



# Hi-Temp Power Supply

Ultra-high efficiency 1U size



Hi-Temp

patents pending



## PLUG & PLAY POWER

next generation power source

### FEATURES

- NEW Conformal Coating Option (note 5)
- -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](mailto:support@excelsys.com)

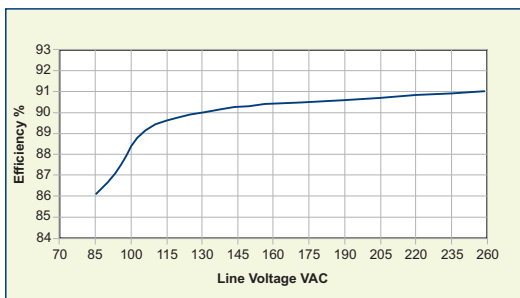
#### powerMods

MODEL	Vmin	Vnom	Vmax	I <sub>max</sub>	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

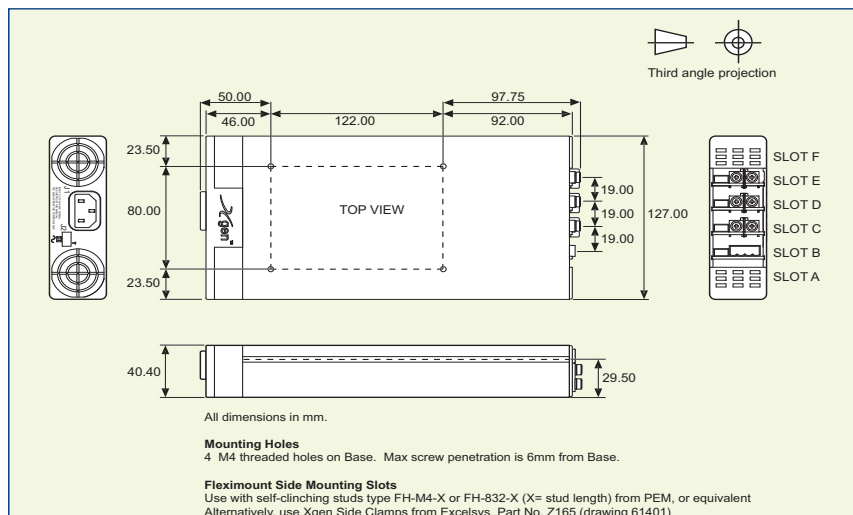
	MODEL	Watts
Xhite	XHA	400W
	XHB	600W

### EFFICIENCY (typical)



### MECHANICAL SPECIFICATIONS

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**

**Hi-Temp**

INPUT					
Parameter	Conditions/Description	Min	Nom	Max	Units
<b>Input Voltage Range</b>	Universal Input	85 120		264 380	VAC VDC
<b>Input Frequency Range</b>		47		63	Hz
<b>Power Rating</b> XHA XHB	Derate linearly from 600W at 120Vac to 425W at 85Vac			400 600	W W
<b>Input Current</b> XHA XHB		85VAC in 400W out 85VAC in 425W out		6.5 7.5	A A
<b>Inrush Current</b>	230VAC @ 25°C			25	A
<b>Undervoltage Lockout</b>	Shutdown	65		74	VAC
<b>Fusing</b> XHA XHB	250V 250V		F10A HRC F12A 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>	1st level: Vset Tracking. 2nd level: Vmax (Latching)	110		125	%
<b>Overcurrent Protection</b>	Straight line with hiccup activation at <30% of Vnom See Designer's 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			600 / 30	ms
<b>Rise Time</b>	Monotonic			5	ms
<b>Hold-up Time</b>	For nominal output voltages at full load.	20			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, 900W @ 24V		90		%
<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 Xgen Series datasheet				
<b>Bias Supply</b>	Always ON. Current 250mA	4.8	5.0	5.2	VDC
<b>Reliability</b>	Failures per million hours at 25°C and full load See Designers' Manual. <i>powerPac</i> excludes fans			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>	Full Load	-20		+70	°C
<b>Storage Temperature</b>		-40		+85	°C
<b>Derating</b>	None				
<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. When powering inductive or capacitive loads, it is recommended to use a blocking diode on the output.

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