



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 PRODUCT.

400W-1000W	
200W-1340W	
200W-1340W	Ċ
400W-600W	
200W-1200W	
200W-1200W	
200W-800W	6
200W-800W	
400W, 900W & 1200W	
1.0V to 58V	
R, XgT	
	200W-1340W 200W-1340W 400W-800W 200W-1200W 200W-1200W 200W-800W 200W-800W 200W-800W 400W, 900W & 1200W 1.0V to 58V

UltiMod and Xgen Series products are comprised of:

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

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

HIGH VOLTAGE WARNING!

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

UtiMod and 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.

The powerPac should be supplied only by a power source of the type indicated on its label. A socket outlet shall be installed near the equipment and shall be easily accessible. The unit should only be used with a suitably rated mains cord and appropriate IEC320 type connector, sourced by the end user, and in accordance with the requirements of Table 3B of IEC60950-1 (latest edition). If in doubt, contact Excelsys Engineering Department for assistance. For installations in accordance with IEC 60601-1, the Neutral input supply lead must be provided with a suitable fuse protection device. See the Fuse table below for details. When adding or removing powerMods from the powerPac, care must be taken to handle the powerMods by the output terminals ONLY, ensuring that all other surface mount components are

below for details. When adding or removing *powerwaas* from the *powerrae*, care that be taken to nation the participation of the participation of the participation of the participation of the powerrae. Care that be taken to nation and participation of the participation of the participation of the participation of the powerrae. Care that be taken to nation and participation of the participation of the powerrae of the powerrae. Care that be taken to nation and participation of the participation of the participation of the powerrae of the

INPUT SPECIFICATIONS	(powerPac only)
Input Voltage Range	100 to 240Volts AC
Input Frequency	50/60 Hz
Earth Leakage Current	1.5mA XI, Xc,Xh,Xq

1.5mA XI, Xc,Xh,Xq,Xk,Xt,Xb,Xf, UXS 300µA Xm,Xv,Xr,Xz,Xn,Xw, UX, UXX

WARNINGI 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	Reference	Fuse	Туре	Voltage	Size
XLA, XKA, XMA, XRA, XTA, XNA	FS1	5A	F	250V	5.0 X 20mm
XLB, XKB, XMB, XRB, XTB, XNB, UXS	FS1	6.3A	F	250V	5.0 X 20mm
XLC, XLD, XKC, XRC, XMC, XMD, UX4	FS1	8A	F	250V	5.0 X 20mm
XCA, XFA, XVA, XQA, XHA, XZA, XBA, XWA	FS1	8A	F	250V	6.25 X 32mm
XCB, XFB, XVB, XHB, XBB, XBC, XWB, XWC	FS1	10A	F	250V	6.25 X 32mm
XCC, XCD, XFC, XFN, XVC, XVD, XQB, XQC, XZB, XZC, UX6, UXX	FS1	12A	F	250V	6.25 X 32mm
XCE, XVE	FS1	15A	F	250V	6.25 X 32mm

OUTPUT SPECIFICATIONS (power/Mod only) See power/Mod table below, with more detail in Designers' Manual. Each moc may be adjusted over the full voltage and pee shown in the table subject to not exceeding the maximum rated Voltage and Power shown in the table.

The Xgen and UlliMod when correctly installed in a limited access environment are designed to comply with the following requirements X1, X2, NX, X4, X4, X4, X4, X4, X4, X4, X4, X5, X5, X1, X1, UL60950-1, CAN/CSA C22 ZN 605050-1-07, IEC60950-1, EN60950-1 and IEC61010 Xm, Xv, X2, X7, Xn, Xw, UX4, UX6, IX58/IAAMI ES60801-11, CAN/CSA C22.2 No.66001-11, IEC 60801-1, EN60801-1 and IEC61010

For current approval status, please contact Excelsys Sales. Equipment manufacturers must protect service personnel against inadvertent contact with the module output terminals.

Environmental Parameters

- The products are designed for the following parameters:
 Pollution Degree 2
 Installation Category 2
 Cleanel.
- Class I
 For use as part of another piece of equipment such that unit is accessible to

- service engineers only Altitude: -155 metres to +2000 metres from sea level Humidity: 10 65% non-condensing Operating temperature 0°C to 70°C Derate at 157% per °C above 40°C and up to 70°C Derating applies to both *powerPacs* and *powerMods*

Approval Limitations Use in North Amarica When this product is used on 190 to 253 Volts AC mains with no neutral, connect one live wire to L (live) terminal and the other live wire to N (neutral) terminal on the input connector. For installation in accordance with UL60601-1 and UL60950-1 the wires connected to the Neutral terminal must be provided with a suitable fuse protection device. See Fuse Table. The attachment plug shall be rated to a current not less than 125% of the rated

of the equipment.

Levels Of Insulation Subject to the limitations above

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

Dielectric strength testing is carried out as follows • Primary mains circuits to chassis: 1500V AC • Primary mains circuits to secondary: 3000V AC

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

Dielectric strength testing is carried out as follows • Primary mains circuits to chassis: 1500V AC • Primary mains circuits to secondary: 4000V AC

IMPORTANT

If in the end use equipment the incoming mains cable earth wire connects directlyto the XgenUIIMod "GND" connection 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 IEC60950-1 or IEC60901-1 requirements this must be marked with the symbol defined in the IEC00417 No.50159. The customer should therefore aftic an adhesive label which will pass the 15 Second rub test (IEC60950-1 section 17.13) 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.

To protect service personnel and users 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.

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

UNUSED SLOTS MUST ALWAYS BE FITTED WITH APPROPRIATE SLOT COVERS X81,X82 or X83. Units must NOT be operated with empty slots.

I nermal Signals (Option 01 - Standard on UX4 Temperature Alarm & Fan Fail and Open Collector signal indica

Nat available for 1200W models. XED/VE model with Revense Fan derate from 1250W at 210VAC to 980W at 100V/ XLD/XDM model with Revense Fan derate from 750W at 210VAC to 500W vt 00VAC at XED/XDM model with Revense Fan derate from 550W at 210VAC to 750W VVC at 10 XeJ/XB XgC & XgD when used in XCE/XVE Model with Revense Fan derate by add 10% for full mage of Line Votage 100VAC to 240VAC.

Low Leakage Current See Designers' Manual for details

Input Cable Input Cable and Connector Option

Model	Vmin	Vnom	Vmax	lmax	Watts	Watts ⁽¹⁾	Watts ⁽²⁾
Xg1	1.5	2.5	3.6	50	125	104	65
Xg2	3.2	5.0	6.0	40	200	166	100
Xg3	6.0	12.0	15.0	20	240	200	120
Xg4	12.0	24.0	30.0	10	240	200	120
Xg5	28.0	48.0	58.0	6	288	240	144
Xg7	5	24.0	28.0	5	120	100	60
Xg8	5/5	24/24	28/28	3/3	72/72	60/60	36/36
XgA	10.8	12	15.6	12.5	150	125	75
XgB	19.2	24	26.4	8.33	200	166	100
XgC	28.8	36	39.6	5.56	200	166	100
XgD	38.4	48	50.4	4.17	200	166	100
XgE	5	24	28	5	120	100	60
XgF	5/5	24/24	28/28	3/3	72/72	60/60	36/36
XgG	1.5	2.5	3.6	40	100	83	50
XgH	3.2	5	6	36	180	150	90
XgJ	6	12	15	18.3	220	184	100
XgK	12	24	30	9.16	220	184	100
XgL	28	48	58	5	240	200	120
XgM	1.0	5.0	6.0	40	200	166	100
XgN	1.0	12.0	15.0	20	240	200	120
XgP	1.0	24.0	30.0	10	240	200	120
XgQ	1.0	48.0	58.0	6	288	240	144
XgR	12.0	24.0	30.0	10	240	200	120
XgT	28.0	48.0	58.0	6	288	240	144

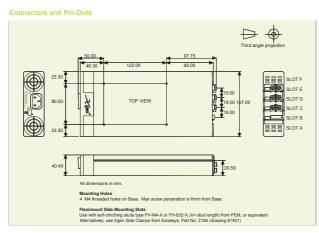
Notes: 1. Derating values for power/Mods when used with the Xb, Xn, Xt, Xw Ultra Quiet Models 2. Derating values for power/Mods when used with the XHA and XHB High Temperature

Permitted Power Ratings for Reliable Operation. powerPases and powerModes are operating within their power ratings as listed above, taking care to factor in the appropriate derating if the ambient temperature exceeds 40°C (except for Xh models).

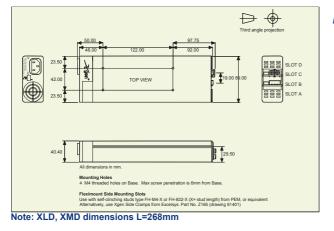
Family	Model	Watts	L x H x W (mm)
XI	XLA	200W	260 x 40.4 x 89
	XLB	400W	260 x 40.4 x 89
	XLC	600W ⁽¹⁾	260 x 40.4 x 89
	XLD	750W ⁽²⁾	268 x 40.4 x 89
Xk	XKA	200W	260 x 40.4 x 89
	XKB	400W	260 x 40.4 x 89
	XKC	600W ⁽¹⁾	260 x 40.4 x 89
Xc	XCA	400W	260 x 40.4 x 127
	XCB	700W	260 x 40.4 x 127
	XCC	1000W ⁽³⁾	260 x 40.4 x 127
	XCD	1200W ⁽⁴⁾	260 x 40.4 x 127
	XCE	1340W ⁽⁵⁾	268 x 40.4 x 127
Xf	XFA	400W	268 x 40.4 x 127
	XFB	700W	268 x 40.4 x 127
	XFC	1000W ⁽⁸⁾	268 x 40.4 x 127
	XFN	1000W ⁽⁸⁾	268 x 40.4 x 127
Xm	XMA	200W	260 x 40.4 x 89
	XMB	400W	260 x 40.4 x 89
	XMC	600W ⁽¹⁾	260 x 40.4 x 89
	XMD	750W ⁽²⁾	268 x 40.4 x 89
Xr	XRA	200W	260 x 40.4 x 89
	XRB	400W	260 x 40.4 x 89
	XRC	600W ⁽¹⁾	260 x 40.4 x 89
Kv	XVA	400W	260 x 40.4 x 127
	XVB	700W	260 x 40.4 x 127
	XVC	1000W ⁽³⁾	260 x 40.4 x 127
	XVD	1200W ⁽⁴⁾	260 x 40.4 x 127
	XVE	1340W ⁽⁵⁾	268 x 40.4 x 127
Xh	XHA	400W	260 x 40.4 x 127
	XHB	600W	260 x 40.4 x 127
Xa	XQA	400W	260 x 40.4 x 127
	XQB	900W	260 x 40.4 x 127
	XQC	1200W ⁽⁴⁾	260 x 40.4 x 127
Xz	XZA	400W	260 x 40.4 x 127
~~	XZR	400W	260 x 40.4 x 127 260 x 40.4 x 127
	XZC	1200W ⁽⁴⁾	260 x 40.4 x 127 260 x 40.4 x 127
Xb	XBA	400W	260 x 40.4 x 127 260 x 40.4 x 127
~~	XBA	400W	260 x 40.4 x 127 260 x 40.4 x 127
	XBB	800W ⁽⁶⁾	260 x 40.4 x 127 260 x 40.4 x 127
Xt	XTA	200W	260 x 40.4 x 127 260 x 40.4 x 89
AL	XTB	200W 400W ⁽⁷⁾	260 x 40.4 x 89 260 x 40.4 x 89
Xw	XWA	400W	260 x 40.4 x 89 260 x 40.4 x 127
XW			
	XWB	600W	260 x 40.4 x 127
	XWC	800W ⁽⁶⁾	260 x 40.4 x 127
Xn	XNA	200W	260 x 40.4 x 89
	XNB	400W ⁽⁷⁾	260 x 40.4 x 89
UX	UX4	600W ⁽¹⁾	260 x 40.4 x 89
	UX6	1200W ⁽⁴⁾	260 x 40.4 x 127
	UXX	900W	260 x 40.4 x 127
	UXS	400W	260 x 40 4 x 89 ⁽⁹⁾

(1)Dente linearly from 600W at 200%te to 140W at 100%te nom. (2)Dentel linearly from 700W at 140%te to 550W at 100%te nom. (3)Dente linearly from 100W at 134%te to 90W at 100%te nom. (4)Dente linearly from 1340W at 134%te to 90W at 100%te nom. (5)Dente linearly from 80W at 134%te to 350W at 100%te nom. (7)Dente linearly from 80W at 134%te to 350W at 100%te nom. (7)Dente linearly from 100W at 134%te to 350W at 100%te nom.

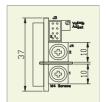
Note A French translation of this Instruction Manual is also available; document number 40115. Contact sales@excelsys.com for a copy of this.



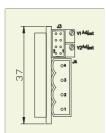
Note: XCE, XVE, XFA, XFB, XFC, XFN dimensions L=268mm



powerMod Type A



powerMod Type B



UltiMod and Xgen Series Part Numbering System

Note A: Option Codes 0 = Standard Model 1 = Thermal Signals 2 = Reverse Fan

3 = Thermal Signals & Reverse Fan

J1: Input Mains Connecto IEC320

Note: For use in ambient temperatures >60C, a hot condition mating connector and cable must be used.

Input cable optional Line: Connector Faston Receptacle 6.3 x 0.8mm Neutral: Connector Faston Receptacle 6.3 x 0.8mm Earth: Connector Crimp Terminal Ring M3

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 Moley, p/p E1110			

HousingMolex p/n 51110 Crimp Terminal Molex p/n 50394

Pi	Туре А	Туре А	Type B
	Xg1-Xg5	XgA-XgD	Xg7 & XgE - V1 only
	XgG-XgT		Xg8 & XgF - V1 & V2
1	+Sense	Not Used	- PG (V2)
2	-Sense	Common	+PG (V2)
3	Vtrim	Not Used	Inhibit (V2)
4	ltrim	Not Used	Common (V2)
5	+Inhibit/Enable	Inhibit+	-PG (V1)
6	-Inhibit/Enable	Inhibit-	+PG (V1)

Inhibit (V1)

Common (V1)

- Power Good 8 Not Used Mating parts:

+Power Good

HousingMolex p/n 51110 Crimp TerminalMolex p/n 50394

J4:	powerMod Output Connector				
Pin	Туре А	Type B			
1	-Vout	- V2			
2	+Vout	+V2			
3		-V1			
4		13/4			

Not Used

Type A : M4 Screw Terminals

Type B : Mating part:

Camden - CTB9200/4A

Note: Cables must be rated 105°C minimum

Labeling and Model Numbers

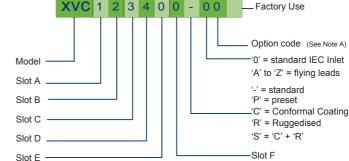
powerMod

powerMod Jabels 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. powerPad 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 [] [] [] [] [] 0 - 01 as an example for a 1200W Xc 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.



4 = Low Leakage Model 5 = Low Leakage & Thermal Signals 6 = Low Leakage & Reverse Fan 7 = Low Leakage, Thermal Signals & Reverse Fan

Configuration Considerations

1. When parallel connecting outputs, refer to Section 4.6 of Product catalogue for set-up, including Vtrim adjust and I-Share switch.

- When connecting outputs, refer to Section 4.6 or Product catalogue for serup, including voltma logist and i-share switch.
 When connecting outputs is series to achieve voltages in excess of SPVDC (SELV), ensure that appropriate safety precautions are taken in the system.
 Before removing and replacing output modules, remove input power for 2 minutes.
 For proper connection to Inhibit, Enable, Fan Fail, Over Temp alarm, and Output Signals Power Good refer section 4.7 and 4.9 of Product Catalogue.
 For power derating, refer to Section 4.11 of Product Catalogue.
 For motor loads, high inductance, and high capacitance: blocking diode may be needed. Contact Excelsys for support.
 Refer to the Product Series Catalogue for information on all the above and additional information regarding the set, installation and operation of the UltiMod and Series Catalogue.
- and Xgen Series.

Excelsys Technologies Ltd. reserves the right to alter or improve the specification, internal design or manufacturing process with-out notice. Please check with your Excelsys representative or visit www.excelsys.com to ensure that you have the current and com-plete specification for your product before use. For information and instructions on use, please consult the Designers' Manuals for these products at www.excelsys.com.



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