Fit Power Limited

Slimline Medical

Xmite

Medical Power Supply

User Configurable 1U size

patents pending

Xgen Series

PLUG & PLAY POWER
next generation power source

FEATURES

- EN60601-1 3rd Edition Approved
- Less than 600µA leakage current
- 4000VAC isolation
- Slimmest 750W configurable power
  - 800W peak power
- Extra low profile: 1U height (40mm)
- Ultra high efficiency, up to 89%
- Plug & Play Power
  - allows fast custom configuration
- Few electrolytic capacitors (all long life)
- Series / Parallel of multiple outputs
- 5V bias standby voltage provided
- Individual output control signals

APPLICATIONS INCLUDE

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

- For non-medical applications see Xlite

The Xmite family of medically approved power supplies provides up to 750W in a slimline 1U package. The Xmite family carries the latest safety agency approvals to EN60601-1 and UL2601-1, meeting the stringent creepage requirements in this compact package. Providing up to 8 isolated outputs, the Xmite family is the most flexible power supply in its class and brings affordable configurable power to the 200-750W medical market.

The Xmite 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 Xmite family provides system designers with flexible instant solutions that significantly shorten system design-in time. For alternative power interfaces contact **support@excelsys.com**

powerMods

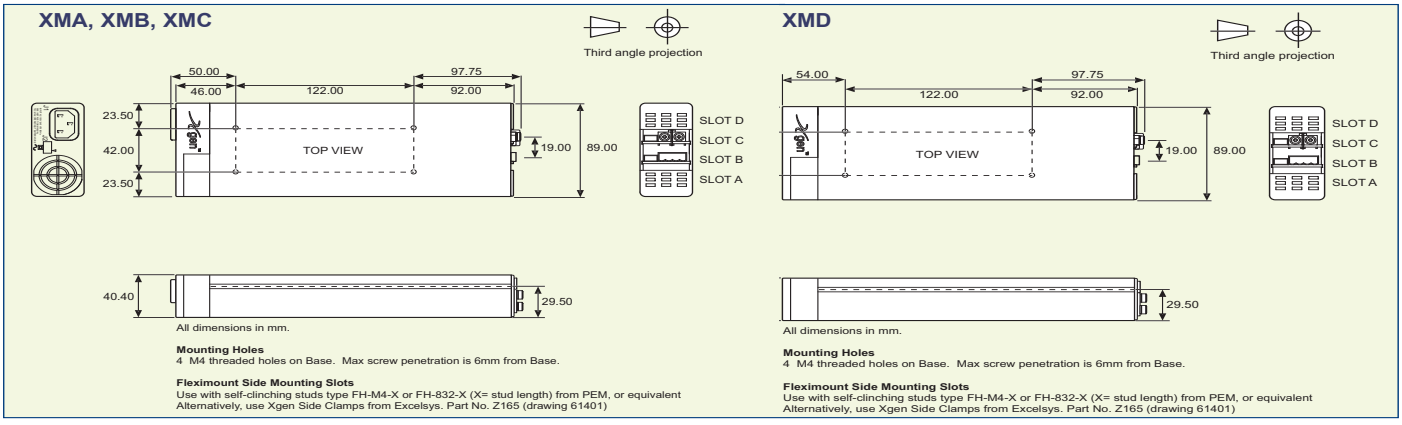
MODEL		Vmin Vtrim	Vmin Vpot	Vnom	Vmax	Imax	Watts
Xg1		1.0	1.5	2.5	3.6	50A	125W
Xg2		1.5	3.2	5.0	6.0	40A	200W
Xg3		4.0	6.0	12.0	15.0	20A	240W
Xg4		8.0	12.0	24.0	30.0	10A	240W
Xg5		8.0	24.0	48.0	58.0	6A	288W
Xg7		5.0	5.0	24.0	28.0	5A	120W
Xg8	V1	5.0	5.0	24.0	28.0	3A	72W
	V2	5.0	5.0	24.0	28.0	3A	72W

powerPacs

	MODEL	Watts
Xmite	XMA	200W
	XMB	400W
	XMC	600W
	XMD	750W

MECHANICAL SPECIFICATIONS

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



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

INPUT

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Voltage Range	Universal Input 47-63Hz,Contact factory for 440Hz operation	85 120		264 380	VAC VDC
Power Rating	XMA:200W, XMB:400W, XMC:600W, XMD:750W See Xgen Designers' Manual for line voltage deratings				
Input Current XMA	85VAC in 200W out		4.0		A
XMB	85VAC in 400W out		6.0		A
XMC	85VAC in 400W out		7.5		A
XMD	85VAC in 525W out		7.5		A
Inrush Current	230VAC @ 25°C			50	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XMA	250V 5 x 20mm		F5A HRC		
XMB	250V 5 x 20mm		F6.3A HRC		
XMC, XMD	250V 5 x 20mm		F8A HRC		

OUTPUT

Parameter	Conditions/Description	Min	Nom	Max	Units
***powerMod* Power**	As per *powerMod* table				
Output Adjustment Range	Manual: Multi-turn potentiometer. As per *powerMod* table Electronic: See Xgen Designers' Manual				
Minimum Load			0		A
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 Settling Time			10 250	% µs
Ripple and Noise	20MHz Bandwidth			1.0	% pk-pk
Overvoltage Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom See Xgen Designers' Manual for full details	110		120	%
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
Overshoot				2	%
Turn-on Delay	From AC In / Enable signal XMA, XMB, XMC From AC In / Enable signal XMD			600 / 30 1000/30	ms ms
Rise Time	Monotonic			5	ms
Hold-up Time	For nominal output voltages at full load XMA,XMB, XMC/XMD	20/15			ms
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC

GENERAL

Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output Input to Chassis	4000 1500			VAC VAC
Efficiency	230VAC, 750W @ 24V		89		%
Safety Agency Approvals	EN60601-1, UL2601-1, CSA601-1 UL File No. E230761				
Leakage Current	250VAC, 60Hz, 25°C			600	µA
Signals	See Xgen Series datasheet				
Bias Supply	Always ON. Current 250mA	4.8	5.0	5.2	VDC
Reliability	Failures per million hours at 25°C and full load *powerMod* See Xgen Designers' Manual. *powerPac* excludes fans *powerPac*			0.98 0.92	fpmh fpmh

EMC

Parameter	Standard	Level	Units
Emissions			
Conducted	EN55011, EN55022, FCC	Level B	
Radiated	EN55011, EN55022, FCC	Level B	
Harmonic Distortion	EN61000-3-2	Compliant	
Flicker and Fluctuation	EN61000-3-3	Compliant	
Immunity			
Electrostatic Discharge	EN61000-4-2	Level 4	
Radiated RFI	EN61000-4-3	Level 3	
Fast Transients - burst	EN61000-4-4	Level 4	
Input Line Surges	EN61000-4-5	Class 4	
Conducted RFI	EN61000-4-6	10	V/m
Voltage Dips	EN61000-4-11 (EN55024)	10	ms

ENVIRONMENTAL

Parameter	Conditions/Description	Min	Nom	Max	Units
Operating Temperature		-20		+70	°C
Storage Temperature		-40		+85	°C
Derating	See Xgen Designers' Manual for full temperature deratings				
	(Section 12, pages 37-38)				
Relative Humidity	Non-condensing	5		95	%RH
Shock	3000 Bumps, 10G (16ms) half sine				
Vibration	1.5G	10		200	Hz

NOTES

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

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