



## Slimline Power Supply

User Configurable 1U Size



genSeries



### PLUG & 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
- SEMI F47 Compliant
- 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

#### MECHANICAL SPECIFICATIONS

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.

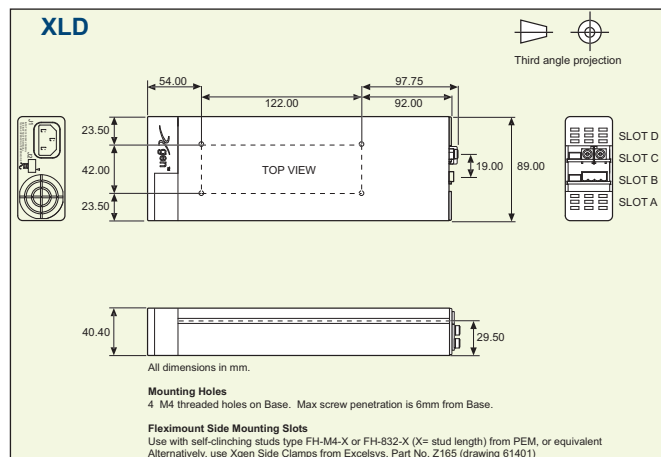
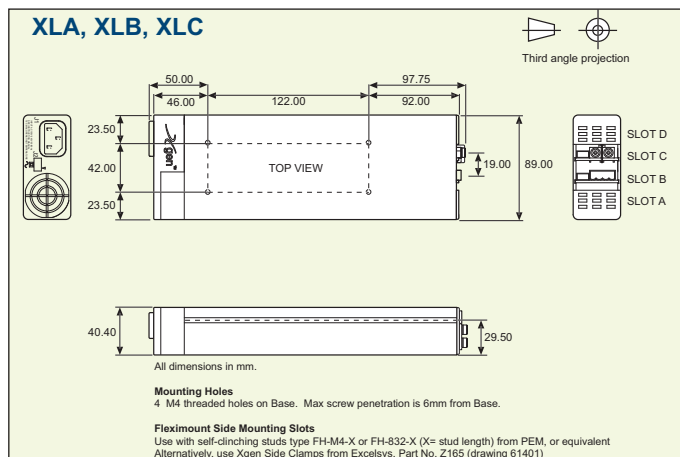
#### powerMods

MODEL	Vmin Vtrim	Vnom Vpot	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	28	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
XL	XLA	200W
	XLB	400W
	XLC	600W
	XLD	750W

Note: See diagrams on pages 34-37



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

<b>Input Voltage Range</b>	Universal Input 47-440Hz	85 120		264 380	VAC VDC
<b>Power Rating</b>	XLA:200W, XLB:400W, XLC:600W, XLD:750W See Section 4.11 for line voltage deratings				
<b>Input Current</b>	XLA 85VAC in 200W out XLB 85VAC in 400W out XLC 85VAC in 400W out XLD 85VAC in 525W out		4.0 6.0 7.5 7.5		A A A A
<b>Inrush Current</b>	230VAC, 25°C			50	A
<b>Undervoltage Lockout</b>	Shutdown	65		74	VAC
<b>Fusing</b>	XLA 250V 5 x 20mm XLB 250V 5 x 20mm XLC, XLD 250V 5 x 20mm		F5A HRC F6.3A HRC F8A HRC		
OUTPUT					
Parameter	Conditions/Description	Min	Nom	Max	Units
<b>powerMod Power</b>	As per <i>powerMod</i> table				
<b>Output Adjustment Range</b>	Manual: Multi-turn potentiometer. As per <i>powerMod</i> table Electronic: See Section 4.6				
<b>Minimum Load</b>			0		A
<b>Line Regulation</b>	For $\pm 10\%$ change from nominal line			$\pm 0.1$	%
<b>Load Regulation</b>	For 25% to 75% load change			$\pm 0.2$	%
<b>Cross Regulation</b>				$\pm 0.2$	%
<b>Transient Response</b>	For 25% to 75% load change Voltage Deviation Settling Time			10 250	% $\mu$ s
<b>Ripple and Noise</b>	20MHz 100mV or 1.0% pk-pk				
<b>Overvoltage Protection</b>	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
<b>Overcurrent Protection</b>	Straight line with hiccup activation at <30% of Vnom See Section 4.6	110		120	%
<b>Remote Sense</b>	Max. line drop compensation. (except Xg7, Xg8)			0.5	VDC
<b>Overshoot</b>				2	%
<b>Turn-on Delay</b>	From AC In and Global Enable / powerMod Enable XLA, XLB, XLC From AC In and Global Enable / powerMod Enable XLD			700 / 6 1000 / 6	ms ms
<b>Rise Time</b>	Monotonic			5	ms
<b>Hold-up Time</b>	For nominal output voltages at full load XLA, XLB, XLC/XLD	20/15			ms
<b>Output Isolation</b>	Output to Output / Output to Chassis	500 / 500			VDC
GENERAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
<b>Isolation Voltage</b>	Input to Output Input to Chassis	3000 1500			VAC VAC
<b>Efficiency</b>	230VAC, 750W @ 24V		89		%
<b>Safety Agency Approvals</b>	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
<b>Leakage Current</b>	250VAC, 60Hz, 25°C			1.5	mA
<b>Signals</b>	See Section 4.9				
<b>Bias Supply</b>	Always on. Current 250mA. 500mA option available	4.8	5.0	5.2	VDC
<b>Reliability</b>	Failures per million hours at 40°C and full load <i>powerMod</i> See Section 4.12. <i>powerPac</i> excludes fans <i>powerPac</i>			0.958 0.92	fpmh fpmh
EMC					
Parameter	Standard	Level		Units	
<b>Emissions</b>					
<b>Conducted</b>	EN55011, EN55022, FCC		Level B		
<b>Radiated</b>	EN55011, EN55022, FCC		Level B		
<b>Harmonic Distortion</b>	EN61000-3-2 Class A		Compliant		
<b>Flicker &amp; Fluctuation</b>	EN61000-3-3		Compliant		
<b>Immunity</b>					
<b>Electrostatic Discharge</b>	EN61000-4-2		Level 2		
<b>Radiated Immunity</b>	EN61000-4-3		Level 3		
<b>Fast Transients-Burst</b>	EN61000-4-4 Level 3				
<b>Input Line Surges</b>	EN61000-4-5		Level 3		
<b>Conducted Immunity</b>	EN61000-4-6		Level 3		
<b>Voltage Dips</b>	EN61000-4-11, SEMI F47 compliant. See note 8.		Compliant		
ENVIRONMENTAL					
Parameter	Conditions/Description	Min	Nom	Max	Units
<b>Operating Temperature</b>		-20		+70	°C
<b>Storage Temperature</b>		-40		+85	°C
<b>Derating</b>	See Section 4.11 for full temperature deratings				
<b>Relative Humidity</b>	Non-condensing	5		95	%RH
<b>Shock</b>	3000 Bumps, 10G (16ms) half sine				
<b>Vibration</b>	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. 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.
8. SEMI F47 compliant at input voltages >160VAC. Consult Excelsys for details.