



# AC/DC Power Supply

Ultra-high efficiency 1U size



patents pending



## PLUG & PLAY POWER next generation power source

### FEATURES

- NEW Conformal Coating Option (note 6)
- 1.5V to 58V standard output voltages
- 1340W with 1450W peak power
- All outputs fully floating
- Extra low profile: 1U height (40mm)
- Ultra high efficiency, up to 90%
- 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

- Industrial machines
- Test and measurement
- Automation equipment
- Printing
- MIL-COTS applications
- For Medical applications see Xvite

The Xcite family of power supplies provides up to an incredible 1340W in an extremely compact 1U x 260 x 127mm package. Boasting industry leading power density of 17W/in<sup>3</sup> and efficiencies of up to 90%, the Xcite family employs an innovative plug & play architecture that allows users to instantly configure a custom power solution in less than 5 minutes!

Ultra high efficiencies and high power density are made possible through the combination of low loss technologies and the best field-proven technologies in planar magnetics and surface mount electronics. Significantly increased efficiency reduces system thermal load by more than 50%.

The Xcite family consists of 5 *powerPac* models ranging in power levels from 400W to 1340W. Each model may be populated with up to 6 *powerMods* selected from the table of *powerMods* shown below. Xgen can be Conformal Coated for harsh environments and MIL-COTS applications. All configurations carry full safety agency approvals, UL60950, EN60950 and are CE marked. For alternative power interfaces contact [support@excelsys.com](mailto:support@excelsys.com)

### powerMods

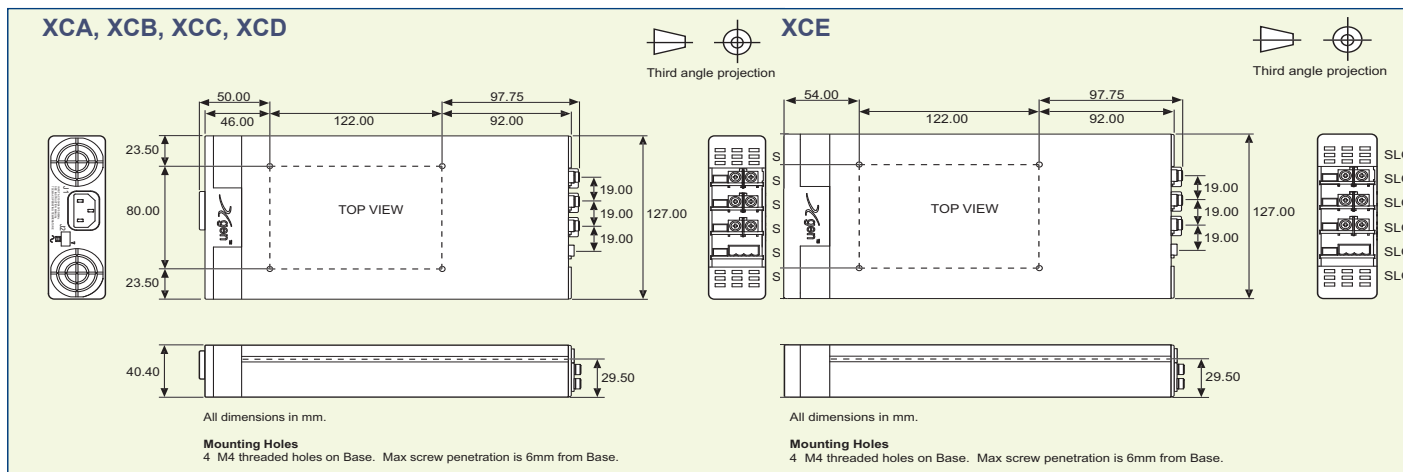
MODEL	V <sub>trim</sub>	V <sub>min</sub> V <sub>pot</sub>	V <sub>nom</sub>	V <sub>max</sub>	I <sub>max</sub>	Watts	
Xg1	1.0	1.5	2.5	3.6	50A	125W	
Xg2	1.5	3.2	5.0	6.0	40A	200W	
Xg3	4.0	6.0	12.0	15.0	20A	240W	
Xg4	8.0	12.0	24.0	30.0	10A	240W	
Xg5	8.0	24.0	48.0	58.0	6A	288W	
Xg7	5.0	5.0	24.0	28.0	5A	120W	
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
Xcite	XCA	400W
	XCB	700W
	XCC	1000W
	XCD	1200W
	XCE	1340W

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
<b>Input Voltage Range</b>	Universal Input 47-63Hz. Contact factory for 440Hz operation	85 120		264 380	VAC VDC
<b>Power Rating</b>	XCA:400W, XCB:700W, XCC:1000W, XCD:1200W, XCE:1340W See Xgen Designers' Manual for line voltage deratings				
<b>Input Current</b>	XCA 85VAC in 400W out XCB 85VAC in 700W out XCC, XCD 85VAC in 850W out XCE 85VAC in 1000W out		7.5 9.5 11.5 14.0		A A A A
<b>Inrush Current</b>	230VAC @ 25°C			25	A
<b>Undervoltage Lockout</b>	Shutdown	65		74	VAC
<b>Fusing</b>	XCA 250V XCB 250V XCC, XCD 250V XCE 250V		F8A HRC F10A HRC F12A HRC F15A 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 Xgen Designers' Manual				
<b>Minimum Load</b>			0		A
<b>Line Regulation</b>	For ±10% change from nominal line			±0.1	%
<b>Load &amp; Cross Regulation</b>	For 25% to 75% load change			±0.2	%
<b>Transient Response</b>	For 25% to 75% load change Voltage Deviation Settling Time			10 250	% µs
<b>Ripple and Noise</b>	20MHz Bandwidth			1.0	% pk-pk
<b>Overvoltage Protection</b>	Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
<b>Overcurrent Protection</b>	Straight line with hiccup activation at <30% of Vnom See Xgen Designers' Manual for full details	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 / Enable signal XCA, XCB, XCC, XCD From AC In / Enable signal XCE			600 / 30 700 / 30	ms ms
<b>Rise Time</b>	Monotonic			5	ms
<b>Hold-up Time</b>	For nominal output voltages at full load. XCA,XCB,XCC / XCD,XCE	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, 1340W @ 24V		90		%
<b>Safety Agency Approvals</b>	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
<b>Earth Leakage Current</b>	250VAC, 60Hz, 25°C			1.5	mA
<b>Signals</b>	See Xgen Series datasheet				
<b>Bias Supply</b>	Always ON. Current 250mA (30mA for XCE)	4.8	5.0	5.5	VDC
<b>Reliability</b>	Failures per million hours at 25°C and full load See Designers' Manual. <i>powerMod</i> excludes fans <i>powerPac</i>			0.98 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		Compliant		
<b>Flicker and Fluctuation</b>	EN61000-3-3		Compliant		
<b>Immunity</b>					
<b>Electrostatic Discharge</b>	EN61000-4-2		Level 4		
<b>Radiated RFI</b>	EN61000-4-3		Level 3		
<b>Fast Transients - burst</b>	EN61000-4-4		Level 4		
<b>Input Line Surges</b>	EN61000-4-5		Class 4		
<b>Conducted RFI</b>	EN61000-4-6		10		V/m
<b>Voltage Dips</b>	EN61000-4-11 (EN55024)		10		ms

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 Xgen Designers' Manual for full temperature deratings (Section 12, pages 37-38)				
<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. 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: Consult factory for details.

Doc. 40032 rev. 10 15/08/2011