

XGEN400-1300 SERIES

AC / DC Modular * GchPower Supplies: 400 ~ 1300 Watts

AMTEX
ELECTRONICS PTY LTD

www.amtex.com.au

"DC Power Solutions...not just components"



Specifications

Input Voltage	85-264VAC (120-380VDC)
Frequency	47-63Hz
Input Current (at 90VAC)	XCA-400W @ 7.5A, XCB-700W @ 9.5A XCC-1000W @ 11.5A, XCD-1200W @ 11.5A XCE-1340W @ 14.0A.
Undervoltage Lockout	Unit will shutdown @ approximately 74VAC
Output Power (6 slot chassis)	XCA=400W, XCB=700W, XCC=1000W XCD= 1200W, XCE = 1340W
Isolation	Input-Output / Chassis: 3000VAC / 1500VAC Output-Chassis: 500VDC,
Efficiency	Typically 89% at 230VAC input and full load
Safety Approvals	EN60950, UL60950,
Leakage Current	1.5mA @ 250VAC , 60Hz
Inhibit / Enable	Inhibit / Enable Signal on output modules, refer to Signals page
Power Good	Power Good Signal on output modules, refer to Signals page
Bias Supply	5vdc 250mA Always ON
EMC	Conducted: EN55011, EN55022 Lev B Radiated: EN55011, EN55022 Lev B
Immunity	Harmonics: EN61000-3-2 Flicker & Fluctuation: EN61000-3-3 Electrostatic Discharge: EN61000-4-2 Radiated RFI: EN61000-4-3 Fast Transients: EN61000-4-4 Input Line Surges: EN61000-4-5 Conducted RFI: EN61000-4-6 Voltage Dips: EN61000-4-11 (EN55024)
Operating Temp:	-20°C to +70°C. Refer to manual for derating above 50°C.
Humidity	5-95% RH Non-Condensing
Shock	3000 Bumps. 10G (16ms) half sine
Vibration	1.5G 10-200Hz
Dimensions	6 slot chassis: 270 x 127 x 40mm
Weight	2 – 3kg

Features

- Extra low profile: 1U height (40mm)
- Plug & Play power, allows for fast custom configurations.
- Series / Parallel connections of output modules for flexibility
- Eight isolated output modules to choose from: 1.5V to 58V
- All output modules wide voltage adjustment range
- Five power levels: 400, 700, 1000, 1200 & 1300 watts
- Ultra high efficiency, up to 89%
- LED Indicator for each output
- IEC mains input connector for world wide use.
- Industrial & Medical safety approved options
- See XGEN 200-750 series for lower power solutions

Description

The **X-GEN** DC power supply is the most flexible power supply range on the market.

It comes in two **Power Pacs: 6 Slot** and **4 Slot**, that allows for six or four individual **Output Modules** to be inserted into each Power Pac.

There are eight output modules to choose from, each having a wide output voltage range adjustment. These output modules can be connected in parallel or series with each other, allowing for an endless selection of voltage settings from 1.5 - 120VDC.

In addition, these modules can be replaced, changed in the field, thus allowing the end user to reconfigure the output voltages on site.

There are seven power levels to choose from, providing added flexibility from 200 - 1200W units.

Complete units can be ordered and shipped within the same day, totally configured to customer specifications.

Specifications: Output Modules.

Output Voltage	Refer to table
Output Adjustment Range	Refer to table Manual: Multi-turn potentiometer on front of output modules. Electronic: Refer to user manual
Minimum Load	zero
Line Regulation	±0.1% for ±10% on input
Load Regulation	±0.2% for 25% to 75% load change
Cross Regulation	±0.2%
Transient Response	10% voltage deviation settling time 250µs
Ripple & Noise	10% pk-pk 200MHz Bandwidth
Overvoltage Protection	Set at approx 125%. 1 st Level: Vset tracking. 2 nd Level Vmax latching.
Overcurrent protection	Straight line with hiccup activation at <30% of Vnom. Refer to manual for more details
Remote Sense	Maximum line drop 0.5V compensation. (except Xg7, Xg8 modules
Overshoot	2%
Turn-on Delay	Refer to manual
Hold up time	Typically 15ms
Output Isolation	Output-Output / Chassis: 500VDC

For more details on the X-GEN series, visit our website

XGEN (\$\$!% \$\$ SERIES

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Output Power Module Selection

Output Module P/N	Output V	A	Voltage Range	No. of Slots	Power W
1	2.5V	50A	1.5 - 3.6V	1	125W
2	5.0V	40A	3.2 - 6.0V	1	200W
3	12.0V	20A	6.0 - 15.0V	1	240W
4	24.0V	10A	12.0 - 30.0V	1	240W
5	48.0V	6A	28.0 - 58.0V	1	288W
7	24.0V	5A	5.0 - 28.0V	1	120W
8	V1 = 24V V2 = 24V	3A 3A	5.0 - 28.0V 5.0 - 28.0V	1 1	72W 72W

Model Configuration:

1. Use the output module rating to configure the V outputs required and current rating.
2. Any number of different modules can be connected in series to obtain the desired output voltage.
3. Any number of the same module type can be connected in parallel for increased output current for specific V out.
4. Then select the appropriate **6 slot** chassis and appropriate Power Level Front End.
5. When powering highly inductive or capacitive loads it is recommended to **use a blocking diode** on the output of modules .

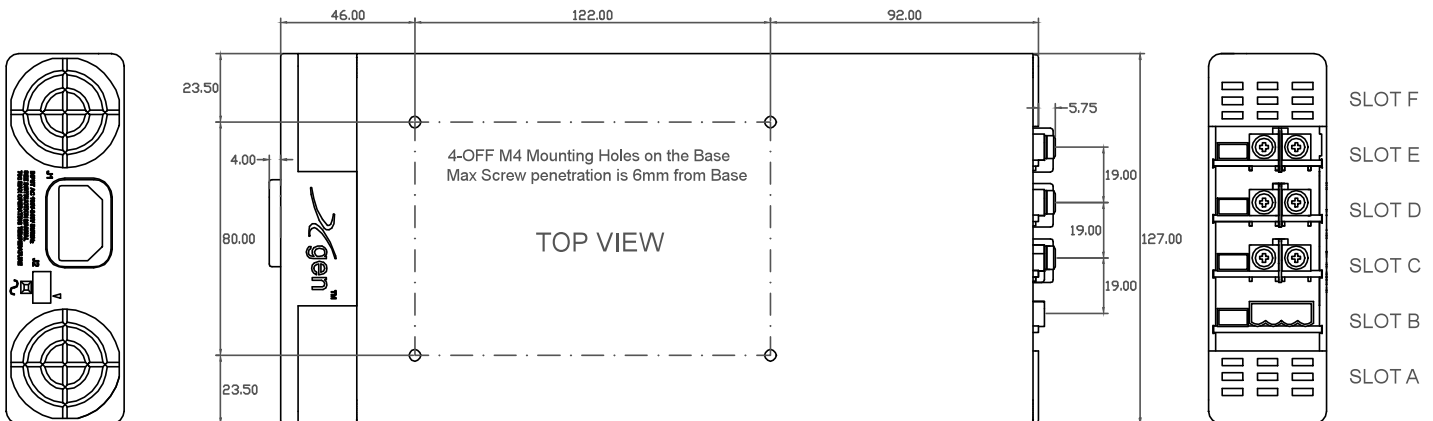
X	CB	2245	Kxxx
X = Series	Power: CA = 400W 6 slot CB = 700W 6 slot CC = 1000W 6 slot CD = 1200W 6 slot CE = 1340W 6 slot	Output Module Type 1 = 2.5V 2 = 5V 3 = 12V 4 = 24V 5 = 48V 7 = 24V 8 = Dual 24V	Factory Allocated

Model Example

XCB-2245

6-slot 700W package:
5V, 5V, 24V, 48V, (nominal)

6 SLOT CHASSIS



Side Mounting Slot works with self clinching stud type PEM - FH-M4-X or type PEM - FH-832-X or similar. X represents the length of the stud.
Alternatively, the Side Mounting Slots may be used with Excelsys Side Clamps (Drawing no. 61401)

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Voltage Adjustment - Local

The multi-turn potentiometer that adjusts each output within the specified range may be accessed via the output panel of the power supply. Clockwise rotation increases output voltage. Resolution is approximately 5% of nominal voltage (Vnom) per turn.

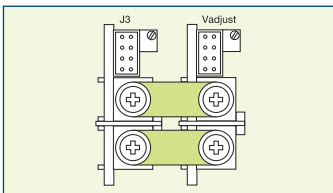
Voltage Adjustment - Remote (resistive / electronic)

The output voltage may be adjusted or trimmed by means of an external resistor or potentiometer network connected to the Vtrim pin. Linear Electronic programming is also possible and may be implemented according to the formula $V_{out} = K V_{control}$. See Xgen series Designers' Manual for full details.

Paralleling

To achieve increased current capacity, simply parallel outputs using the standard parallel links. Excelsys' wireless' sharing ensures that current hogging is not possible. To parallel connect outputs:

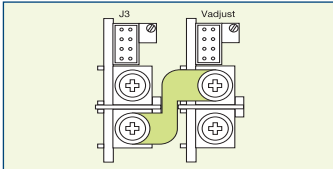
1. Switch on IShare switch to ON on powerMods.
2. Connect Negative parallel link.
3. Adjust output voltages of powerMods to within 5mV of each other.
4. Connect Positive Parallel Link.



Parallel Links available to order. Part Number XP1

Seriesing

To achieve increased output voltages, simply series outputs using standard series links, paying attention to the requirements to maintain SELV levels if required in your system.



Series Links available. Part Number XS1

Remote Sensing

When the load is remote from the power supply, the remote sense pins may be used to compensate for drops in the power leads. Where the power cabling contributes significant dynamic impedance, see Xgen series Designers' Manual.

Bias Voltage

A SELV isolated 5V (always on) bias voltage rated at 250mA is provided on J2 to facilitate miscellaneous control functions.

Current Limit Adjustment

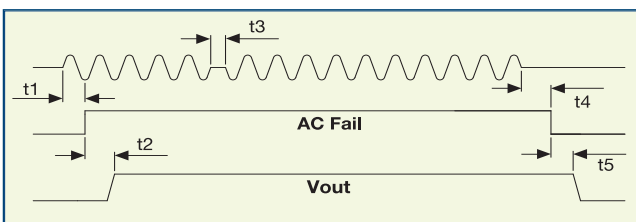
The output current limit setting may be adjusted (downwards only) by means of an external resistor connection to the I trim pin.

Inhibit/Enable

Inhibiting may be implemented either globally or on a per module basis (powerPac or powerMod inhibiting). Reverse logic (Enabling) may also be implemented, see Xgen series Designers' Manual.

AC Fail

Open collector signal indicating that the input voltage has failed or is less than 80Vac. This signal changes state giving 5mS of warning before loss of output regulation. See Xgen series Designers' Manual for full specifications.

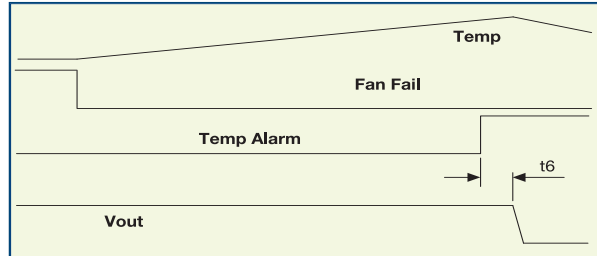


Temperature Alarm (Option 01)

Open collector signal indicating excessive powerPac temperatures due to fan failure or operation beyond ratings. This signal is activated at least 10ms prior to system shutdown.

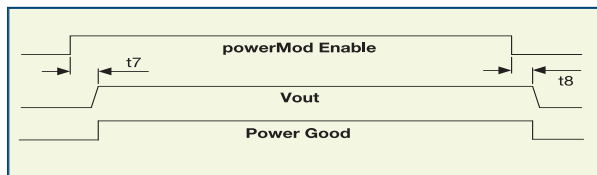
Fan Fail (Option 01)

Open collector signal indicating that at least one of the system fans have failed. This does not cause system shutdown.



Power Good

Opto-isolated output signal indicates that the powerMod is operating correctly and output voltage is within normal band. Opto transistor ON = Good.



Indication LEDs

Each powerMod has a visual indicator to identify that it is operating within normal ratings. Very useful for system diagnosis.

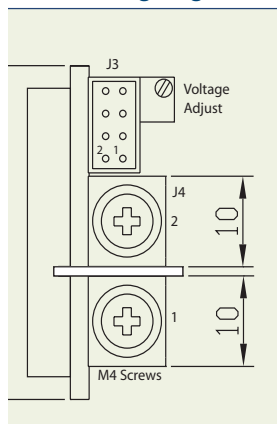
Signal Connector Pinout

Pin	J2 (powerPac)	J3 (powerMod) Type A	J3 (powerMod) Type B
1	common	+sense	+pg (V2)
2	+5V bias	-sense	-pg (V2)
3		V trim	inhibit (V2)
4	ac fail	I trim	common (V2)
5	fan fail*	+inhibit/enable	+pg (V1)
6	global enable	-inhibit/enable	-pg (V1)
7	temp alarm*	+power good	inhibit (V1)
8	global inhibit	-power good	common (V1)

*Option 01 only

Signal Connector Pinout

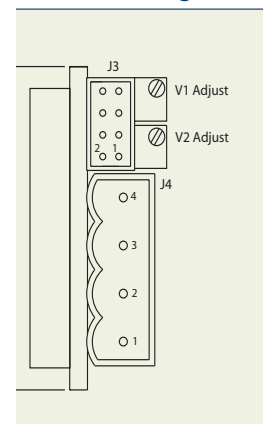
TYPE A Xg1-Xg7



J4 Connector : M4 Screw

J3 Connector Mating Connector
Housing: Locking Molex 51110-0860
Non Locking Molex 51110-0850
Crimp Terminal: Molex p/n 50394

TYPE B : Xg8



J4Connector : Camden 9200/4A

J3 Connector Mating Connector
Housing: Locking Molex 51110-0860
Non Locking Molex 51110-0850
Crimp Terminal: Molex p/n 50394

See Xgen series Designers' Manual for full signal connector details.