Xhite

Hi-Temp Power Supply

Ultra-high efficiency 1U size

patents pending

CE cULus

PLUG & PLAY POWER
next generation power source

FEATURES

- -20°C to +70°C operating ambient temp
- 1.5V to 58V standard output voltages
- All outputs fully floating
- Extra low profile: 1U height (40mm)
- Ultra high efficiency, up to 90%
- Plug & Play Power
  - allows fast custom configuration
  - allow easy maintenance logistics
- Reduced system heat dissipation
- Few electrolytic capacitors (all long life)
- Visual LED indicators
- Series / Parallel of multiple outputs
- 5V bias standby voltage provided
- Individual output control signals

APPLICATIONS INCLUDE

- Industrial equipment
- Telecommunications
- Outdoor display systems

The Xhite family of high temperature power supplies provides up to 600W in an extremely compact 1U x 260 x 127mm package. Designed as a configurable power supply, the Xhite family employs the innovative plug and play architecture that allows users to instantly configure a custom power solution in less than 5 minutes.

The Xhite family is ideal for use in harsh environments where there can be high ambient temperatures and wide temperature fluctuations. Operation at higher temperatures is made possible through employment of leading edge technologies and cooling techniques, making it possible for the Xhite to achieve unprecedented efficiencies of up to 90%.

The Xhite family consists of 2 *powerPac* models ranging in power levels from 400W to 600W. 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. For alternative power interfaces contact support@excelsys.com

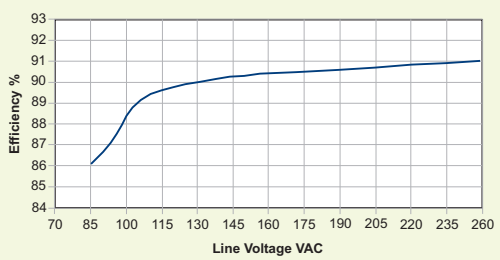
powerMods

MODEL		Vmin	Vnom	Vmax	Imax	Watts
Xg1		1.5	2.5	3.6	25A	65W
Xg2		3.2	5.0	6.0	20A	100W
Xg3		6.0	12.0	15.0	10A	120W
Xg4		12.0	24.0	30.0	5A	120W
Xg5		28.0	48.0	58.0	3A	144W
Xg7		5.0	24.0	28.0	2.5A	60W
Xg8	V1	5.0	24.0	28.0	1.5A	36W
	V2	5.0	24.0	28.0	1.5A	36W

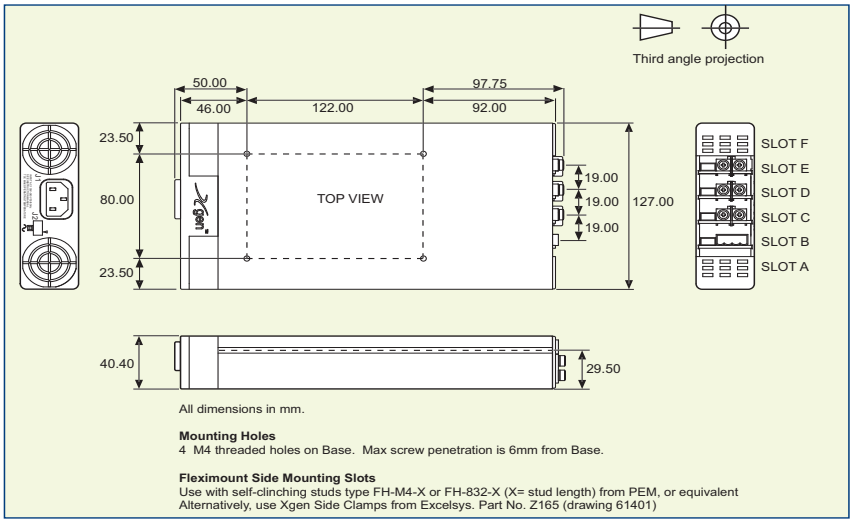
powerPacs

	MODEL	Watts
Xhite	XHA	400W
	XHB	600W

EFFICIENCY (typical)



MECHANICAL SPECIFICATIONS



All dimensions in mm.

Mounting Holes
4 M4 threaded holes on Base. Max screw penetration is 6mm from Base.

Fleximount Side Mounting Slots
Use with self-clinching studs type FH-M4-X or FH-832-X (X= stud length) from PEM, or equivalent
Alternatively, use Xgen Side Clamps from Excelsys. Part No. Z165 (drawing 61401)

Xgen Series

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	85 120		264 380	VAC VDC
Input Frequency Range		47		63	Hz
Power Rating XHA XHB	 Derate linearly from 600W at 120Vac to 425W at 85Vac			400 600	W W
Input Current XHA XHB	85VAC in 400W out 85VAC in 425W out		6.5 7.5		A A
Inrush Current	230VAC @ 25°C			25	A
Undervoltage Lockout	Shutdown	65		74	VAC
Fusing XHA XHB	250V 250V		F10A HRC 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 *powerMod* table Electronic: See Xgen Designers' Manual				
Minimum Load			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 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 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			300 / 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 Input to Chassis	3000 1500			VAC VAC
Efficiency	230VAC, 900W @ 24V		90		%
Safety Agency Approvals	EN60950, UL60950, CSA22.2 No.950 UL File No. E181875				
Leakage Current	250VAC, 60Hz, 25°C			1.5	mA
Signals	See Xgen Series datasheet				
Bias Supply	Always ON. Current 250mA	4.9	5.0	5.1	VDC
Reliability	Failures per million hours at 25°C and full load *powerMod* See Designers' Manual. *powerPac* excludes fans *powerPac*			1.0 0.6	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	Full Load	-20		+70	℃
Storage Temperature		-40		+85	℃
Derating	None				
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.

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