 600W @ 24V		89		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
Leakage Current	250VAC, 60Hz, 25°C			1.5	mA
Signals	See Section 4.9				
Bias Supply	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
Reliability	Failures per million hours at 25°C and full load powerMod			0.98	fpmh
	See Section 4.12. powerPac excludes fans powerPac			0.92	fpmh
EMC					
EMC Parameter	Standard		Level	_	Unit
EMC Parameter Emissions	Standard	_	Level	_	Unit
Parameter <mark>Emissions</mark>	Standard EN55011, EN55022, FCC		Level B		Unit
Parameter <mark>Emissions</mark> Conducted					Unit
Parameter Emissions Conducted Radiated	EN55011, EN55022, FCC		Level B		Units
Parameter Emissions Conducted Radiated Harmonic Distortion	EN55011, EN55022, FCC EN55011, EN55022, FCC		Level B Level B		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3		Level B Level B Compliant Compliant		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2		Level B Level B Compliant Compliant Level 2		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Level B Level B Compliant Compliant Level 2 Level 3		Units
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Level B Level B Compliant Compliant Level 2 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	Max	Units
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	Max +70	
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	-20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	Units °C
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	-20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	Units °C
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Derating Relative Humidity	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	-20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	Unit:
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity Acoustic Noise	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	-20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	Units °C °C
Parameter	EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing Measured from distance of 1m	-20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	Units °C °C

- 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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 5. Conformal Coating option: See Sections 3.1 and 4.10 for details.
- ${\hbox{\bf 6.}} \ \ \hbox{For section references above go to the Xgen Designers Manual}.$









PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- Low Acoustic noise 39.8dBA
- EN60601-1 3rd edition approved
- Less than 300µA leakage current
- 150µA option available
- 4000VAC isolation
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- · Few electrolytic capacitors (all long life)
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Radiological imaging
- Clinical diagnostics
- Medical lasers
- · Clinical chemistry

The XR family of low acoustic noise medically approved power supplies provides up to 600W in a slimline 1u x 260mm x 89mm package. Ideal for acoustic sensitive medical equipment, the XR family carries full safety agency approvals to EN60601-1 and UL60601-1 3rd Edition, meeting the stringent creepage and clearance requirements in this compact package. Providing up to 8 isolated outputs, the XR family is the most flexible power supply in its class and brings affordable configurable power to the 200-600W medical market.

The XR family consists of 3 powerPac models in 200W, 400W and 600W power levels. Each powerPac model may be populated with up to 4 powerMods selected from the table of powerMods shown below. Simply select your appropriate powerPac and powerMods to get your instant custom power solution.

This slimline product boasts unrivalled power density, providing significant system space savings. Combined with ultra-high efficiencies, the XR family provides system designers with flexible instant solutions that significantly shorten system design-in time.

powerMods

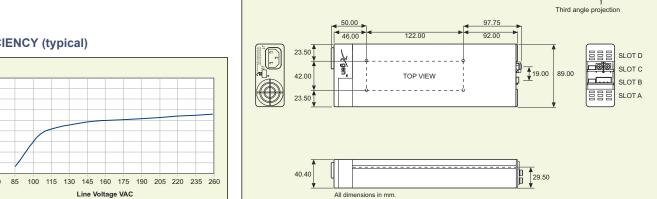
MODEL	Vr	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	48.0	58.0	6A	288W
Xg7		5.0	24.0	28.0	5A	120W
Xg8 v1 v2		5.0 5.0	24.0 24.0	28.0 28.0	3A 3A	72W 72W

powerPacs

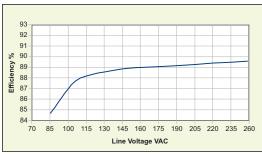
MODEL	vvatts
XRA	200W
XRB	400W
XRC	600W
	XRA XRB

MECHANICAL SPECIFICATIONS

Note: See diagrams on pages 34-37



EFFICIENCY (typical)



Parameter	Conditions/Description	Min	Nom	Max	Unit
nput Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
input voltage Runge	Oniversal input 47 corres. Contact factory for 440112 operation	120		380	VDC
Power Rating	XRA:200W, XRB:400W, XRC:600W			000	
	See Section 4.11 for line voltage deratings				
nput Current XRA	85VAC in 200W out		4.5		Α
XRB	85VAC in 400W out		5.5		Α
XRC	85VAC in 400W out		7.5		Α
nrush Current	230VAC, 25°C			50	Α
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XRA	250V 5 x 20mm		F5A HRC		
XRB	250V 5 x 20mm		F6.3A HRC		
XRC	250V 5 x 20mm		F8A HRC		
DUTPUT					
arameter	Conditions/Description	Min	Nom	Max	Unit
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
Minimum I and	Electronic: See Section 4.6		0		Α
Minimum Load	For 1400/ shoots from actival line		0	.0.1	A 0/
Line Regulation	For ±10% change from nominal line			±0.1	%
Load Regulation	For 25% to 75% load change			±0.2 ±0.2	%
Cross Regulation	For 25% to 75% load change Voltage Deviation			±0.2	%
Transient Response	For 25% to 75% load change Voltage Deviation Settling Time			250	µs
Ripple and Noise	20MHz 100mV or 1.0% pk-pk			200	μο
Overvoltage Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	%
	See Section 4.6				"
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	20			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
Isolation Voltage	Input to Output	4000			VAC
ū	Input to Chassis	1500			VAC
Efficiency	230VAC, 600W @ 24V		89		%
Safety Agency Approvals	EN60601-1, UL2601-1, CSA601-1 UL File No. E230761				
Leakage Current	250VAC, 60Hz, 25°C			300	μA
	250VAC, 60Hz, 25°C Option 04			150	μA
Signals	See Section 4.9				
<u> </u>	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
<u> </u>		1.0		V.=	
Bias Supply	Failures per million hours at 25°C and full load powerMod			0.98	tpml
Bias Supply		0		-	
Bias Supply Reliability	Failures per million hours at 25°C and full load powerMod	9		0.98	
Bias Supply Reliability EMC	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac		Level	0.98	fpml
Bias Supply Reliability EMC Parameter	Failures per million hours at 25°C and full load powerMod		Level	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard			0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC		Level B	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC		Level B Level B	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A		Level B Level B Compliant	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC		Level B Level B	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A		Level B Level B Compliant	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3		Level B Level B Compliant Compliant	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2		Level B Level B Compliant Compliant Level 2	0.98	fpml fpml Unit
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Level B Level B Compliant Compliant Level 2 Level 3	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Level B Level B Compliant Compliant Level 2 Level 3 Level 3	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Emmunity Flaction Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	0.98	fpml
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-2 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	Failures per million hours at 25°C and full load see Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	0.98 0.92	- Unit
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-2 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	Unit Unit
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerMod powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92	- Unit
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Derating	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70 +85	Unit Unit °C °C
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	Unit Unit CC C %RH
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst nput Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Operating	Failures per million hours at 25°C and full load See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70 +85	Unit Unit °C °C

- 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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 5. For section references above go to the Xgen Designers Manual.





Ultra Low Noise Power Supply

Ultra-high efficiency 1U size



PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- · Low Acoustic noise 37.3dBA
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- · Few electrolytic capacitors (all long life)
- · Visual LED indicators
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Audio Equipment
- Test and measurement
- **Telecommunications**
- · For Medical applications, See XN



Ideal for acoustic sensitive applications such as audio applications, the XT 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 XT family consists of 2 powerPac models ranging in power levels from 200W to 400W. Each model may be populated with up to 4 powerMods selected from the table of powerMods shown below.

All configurations carry full safety agency approvals, UL60950, EN60950 and are CE

powerMods

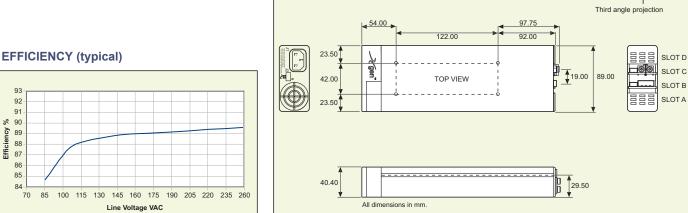
MODEL	Vi	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	41.6A	104W
Xg2	1.5	3.2	5.0	6.0	33.2A	166W
Xg3	4.0	6.0	12.0	15.0	16.67A	200W
Xg4	8.0	12.0	24.0	30.0	8.33A	200W
Xg5	8.0	24.0	48.0	58.0	5A	240W
Xg7		5.0	24.0	28.0	4.17A	100W
Xg8 v1		5.0	24.0	28.0	2.5A	60W
V2		5.0	24.0	28.0	2.5A	60W

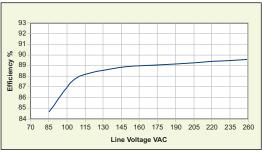
MECHANICAL SPECIFICATIONS

powerPacs

	MODEL	Watts
\vdash	XTA	200W
×	XTB	400W

powerMod Maximum Power Outputs (W) have been derated to operate with XT range of Ultra Low-Noise Power Supplies. See Section 4.11 Xgen Designers Manual for full derating details







INPUT	O				
Parameter	Conditions/Description	Min	Nom	Max	Unit
Input Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
	VTA 20014 VTB 40014	120		380	VDC
Power Rating	XTA:200W, XTB:400W				
L. 10	See Section 4.11 for line voltage deratings		4.5		-
Input Current XTA	85VAC in 200W out		4.5		Α
XTB	85VAC in 283W out		5.0		Α
Inrush Current	230VAC, 25°C			50	Α
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XTA	250V		F5A HRC		
XTB	250V		F6.3A HRC		
OUTPUT					
Parameter	Conditions/Description	Min	Nom	Max	Unit
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table Electronic: See Section 4.6				
Minimum Load	LISSUSTITU. COC COCCIOTI T.C		0		Α
Line Regulation	For ±10% change from nominal line		0	±0.1	%
Line Regulation Load & Cross Regulation	For 25% to 75% load change			±0.1 ±0.2	%
Transient Response	For 25% to 75% load change Voltage Deviation			±0.2 10	%
manaiem Response	For 25% to 75% load change Voltage Deviation Settling Time			250	
Ripple and Noise	20MHz 100mV or 1.0% pk-pk			200	μs
		110		125	%
Overvoltage Protection Overcurrent Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)				%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	70
Domoto Cores	See Section 4.6			0.5	1/00
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot	From AC In / Enoble signal			2 600 / 20	% ma
Turn-on Delay	From AC In / Enable signal			600 / 30	ms
Rise Time	Monotonic VTA 2 VTA 2 VTA	00 / 45		5	ms
Hold-up Time	For nominal output voltages at full load. XTA & XTB	20 / 15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
Isolation Voltage	Input to Output	3000			VAC
isolution voltage	Input to Chassis	1500			VAC
Efficiency	230VAC, 800W @ 24V	1300	90		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875		30		/0
Leakage Current	250VAC, 60Hz, 25°C			1.5	mA
Signals	See Section 4.9			1.5	IIIA
	Always on. Current 250mA. 500mA option available	4.0	F 0	F 2	VDC
Bias Supply		4.8	5.0	5.2	_
Reliability	Failures per million hours at 25°C and full load powerMod			0.98	fpml
	See Section 4.12. powerPac excludes fans powerPac			0.92	fpml
EMC	Otanidari		Loud		11,
Parameter	Standard		Level		Unit
Emissions	FNEEDAA FNEEDOO FOO		Laurin		
Conducted			Level B		
	EN55011, EN55022, FCC				
Radiated	EN55011, EN55022, FCC		Level B		
Radiated Harmonic Distortion	EN55011, EN55022, FCC EN61000-3-2 Class A		Compliant		
Radiated Harmonic Distortion Flicker & Fluctuation	EN55011, EN55022, FCC				
Radiated Harmonic Distortion Flicker & Fluctuation Immunity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3		Compliant Compliant		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2		Compliant Compliant Level 2		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Compliant Compliant Level 2 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Compliant Compliant Level 2 Level 3 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Compliant Compliant Level 2 Level 3 Level 3 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Compliant Compliant Level 2 Level 3 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Compliant Compliant Level 2 Level 3 Level 3 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11		Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	Max	
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	-20	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	°C
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description		Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	-20	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	°C
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	-20	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	°C
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	-20 -40	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	°C °C %RI
Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	-20 -40	Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	+70 +85	

NOTES

Vibration

- 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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 5. Conformal Coating option: See Sections 3.1 and 4.10 for details.

1.5G

6. For section references above go to the Xgen Designers Manual.



10

Hz

200



Medically Approved Ultra Low Noise Power Supply

Ultra-high efficiency 1U size



PLUG & PLAY POWER next generation power solution

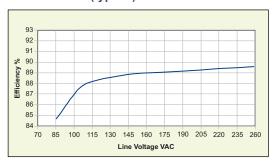
FEATURES & OPTIONS

- · Low Acoustic noise 37.3dBA
- EN60601-1 3rd edition approved
- Less than 300µA leakage current
- 150µA option available
- · 4000VAC isolation
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- All outputs fully floating
- Series / Parallel of multiple outputs
- Few electrolytic capacitors (all long life)
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Clinical diagnostic equipment
- · Medical lasers
- · Dialysis equipment
- · For Standard applications see XT

EFFICIENCY (typical)





The XN family of medically approved Ultra Low Noise power supplies provides up to 400W in an extremely compact 1U package. Providing up to 8 isolated DC outputs, the XN family employs innovative plug & play architecture allowing users to instantly configure a custom power solution in less than 5 minutes!

The XN family consists of 3 *powerPacs* ranging in power levels from 200W to 400W peak and 7 *powerMod* DC output modules. Simply select the appropriate *powerPac* and up to 4 *powerMods* from the tables below to complete your custom power supply.

The XN family boasts ultra-high efficiencies (up to 90%). The significant system space savings and reduced heat dissipation radically simplify system design.

All configurations carry full safety agency approvals including UL60601-1, EN60601-1 3rd Edition and are CE marked.

powerMods

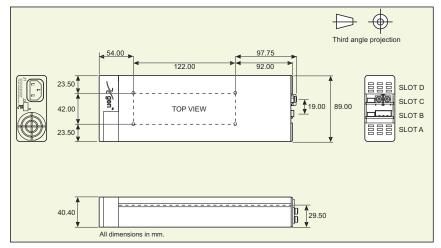
MODEL	Vr	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	41.6A	104W
Xg2	1.5	3.2	5.0	6.0	33.2A	166W
Xg3	4.0	6.0	12.0	15.0	16.67A	200W
Xg4	8.0	12.0	24.0	30.0	8.33A	200W
Xg5	8.0	24.0	48.0	58.0	5A	240W
Xg7		5.0	24.0	28.0	4.17A	100W
Xg8 v1		5.0	24.0	28.0	2.5A	60W
V2		5.0	24.0	28.0	2.5A	60W

powerPacs

	MODEL	Watts
Z	XNA	200W
$\overline{\times}$	XNB	400W

powerMod Maximum Power Outputs (W) have been derated to operate with XN range of Ultra Low-Noise Power Supplies. See Section 4.11 Xgen Designers' Manual for full derating details.

MECHANICAL SPECIFICATIONS





INPUT Parameter	Conditions/Decription	Min	Nom	Max	Unit
Input Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
put roimgo ruingo	omitorious imparementation actions y for thorne operation	120		380	VDC
Power Rating	XNA:200W, XNB:400W	.=4			
	See Section 4.11 for line voltage deratings				
Input Current XNA	85VAC in 200W out		4.5		Α
XNB	85VAC in 283W out		5.0		Α
Inrush Current	230VAC, 25°C			50	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XNA XNB	250V		F5A HRC		
XINB	250V		F6.3A HRC		
ОИТРИТ					
Parameter	Conditions/Description	Min	Nom	Max	Unit
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per powerMod table				
	Electronic: See Section 4.6				
Minimum Load			0		Α
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	%
Discuss and Note:	Settling Time			250	μs
Ripple and Noise	220MHz 100mV or 1.0% pk-pk Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	0/
Overvoltage Protection Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110 110		125 120	%
Overcurrent Frotection	See Section 4.6	110		120	-/0
Remote Sense	Max. line drop compensation. (except Xq7, Xq8)			0.5	VDC
Overshoot	arep compensuson (except Agr, Age)			2	%
Turn-on Delay	From AC In / Enable signal			600 / 30	ms
- 4	v ·				
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load. XNA & XNB	20 / 15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unit
Isolation Voltage	Input to Output	4000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 800W @ 24V		90		%
Safety Agency Approvals	EN60601-1 3rd Edition, UL60601-1, CSA601-1 UL File No. E230761				,,,
Leakage Current	250VAC, 60Hz, 25°C			300	μA
3	250VAC, 60Hz, 25°C option 04			150	μA
Signals					
	See Section 4.9				
<u> </u>	See Section 4.9 Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
Bias Supply		4.8	5.0	5.2 0.98	
Bias Supply Reliability	Always on. Current 250mA. 500mA option available	4.8	5.0		VDC fpmh fpmh
Bias Supply Reliability	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply Reliability EMC	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac	4.8		0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard	4.8	Level	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC	4.8	Level B	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC	4.8	Level B Level B	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B Compliant	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC	4.8	Level B Level B	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3	4.8	Level B Level B Compliant Compliant	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B Compliant Compliant	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2	4.8	Level B Level B Compliant Compliant	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3	4.8	Level B Level B Compliant Compliant Level 2 Level 3	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	0.98	fpmh fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92	fpmh fpmh Unite
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	0.98 0.92	fpmh fpmh Unite
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92	fpmh fpmh Unite
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70 +85	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	fpmh fpmh Units CC CR
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity Acoustic Noise	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing Measured from distance on 1m	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70 +85	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70 +85	fpmh fpmh Units CC CR

NOTES

Vibration

- 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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 5. For section references above go to the Xgen Designers Manual.

1.5G



10

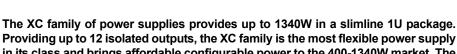
Hz

200









PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- Ultra high efficiency, up to 90%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- Few electrolytic capacitors (all long life)
- · Visual LED indicators
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Industrial machines
- Test and measurement
- · Automation equipment
- Printing
- · MIL-COTS applications

in its class and brings affordable configurable power to the 400-1340W market. The slimline product boasts unrivalled power density saving valuable system space.

Combined with ultra high efficiencies, the XC family provides system designers with flexible instant solutions that significantly shorten and simplify system design-in time.

The XC family consists of 5 powerPac models in 400W, 700W, 1000W, 1200W and 1340W power levels. Each powerPac 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.

powerMods

MODEL	Vı	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	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

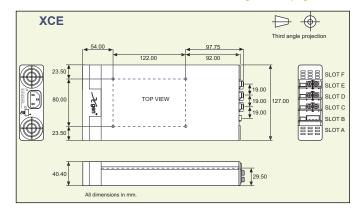
	MODEL	Watts
	XCA	400W
	XCB	700W
9	XCC	1000W
	XCD	1200W
	XCE	1340W

GenSeries

MECHANICAL SPECIFICATIONS

XCA, XCB, XCC, XCD $\Rightarrow \Rightarrow$ 46.00 19.00 SLOT E SLOT D 2 SLOT C SLOT B SLOTA

Note: See diagrams on pages 34-37





INPUT					
Parameter	Conditions/Decription				
Input Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
		120		380	VDC
Power Rating	XCA:400W, XCB:700W, XCC:1000W, XCD:1200W, XCE:1340W				
	See Section 4.11 for line voltage deratings				
Input Current XCA	85VAC in 400W out		7.5		Α
XCB	85VAC in 700W out		9.5		Α
XCC, XCD	85VAC in 850W out		11.5		Α
XCE	85VAC in 1000W out		14.0		Α
Inrush Current	230VAC @ 25°C			25	Α
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XCA	250V		F8A HRC		
XCB	250V		F10A HRC		
XCC, XCD	250V		F12A HRC		
XCE	250V		F15A HRC		
ОИТРИТ					
Parameter	Conditions/Description	Min	Nom	Max	Uni
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
	Electronic: See Section 4.6				
Minimum Load			0		Α
Line Regulation	For ±10% change from nominal line		-	+0 1	%
Load & Cross Regulation	For 25% to 75% load change				%
Transient Response	For 25% to 75% load change Voltage Deviation				%
manaiem nesponse	8 8				
Ripple and Noise	Settling Time 20MHz 100mV or 1.0% pk-pk			200	μs
	Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overvoltage Protection					
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	%
Damata Carri	See Section 4.6			0.5	1/0
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)				VDC
Overshoot					%
Turn-on Delay	From AC In / Enable signal XCA, XCB, XCC, XCD				ms
	From AC In / Enable signal XCE				ms
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load. XCA,XCB,XCC / XCD,XCE	20 / 15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDO
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Unii
Isolation Voltage	Input to Output	3000			VAC
rootation voltage	Input to Chassis	1500			VAC
Efficiency	230VAC, 1340W @ 24V	1300	00		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875		90		/0
Earth Leakage Current	250VAC, 60Hz, 25°C			1 5	mA
<u> </u>	See Section 4.9			1.5	IIIA
Signals		4.0	F 0	F F	VDC
Bias Supply	Always on. Current 250mA (30mA for XCE) 500mA option available	4.8	5.0		VDC
Reliability	Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac			264 380 25 74 *** *** *** *** *** *** ***	fpm
			25 74 F8A HRC F10A HRC F12A HRC F15A HRC	0.92	fpm
	See Section 4.12. power at excludes lans power at				
EMC					
Parameter	Standard Standard		Level		Uni
Parameter Emissions	Standard			_	Unit
Parameter Emissions	Standard EN55011, EN55022, FCC				Unit
Parameter Emissions Conducted	Standard		Level B		Unit
Parameter Emissions Conducted Radiated	Standard EN55011, EN55022, FCC		Level B Level B		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC		Level B Level B Compliant		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A		Level B Level B Compliant		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A		Level B Level B Compliant Compliant		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3		Level B Level B Compliant Compliant Level 2		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3		Level B Level B Compliant Compliant Level 2 Level 3		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4		Level B Level B Compliant Compliant Level 2 Level 3 Level 3		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3		Uni
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3		Unit
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Level 3	Max	
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant		Unid
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	-20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	
Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	-20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70 +85	Unit
Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	-20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3 Compliant	+70	Unit

NOTES

Vibration

- 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. XCE: 1450W peak for 10s; Duty cycle 8%. powerMod output power must not exceed normal ratings.
- 5. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 6. Conformal Coating option: See Sections 3.1 and 4.10 for details.
- 7. For section references above go to the Xgen Designers Manual.



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PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- EN60601-1 3rd edition approved
- Less than 300µA leakage current
- 150µA option available
- 4000VAC isolation
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- Few electrolytic capacitors (all long life)
- · 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- · Clinical diagnostic equipment
- Medical lasers
- · Dialysis equipment

The XV family of medically approved power supplies provides up to an incredible 1340W in an extremely compact 1U package. Providing up to 12 isolated DC outputs, the XV family employs innovative plug & play architecture allowing users to instantly configure a custom power solution in less than 5 minutes!

The XV family consists of 5 *powerPacs* ranging in power levels from 400W to 1450W peak and 7 *powerMod* DC output modules. Simply select the appropriate *powerPac* and up to 6 *powerMods* from the tables below to complete your custom power supply.

The XV family boasts an industry leading power density of 17W/in³ and ultra-high efficiencies (up to 90%). The significant system space savings and reduced heat dissipation radically simplify system design.

All configurations carry full safety agency approvals including UL60601-1, EN60601-1 3^{rd} Edition and are CE marked.

powerMods

MODEL	Vr	nin	Vnom	Vmax	lmax	Watts
	Vtrim	Vpot				
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	48.0	58.0	6A	288W
Xg7		5.0	24.0	28.0	5A	120W
Xg8 v1		5.0	24.0	28.0	ЗА	72W
V2		5.0	24.0	28.0	3A	72W

powerPacs

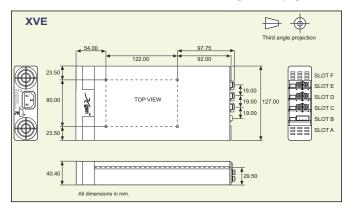
	MODEL	Watts
	XVA	400W
	XVB	700W
Ş	XVC	1000W
	XVD	1200W
	XVE	1340W

MECHANICAL SPECIFICATIONS

TOP VIEW

TOP VI

Note: See diagrams on pages 34-37





INPUT Parameter	Conditions/Decription	Min	Nom	Max	Units
Input Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85	- Nom	264	VAC
iiput voitage Raiige	Oniversal input 47-03Hz. Contact factory for 440Hz operation	120		380	VAC
Power Rating	XVA:400W, XVB:700W, XVC:1000W, XVD:1200W, XVE:1340W	120		300	VDC
ower Rating	See Section 4.11 for line voltage deratings				
Input Current XVA	85VAC in 400W out		7.5		Α
XVB	85VAC in 700W out		9.5		A
XVC, XVD	85VAC in 850W out		11.5		A
XVC, XVD XVE	85VAC in 1000W out		14.0		A
 Inrush Current	230VAC @ 25°C		14.0	25	A
		C.F.			VAC
Undervoltage Lockout	Shutdown	65	EQA LIDO	74	VAC
Fusing XVA	250V		F8A HRC		
XVB	250V		F10A HRC		
XVC, XVD	250V		F12A HRC		
XVE	250V		F15A HRC		
ОИТРИТ					
Parameter	Conditions/Description	Min	Nom	Max	Unit
		IVIIII	NOITI	IVIAA	Ullik
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
	Electronic: See Section 4.6				
Minimum Load	5 400/ 1 6 1 1 1		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	μs
Ripple and Noise	20MHz 100mV or 1.0% pk-pk				
Overvoltage Protection	Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom	110		120	%
	See Section 4.6			_	1
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot	max. into drop compensation. (except xgr, xge)			2	%
Turn-on Delay	From AC In / Enable signal XVA, XVB, XVC, XVD			600 / 30	ms
Turri-Ori Delay	From AC In / Enable signal XVE, XVB, XVC, XVB			700 / 30	ms
Rise Time	Monotonic Signal AVE			5	
		00 / 15		5	ms
Hold-up Time	For nominal output voltages at full load. XVA,XVB,XVC / XVD,XVE	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
ioolation voltage	Input to Chassis	1500			VAC
Efficiency	230VAC, 1340W @ 24V	1300	90		%
	EN60601-1, UL2601-1, CSA601-1 UL File No. E230761		90		70
Safety Agency Approvals	·			000	
Leakage Current	250VAC, 60Hz, 25°C			300	μA
	250VAC, 60Hz, 25°C Option 04			150	μA
Signals	See Section 4.9				
Bias Supply	Always on. Current 250mA. (30mA for XVE) 500mA option available	4.8	5.0	5.2	VDC
Reliability	Failures per million hours at 25°C and full load powerMod			0.98	fpmh
- · · · · · · · · · · · · · · · · · · ·	See Section 4.12. powerPac excludes fans powerPac			0.92	fpmh
-110	222 223331 1112. parion do oxidado fallo pomon do			J.J.	ipinii
EMC					
Parameter	Standard		Level		Units
Emissions					
Conducted	EN55011, EN55022, FCC		Level B		
Radiated	EN55011, EN55022, FCC		Level B		
Harmonic Distortion	EN61000-3-2 Class A		Compliant		
Flicker & Fluctuation	EN61000-3-3		Compliant		
Immunity	L140 1000-0-0		Compliant		
	ENG1000 4 2		Lovel 2		
Electrostatic Discharge	EN61000-4-2		Level 2		
Radiated Immunity	EN61000-4-3		Level 3		
Fast Transients-Burst	EN61000-4-4		Level 3		
nput Line Surges	EN61000-4-5		Level 3		
Conducted Immunity	EN61000-4-6		Level 3		
7. It B'	EN61000-4-11		Compliant		
Voltage Dips					
<u> </u>					
ENVIRONMENTAL					
ENVIRONMENTAL Parameter	Conditions/Description	Min	Nom	Max	
ENVIRONMENTAL Parameter	Conditions/Description	Min -20	Nom	Max +70	Units °C
ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Conditions/Description		Nom		°C
ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Conditions/Description See Section 4.11 for full temperature deratings	-20	Nom	+70	°C
ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	See Section 4.11 for full temperature deratings	-20 -40	Nom	+70	°C
ENVIRONMENTAL Parameter Operating Temperature Storage Temperature		-20	Nom	+70 +85	°C

NOTES

Vibration

- This product is not intended for use as a stand alone unit and must be installed by qualified personnel.
 The specifications contained herein are believed to be correct at time of publication and are subject to change without notice.
 All specifications at nominal input, full load, 25°C unless otherwise stated.
- 4. XVE: 1450W peak for 10s; Duty cycle 8%. powerMod output power must not exceed normal ratings.
- When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 6. For section references above go to the Xgen Designers Manual.

1.5G



10

Hz

200



Low Acoustic Noise Power Supply

Ultra-high efficiency 1U size







PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- · Low Acoustic noise 42.7dBA
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- · All outputs fully floating
- · Series / Parallel of multiple outputs
- · Few electrolytic capacitors (all long life)
- · Visual LED indicators
- 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- Audio Equipment
- Test and measurement
- · Telecommunications

The XQ family of low acoustic noise power supplies provides up to 1200W in an extremely compact 1U x 260mm x 127mm package. Boasting industry leading power density of 15W/in³ and efficiencies of up to 90%, the XQ 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 XQ 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 XQ 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, UL60950, EN60950 and are CE marked.

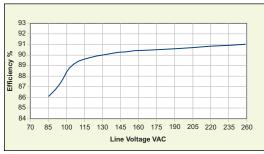
powerMods

MODEL	VI Vtrim	nin Vpot	Vnom	Vmax	lmax	Watts
Xg1	1.0	1.5	2.5	3.6	50A	125W
Xg2	1.5	3.2	5.0	6.0	40A	200W
Xg3	4.0	6.0	12.0	15.0	20A	240W
Xg4	8.0	12.0	24.0	30.0	10A	240W
Xg5	8.0	24.0	48.0	58.0	6A	288W
Xg7		5.0	24.0	28.0	5A	120W
Xg8 v1 v2		5.0 5.0	24.0 24.0	28.0 28.0	3A 3A	72W 72W

powerPacs

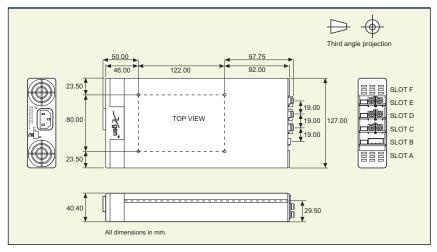
	MODEL	Watts
	XQA	600W
Ä	XQB	900W
	XQC	1200W

EFFICIENCY (typical)



MECHANICAL SPECIFICATIONS

Note: See diagrams on pages 34-37



Parameter	Conditions/Description	Min	Nom	Max	Units
nput Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
	,	120		380	VDC
Power Rating	XQA:600W, XQB:900W, XQC:1200W	-			
	See Section 4.11 for line voltage deratings				
Input Current XQA	85VAC in 400W out		7.5		Α
XQB	85VAC in 850W out		11.5		Α
XQC	85VACin 850W out		11.5		Α
Inrush Current	230VAC @ 25°C			25	Α
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 powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table				
o alpat / tajaoanioni i tango	Electronic: See Section 4.6				
Minimum Load			0		Α
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	μs
Ripple and Noise	20MHz 100mV or 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	110		120	%
	See Section 4.6				
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	3000			VAC
	Input to Chassis	1500			VAC
Efficiency	230VAC, 1200W @ 24V		90		%
	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
Safety Agency Approvals	EN00950, UL00950, CSA22.2 NO.950 UL FIIE NO. E101075				mA
Safety Agency Approvals	250VAC, 60Hz, 25°C			1.5	IIIA
Safety Agency Approvals Leakage Current				1.5	IIIA
	250VAC, 60Hz, 25°C	4.8	5.0	1.5 5.2	
Safety Agency Approvals Leakage Current Signals Bias Supply	250VAC, 60Hz, 25°C See Section 4.9	4.8	5.0		VDC
Safety Agency Approvals Leakage Current Signals Bias Supply	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	5.2 0.98	VDC fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac	4.8		5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard	4.8	Level	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC	4.8	Level B	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC	4.8	Level B Level B	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC	4.8	Level B Level B Compliant	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B Compliant Compliant	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3	4.8	Level B Level B Compliant	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2	4.8	Level B Level B Compliant Compliant Level 2	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3	4.8	Level B Level B Compliant Compliant Level 2 Level 3	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	5.2 0.98	VDC fpmh fpmh
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92	VDC fpmh fpmh Units
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	5.2 0.98 0.92	VDC fpmh fpmh Units
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92	VDC fpmh fpmh Units
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92	VDC fpmh fpmh Units
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92 Max +70 +85	VDC fpmh fpmh Units Units °C °C
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-2 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92	VDC fpmh fpmh Units "C "C"
Safety Agency Approvals Leakage Current Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	250VAC, 60Hz, 25°C See Section 4.9 Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	5.2 0.98 0.92 Max +70 +85	VDC fpmh fpmh Units

- 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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
- 5. Conformal Coating option: See Sections 3.1 and 4.10 for details.
- 6. For section references above go to the Xgen Designers Manual.











PLUG & PLAY POWER next generation power solution

FEATURES & OPTIONS

- · Low Acoustic noise 42.7dBA
- EN60601-1 3rd edition Approved
- Less than 300µA leakage current
- 150µA option available
- 4000VAC isolation
- Ultra high efficiency, up to 89%
- Extra low profile: 1U height (40mm)
- Plug & Play Power allows fast custom configuration
- · Individual output control signals
- All outputs fully floating
- · Series / Parallel of multiple outputs
- Few electrolytic capacitors (all long life)
- 5V bias standby voltage provided
- Standard Xgen product options include: Conformal Coating, Low Acoustic Noise, Low Leakage Current, Extra Ruggedisation, Connector, Cabling & Mounting options, Thermal Signals and Reverse Fans. See Section 4.10 for more information

APPLICATIONS INCLUDE

- Clinical diagnostic equipment
- · Medical lasers
- · Dialysis equipment

The XZ family of low acoustic noise medically approved power supplies provides up to 1200W in an extremely compact 1U x 260mm x 127mm package. Boasting industry leading power density of 15W/in³ and efficiencies of up to 90%, the XZ 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 XZ 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 XZ 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, UL60601-1, EN60601-1 3rd Edition and are CE marked.

powerMods

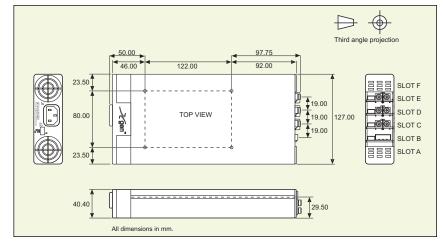
MODEL	Vmin	Vnom	Vmax	lmax	Watts
Xg1	1.5	2.5	3.6	50A	125W
Xg2	3.2	5.0	6.0	40A	200W
Xg3	6.0	12.0	15.0	20A	240W
Xg4	12.0	24.0	30.0	10A	240W
Xg5	28.0	48.0	58.0	6A	288W
Xg7	5.0	24.0	28.0	5A	120W
Xg8 V1 V2	5.0 5.0	24.0 24.0	28.0 28.0	3A 3A	72W 72W

powerPacs

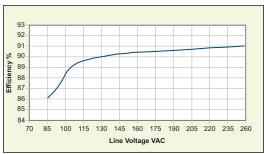
	MODEL	Watts
	XZA	600W
N	XZB	900W
	XZC	1200W

MECHANICAL SPECIFICATIONS

Note: See diagrams on pages 34-37



EFFICIENCY (typical)



INPUT	Conditions/Departmine	Mire	Nom	Max	Llock
arameter	Conditions/Description	Min	Nom	Max	Units
nput Voltage Range	Universal Input 47-63Hz. Contact factory for 440Hz operation	85		264	VAC
Name of the second	V7A-000M V7D-000M V7O-4000M	120		380	VDC
Power Rating	XZA:600W, XZB:900W, XZC:1200W				
	See Section 4.11 for line voltage deratings		7.5		_
nput Current XZA	85VAC in 400W out		7.5		A
XZB	85VAC in 600W out		11.5		A
XZC	85VAC in 850W out		11.5	0.5	A
nrush Current	230VAC @ 25°C	GE.		25 74	A VAC
Undervoltage Lockout Fusing XZA	Shutdown 250V	65	F8A HRC	74	VAC
Fusing XZA XZB			F12A HRC		
XZC	250V 250V		F12A HRC		
DUTPUT	O and distance (Dance of other or	No.			11
Parameter	Conditions/Description	Min	Nom	Max	Units
powerMod Power	As per powerMod table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table Electronic: See Section 4.6				
Minimum Load			0		Α
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	μs
Ripple and Noise	20MHz 100mV or 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	110		120	%
Remote Sense	See Section 4.6 Max. line drop compensation. (except Xq7, Xq8)			0.5	VDC
Overshoot	wax. line drop compensation. (except Agr, Ag8)			2	% %
Turn-on Delay	From AC In / Enable signal			600 / 30	
Rise Time	Monotonic			5	ms ms
Hold-up Time	For nominal output voltages at full load. XZA, XXB/XZC	20 / 15		5	
Output Isolation	Output to Output / Output to Chassis	500 / 500			ms VDC
·	Output to Output / Output to Onassis	3007300			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, UL60601-1 3rd Edition, CSA601-1 UL File no. E230761				
Leakage Current	250VAC, 60Hz, 25°C			300	μA
	250VAC, 60Hz, 25°C Option 04			150	μA
_ 4	See Section 4.9				
Bias Supply	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	_
Bias Supply	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply	Always on. Current 250mA. 500mA option available	4.8	5.0		fpmh
Bias Supply Reliability	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply Reliability EMC	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply Reliability EMC Parameter	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod	4.8	5.0	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard	4.8	Level	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC	4.8	Level B	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC	4.8	Level B Level B	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B Compliant	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC	4.8	Level B Level B	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3	4.8	Level B Level B Compliant Compliant	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A	4.8	Level B Level B Compliant Compliant	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2	4.8	Level B Level B Compliant Compliant Level 2 Level 3	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	4.8	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	0.98	fpmh
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11		Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98	fpmh fpmh Unite
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Level 3	0.98 0.92	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	VDC fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description	Min	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	Max +70 +85	fpmh fpmh Units
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	0.98 0.92 Max +70	fpmh fpmh Units °C °C °C
Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation mmunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst nput Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Derating Relative Humidity Acoustic Noise	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing Measured from distance of 1m	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	Max +70 +85	fpmh fpmh Units
Signals Bias Supply Reliability EMC Parameter Emissions Conducted Radiated Harmonic Distortion Flicker & Fluctuation Immunity Electrostatic Discharge Radiated Immunity Fast Transients-Burst Input Line Surges Conducted Immunity Voltage Dips ENVIRONMENTAL Parameter Operating Temperature Storage Temperature Derating Relative Humidity Acoustic Noise Shock Vibration	Always on. Current 250mA. 500mA option available Failures per million hours at 25°C and full load powerMod See Section 4.12. powerPac excludes fans powerPac Standard EN55011, EN55022, FCC EN55011, EN55022, FCC EN61000-3-2 Class A EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-5 EN61000-4-5 EN61000-4-6 EN61000-4-11 Conditions/Description See Section 4.11 for full temperature deratings Non-condensing	Min -20 -40	Level B Level B Compliant Compliant Level 2 Level 3 Level 3 Level 3 Compliant	Max +70 +85	fpmh fpmh Units °C °C °C

- 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. For section references above go to the Xgen Designers Manual.

