



Medical Power Supply
Low Acoustic Noise 1U size

patents pending
CE c US



PLUG & PLAY POWER
next generation power source

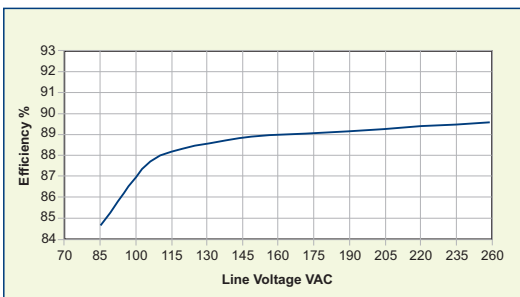
FEATURES

- Low Acoustic Noise 54dBA
- EN60601-1 and UL2601-1 approved
- EN60601-1 3rd Edition Q4 2011
- Less than 600µA leakage current
- 4000VAC isolation
- Slimmest 600W configurable power
- Extra low profile: 1U height (40mm)
- Ultra high efficiency, up to 89%
- Plug & Play Power
- allows fast custom configuration
- allow easy logistics
- 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 Xkite

EFFICIENCY (typical)



The Xrite family of low acoustic noise medically approved power supplies provides up to 600W in a slimline 1U x 260 x 89mm package. Ideal for acoustoc sensitive medical equipment, the Xrite family carries full 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 Xrite family is the most flexible power supply in its class and brings affordable configurable power to the 200-600W medical market.

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

powerMods

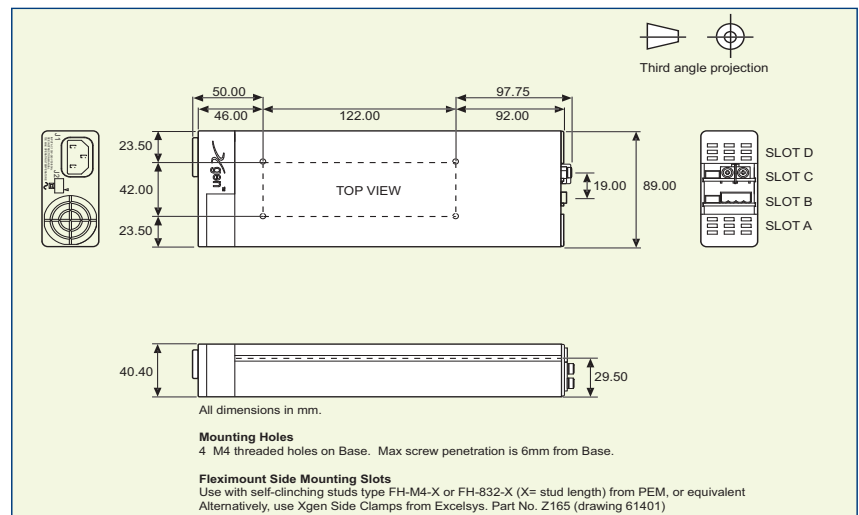
MODEL	Vmin	Vnom	Vmax	Imax	Watts	
Xg1	1.5	2.5	3.6	50A	125W	
Xg2	3.2	5.0	6.0	40A	200W	
Xg3	6.0	12.0	15.0	20A	240W	
Xg4	12.0	24.0	30.0	10A	240W	
Xg5	28.0	48.0	58.0	6A	288W	
Xg7	5.0	24.0	28.0	5A	120W	
Xg8	v1	5.0	24.0	28.0	3A	72W
	v2	5.0	24.0	28.0	3A	72W

powerPacs

	MODEL	Watts
Xrite	XRA	200W
	XRB	400W
	XRC	600W

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

MECHANICAL SPECIFICATIONS



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

INPUT						
Parameter	Conditions/Description	Min	Nom	Max	Units	
Input Voltage Range	Universal Input	85		264	VAC	
		120		380	VDC	
Input Frequency Range		47		63	Hz	
Power Rating	XRA			200	W	
	XRB			400	W	
	XRC			600	W	
Input Current	XRA	85VAC in 200W out		4.5	A	
	XRB	85VAC in 400W out		5.5	A	
	XRC	85VAC in 600W out		7.5	A	
Inrush Current	230VAC @ 25°C			50	A	
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		

OUTPUT						
Parameter	Conditions/Description	Min	Nom	Max	Units	
powerMod Power	As per <i>powerMod</i> table					
Output Adjustment Range	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table					
	Electronic: See Xgen Designers' Manual					
Minimum Load			0		A	
Line Regulation	For ±10% change from nominal line			±0.1	%	
Load 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 Bandwidth			1.0	% pk-pk	
Overvoltage Protection	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%	
Overcurrent Protection	Straight line with hiccup activation at <30% of Vnom See Designer's Manual for full details	110		120	%	
Remote Sense	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC	
Overshoot				2	%	
Turn-on Delay	From AC In / Enable signal			600 / 30	ms	
Rise Time	Monotonic			5	ms	
Hold-up Time	For nominal output voltages at full load	20			ms	
Output Isolation	Output to Output / Output to Chassis	500 / 500			VDC	

GENERAL						
Parameter	Conditions/Description	Min	Nom	Max	Units	
Isolation Voltage	Input to Output	4000			VAC	
	Input to Chassis	1500			VAC	
Efficiency	230VAC, 600W @ 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			0.98	fpmh	
	See Designers' Manual. <i>powerPac</i> excludes fans			0.92	fpmh	

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

ENVIRONMENTAL						
Parameter	Conditions/Description	Min	Nom	Max	Units	
Operating Temperature		-20		+70	°C	
Storage Temperature		-40		+85	°C	
Derating	See Designers Manual for full deratings (Section 12, pages 37-38)					
Relative Humidity	Non-condensing	5		95	%RH	
Acoustic Noise	Background noise 28.6dBA, Noise measured 10cm from unit		54		dBA	
Shock	3000 Bumps, 10G (16ms) half sine					
Vibration	1.5G	10		200	Hz	

- NOTES**
1. This product is not intended for use as a stand alone unit and must be installed by qualified personnel.
 2. The specifications contained herein are believed to be correct at time of publication and are subject to change without notice.
 3. All specifications at nominal input, full load, 25°C unless otherwise stated.
 4. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.
 5. Conformal Coating Option: Consult factory for details.

Xrite rev 09 10/10