

## Instruction Manual

**PLEASE READ THIS INSTRUCTION MANUAL CAREFULLY BEFORE INSTALLATION OR USE OF THIS PRODUCT, AND KEEP IT IN A SAFE PLACE FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE PROUDCT.**

### HIGH VOLTAGE WARNING!

Dangerous voltages are present within these power supplies. These products should only be worked on by qualified personnel.

powerPacs		
Xlite, Xcite	Standard	200W-1200W
Xmite, Xvite	Medical	200W-1200W
Xhite	High Temperature	400W-600W
Xqite, Xzite	Lo-Noise	400W-900W
powerMods		
XG1, XG2, XG3, XG4, XG5, XG6, XG7, XG8	1.5V to 58V	

Xgen Series products are comprised of:

**powerPac Chassis Converters** intended for use in Xgen series ONLY. These must NOT be used for any other purpose.

**powerMod Plug-In Modules** intended for use in Xgen series ONLY. These must NOT be used for any other purpose.

Xgen Series products are designed for use within other equipment or enclosures, which restrict access to **authorised competent personnel only**. The unit covers are designed only to protect skilled personnel from hazards. They must not be used as part of the external covers of any equipment where they may be accessible to operators, since, under full load conditions, part or parts of the unit may reach temperatures in excess of those considered safe for operator access.

### IMPORTANT CONSIDERATIONS

The units should only be supplied only by a power source of the type indicated on its label. An appropriate disconnect device must be provided as part of the building installation. Connection should be made using an appropriate IEC320 type connector. When securing the product, do not use screws which infringe the maximum penetration depth of 6mm. Customer fixings are provided on the base of the unit in addition to the Excelsys 'fleximount' system which allows the unit to be mounted on either side of the **powerPac** chassis. The Xgen series of power supplies have integral fans and may be mounted in any orientation provided that the air intake and air outlet areas are not impeded with particular regard paid to provide ventilation holes in any chassis on which or near which the unit is mounted. AFTER DISCONNECTING THE AC SOURCE, ALLOW 4 MINUTES BEFORE DISASSEMBLY TO ALLOW CAPACITORS WITHIN THE UNIT TO DISCHARGE.

### INPUT SPECIFICATIONS (powerPac only)

Input Voltage Range	100 to 240Volts AC
Input Frequency	50/60 Hz
Earth Leakage Current	1.5mA for Xlite, Xcite, Xhite, Xqite 300µA for Xmite, Xvite, Xzite

### Input Fusing

**WARNING! To protect against risk of fire, replace only with fuses of same rating and type. Fuses must be replaced by qualified service personnel only.**

Model	Fuse	Type	Voltage	Size
XLA	5A	F	250V	5.0 x 20mm
XLB	6.3A	F	250V	5.0 x 20mm
XLC	8A	F	250V	5.0 x 20mm
XCA	8A	F	250V	6.25 x 32mm
XCB	10A	F	250V	6.25 x 32mm
XCC	12A	F	250V	6.25 x 32mm
XCD	12A	F	250V	6.25 x 32mm
XMA	5A	F	250V	5.0 x 20mm
XMB	6.3A	F	250V	5.0 x 20mm
XMC	8A	F	250V	5.0 x 20mm
XVA	8A	F	250V	6.25 x 32mm
XVB	10A	F	250V	6.25 x 32mm
XVC	12A	F	250V	6.25 x 32mm
XVD	12A	F	250V	6.25 x 32mm
XHA	10A	F	250V	6.25 x 32mm
XHB	12A	F	250V	6.25 x 32mm
XQA	10A	F	250V	6.25 x 32mm
XQB	12A	F	250V	6.25 x 32mm
XZA	10A	F	250V	6.25 x 32mm
XZB	12A	F	250V	6.25 x 32mm

- Altitude: -155 metres to +3050 metres from sea level.
- Humidity: 10 to 95% non-condensing.
- Operating temperature -20°C to 70°C
- Derate at 2.5% per °C above 50°C and up to 70°C.

### Approval Limitations

#### Use In North America

When this product is used on 180 to 253 Volts AC mains with no neutral, connect the two lives wires to L (live) and N (neutral) terminals on the input connector.

### Levels Of Insulation

Subject to the limitations above

#### Xlite, Xcite, Xhite and Xqite

- Primary mains circuits to earth: 2.5mm spacing
- Primary mains circuits to secondary: 5mm spacing

Dielectric strength testing is carried out as follows:

- Primary mains circuits to chassis: 1500V AC
- Primary mains circuits to secondary: 3000V AC.

#### Xmite, Xvite and Xzite

- Primary mains circuits to earth: 4mm spacing
- Primary mains circuits to secondary: 8mm spacing

Dielectric strength testing is carried out as follows:

- Primary mains circuits to chassis: 1500V AC
- Primary mains circuits to secondary: 4000V AC.

### Earth Terminal Marking IMPORTANT

If in the end use equipment the incoming mains cable earth wire connects directly to the "GND" connection Xgen without being interrupted or junctioned on its way to that connection, then this connection forms the main protective earth of the system. To comply with IEC60950, EN60950, UL1950 requirements and to comply with EN60601-1, UL2601-1, CSA22.2-601-1 requirements then this must be marked with the symbol defined in the IEC417 No. 5019a. The customer should therefore affix an adhesive label which will pass the 15 Second rub test (IEC60950 section 1.7.15) showing the symbol here adjacent to the earth connection. This symbol must only be used at the first interruption / connection of the incoming earth wire.

### Health And Safety At Work Act (UK only)

In order to protect service personnel and users of these power supplies and to comply with section 6 of the Health And Safety Acts, a clearly visible label should be fitted warning that surfaces of these units may be hot and must not be touched when the units are in operation.

### Receipt And Unpacking

On receipt a unit should be unpacked carefully and checked for transit damage. If the unit is damaged, do not apply power or install the unit. SEEK SPECIALIST ADVICE!

### Warranty

Warranty conditions are contained in our standard terms and conditions. Contact your authorised outlet for repair.

### powerPacs

Family	Model	Watts	L x H x W (mm)
Xlite	XLA	200W	260 x 40.4 x 89
	XLB	400W	260 x 40.4 x 89
	XLC	600W*	260 x 40.4 x 89
Xcite	XCA	400W	260 x 40.4 x 127
	XCB	700W	260 x 40.4 x 127
	XCC	1000W**	260 x 40.4 x 127
	XCD	1200W***	260 x 40.4 x 127
Xmite	XMA	200W	260 x 40.4 x 89
	XMB	400W	260 x 40.4 x 89
	XMC	600W*	260 x 40.4 x 89
Xvite	XVA	400W	260 x 40.4 x 127
	XVB	700W	260 x 40.4 x 127
	XVC	1000W**	260 x 40.4 x 127
	XVD	1200W***	260 x 40.4 x 127
Xhite	XHA	400W	260 x 40.4 x 127
	XHB	600W	260 x 40.4 x 127
Xqite	XQA	400W	260 x 40.4 x 127
	XQB	900W****	260 x 40.4 x 127
Xzite	XZA	400W	260 x 40.4 x 127
	XZB	900W****	260 x 40.4 x 127

\*Derate linearly from 600W at 180Vac to 400W at 85Vac  
\*\*Derate linearly from 1000W at 120Vac to 850W at 85Vac  
\*\*\*Derate linearly from 1200W at 120Vac to 850W at 85Vac  
\*\*\*\*Derate linearly from 900W at 120Vac to 600W at 85Vac

### Options

#### Thermal Signals (Option 01)

Temperature Alarm & Fan Fail  
Open Collector signal indicators.

#### Reverse Fan (Option 02)

Reverse direction of air flow through the Xgen.  
Not available for 1200W models.

### powerMods

Model	Vmin	Vnom	Vmax	Imax	Watts	Watts*
Xg1	1.5	2.5	3.6	50	125	100
Xg2	3.2	5.0	6.0	40	200	150
Xg3	6.0	12.0	15.0	20	240	180
Xg4	12.0	24.0	30.0	10	240	180
Xg5	28.0	48.0	58.0	6	288	215
Xg7	5	24.0	28.0	5	120	90
Xg8	5/5	24/24	28/28	3/3	72/72	55/55

\* Reduced ratings when used with XQ and XZ powerPac models.  
powerMod maximum power ratings must not be exceeded

### Permitted Power Ratings for Reliable Operation.

When specifying an Xgen in an application, it is necessary to ensure that the **powerPacs** and **powerMods** are operating within their power ratings as listed above, taking care to factor in the appropriate derating if the ambient temperature exceed 50°C (except for Xhite models).

### Unused Slots

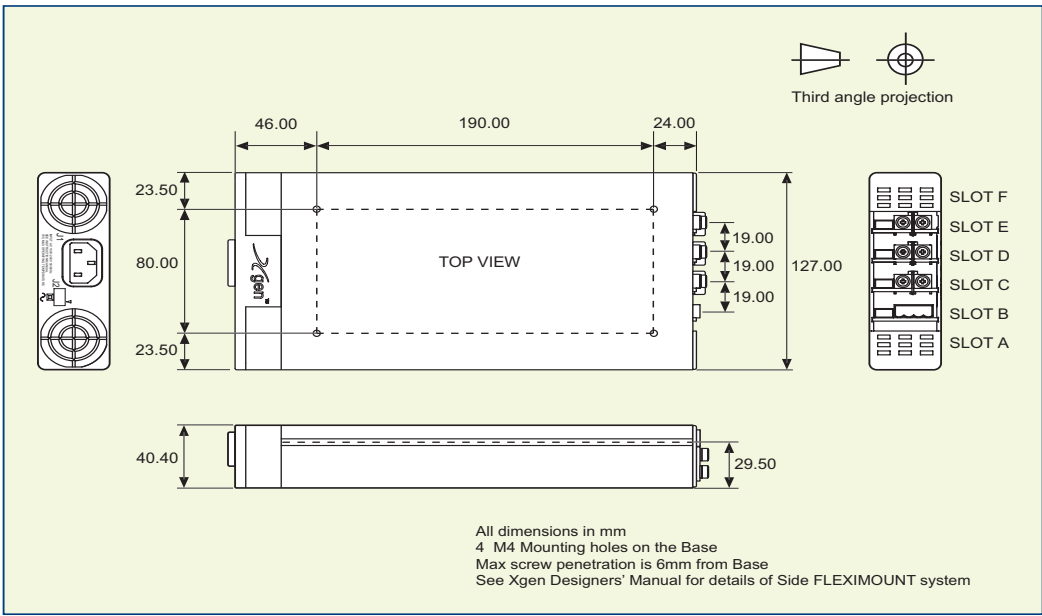
UNUSED SLOTS MUST ALWAYS BE FITTED WITH APPROPRIATE SLOT COVERS XB1, XB2 or XB3. Units must NOT be operated with empty slots.

### Environmental Parameters

The Xgen Series is designed for the following parameters:

- Pollution Degree 2
- Installation Category 2
- Class I
- Indoor use (as part of another piece of equipment such that unit is accessible to service engineers only).

Connectors and Pin-Outs



**J1: Input Mains Connector**  
IEC320

**J2: powerPac Signal Connector**

Pin	J2 powerPac
1	Common
2	+5V Bias
3	
4	AC Fail
5	Fan Fail*
6	Global Enable
7	Temp Alarm*
8	Global Inhibit

Mating parts:  
Housing Molex p/n 51110  
Crimp Terminal Molex p/n 50394

**J3: powerMod Signal Connector**

Pin	Type A	Type B
1	+Sense	+PG (V2)
2	-Sense	-PG (V2)
3	Vtrim	Inhibit (V2)
4	Itrim	Common (V2)
5	+Inhibit/Enable	+PG (V1)
6	-Inhibit/Enable	-PG (V1)
7	+Power Good	Inhibit (V1)
8	- Power Good	Common (V1)

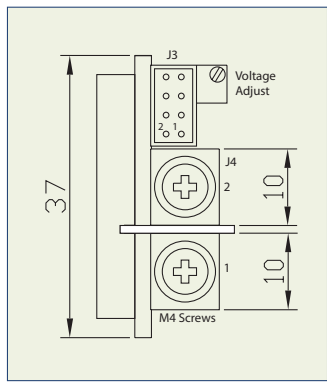
Mating parts:  
Housing Molex p/n 51110  
Crimp Terminal Molex p/n 50394

**J4: powerMod Output Connector**

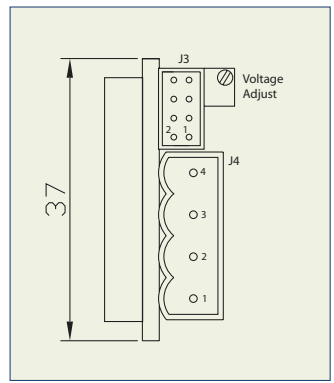
Pin	Type A	Type B
1	-Vout	-V2
2	+Vout	+V2
3		-V1
4		+V1

Type A : M4 Screw Terminals  
Type B : Mating part:  
Molex - xxxxxxxxxxxx  
Phoenix - xxxxxxxxxxxx

**powerMod Type A**



**powerMod Type B**



Labeling and Model Numbers

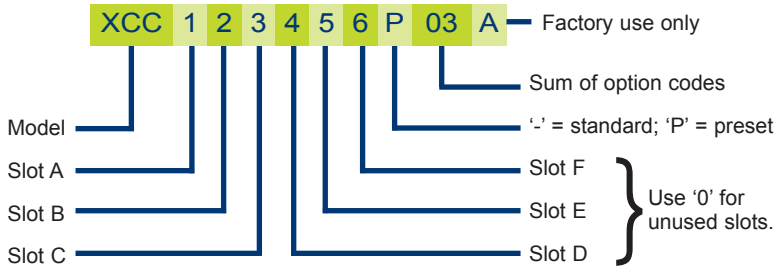
**powerMod**  
powerMod labels contain:  
..Minimum, Nominal & Maximum voltage adjustment range.  
..Maximum current (Imax)  
..Maximum power (Watts)  
..Model number  
Model numbers are easily identified by the number marked on the top of signal connector J3.

**powerPac**  
powerPac labels contain:  
..Input Freq  
..Input Voltage  
..Fuse rating  
..Serial Number  
..Maximum combined power rating of inserted powerMods  
..Maximum Line current under rated conditions  
..Model Number in the format XCD [ ] [ ] [ ] [ ] - 01 as an example for a 1200W Xcite model, with optional Thermal Signals.

When the powerPac has no powerMods inserted, its Model number is simply XCD-01.

When the powerPac has one or more powerMods inserted, its model number may be easily read to be XCD012340-01 as an example, where powerMods XG1, XG2, XG3, XG4 are inserted in Slots B,C,D,E respectively with slot covers in the remaining slots A and F.

Xgen Series Part Numbering System



Excelsys Technologies Ltd. reserves the right to alter or improve the specification, internal design or manufacturing process without notice. Please check with your Excelsys distributor or visit www.excelsys.com to ensure that you have the current and complete specification for your product before use. For information and instructions on use, please consult the Xgen Designers' Manual.



Excelsys Technologies Ltd.  
Swords Business Park,  
Swords, Co. Dublin, Ireland  
tel: +353 18900933  
fax: +353 18901358  
email: sales@excelsys.com