

## Plug & Play Power

next generation power source

### Lowest Profile (1U) Highest Efficiency

#### FEATURES

- up to 1200W multi-output power in 1U (40mm)
- 1.5V to 58V standard output voltages
- All outputs fully floating
- Plug & Play power module architecture
  - allows fast custom configurations
  - facilitates rapid prototyping
  - simplifies logistics
- Ultra-high efficiency up to 90%
- Series / Parallel of multiple outputs
- Visual LED indicators

#### APPLICATIONS INCLUDE

- Industrial machines
- Test and measurement
- Automation equipment
- Telecommunications
- Medical equipment
- Laboratory and Diagnostic equipment
- Audio and broadcast
- Linear and rotary motion
- 19" systems



# XGEN SERIES

Excelsys brings over 20 years experience of modular power supply development and applications together with the most modern product development and design techniques in the revolutionary Xgen series.

The Xgen series brings OEM power supplies to a new paradigm, combining technical excellence with logistics simplicity to fully resolve all the concerns regularly expressed by users of multiple-output power supplies. Xgen continues the Excelsys tradition of providing an instant, no compromise power solution for any application where a unique set of voltage and current requirements is needed.

## Too much heat generated in your OEM equipment? Difficult to maintain your equipment at the right temperature?

**EFFICIENCY** Xgen has industry-unrivalled efficiency, exceeding 90% !! This means that less than half of the amount of waste heat is created in comparison to conventional multiple output power sources with efficiencies of 80% and lower. It also guarantees increased reliability.  
Now, that's a **cool** power supply!

## Not enough space available in your OEM equipment? Is space at a premium, making design and manufacture difficult and compromised?

**SPACE** Xgen has industry-unrivalled power density for a full functionality ac/dc power supply, at 15W/in<sup>3</sup>. Check it out! You can get 1200W of multiple-output power source in 1U rack space - Xgen dimension: 40.4mm! It's so compact, you'll hardly notice it, once installed, and it leaves plenty more space for your other components and general accessibility.  
Now, that's a **discreet** power supply!

## Need a custom power supply in a hurry?

**CUSTOM POWER** Xgen is a true Plug & Play multiple-output power supply. Any one of more than 30 million configurations can be assembled anywhere, in under 5 minutes, from standard, volume-produced modules. This is the new-paradigm: a custom power supply available in 5 minutes from standard parts.  
Now, that's a **new paradigm** power supply!

## Worried about meeting all relevant standards - EMC, Safety, etc?

**STANDARD APPROVALS** Xgen series models are fully compliant with all relevant standards. Xcite, Xlite, Xhite and Xqite models meet the requirements of EN60950, UL60950, CSA22.2, EN61000-3-x and EN61000-4-x. Additionally Xvite and Xmite models meet the requirements of EN60601-1 and UL2601 for medical applications.  
Now, that's a **re-assuring** power supply!



## Looking for a cost-effective long term solution for all your power supply requirements?

**COST-EFFECTIVE** Xgen is configured from standard component parts that are manufactured in volume in a world class manufacturing facility. This allows Excelsys to provide you with all the benefits of Xgen at a world class competitive price. Call Excelsys or one of our distributors and find out for yourself.  
Now, that's an **excellent value** power supply!



## Excelsys Development and Design Methodology

Excelsys has applied the most modern and rigorous processes and design techniques to development of the Xgen product range.

A world-class Stage-Gate™ development process ensures that a holistic approach to development and design is guaranteed, with optimised outcomes built in from the start in respect of customer needs, manufacturing, support and logistics. The Stage-Gate™ process provides the framework for efficient and effective teamwork within Excelsys as well as between Excelsys and its design partners.

The development-specific processes are supplemented by the company-wide process requirements of ISO9001:2000, in particular in the ISO9001:2000 designated area of 'Product Realisation'.

Excelsys was an early adopter of and is fully approved to this latest, upgraded ISO9001:2000 standard.

As well as design laboratory testing, Excelsys has applied exhaustive HALT testing and field prototype testing to development of Xgen. Highly Accelerated Life Testing ensures that design margins are more than sufficient to provide insensitivity to manufacturing variability and to maximise field reliability.



**Voltage Adjustment - Local**

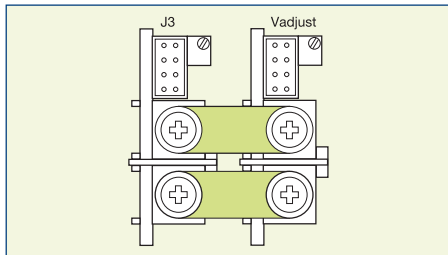
The multi-turn potentiometer that adjusts each output within the specified range may be accessed via the output panel of the power supply. Clockwise rotation increases output voltage. Resolution is approximately 5% of nominal voltage (Vnom) per turn.

**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**

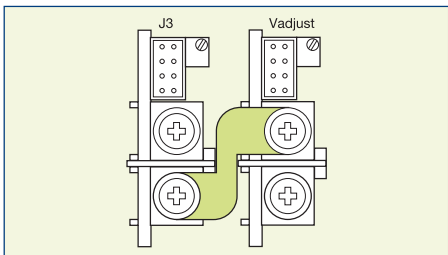
To achieve increased current capacity, simply parallel outputs using the standard parallel links. Excelsys 'wireless' sharing ensures that current hogging is not possible.



Standard parallel links can be supplied. To order, please use 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.



Standard serial links can be supplied. To order, please use 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**

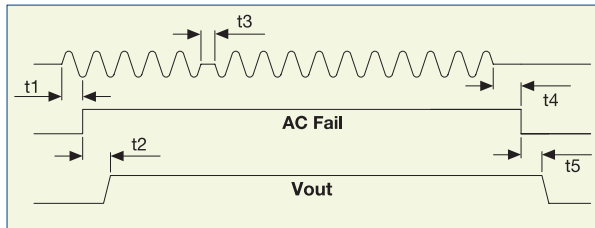
The output current limit setting may be adjusted (downwards only) by means of an external resistor connection to the I trim pin.

**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.

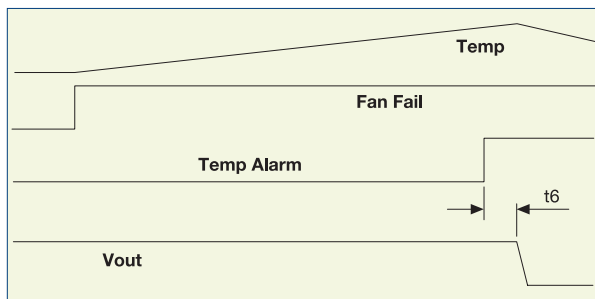


**Temperature Alarm (Option 01)**

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.

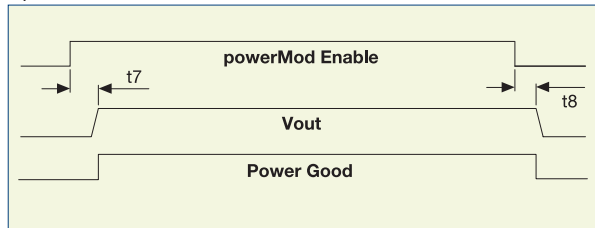
**Fan Fail (Option 01)**

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

\*\*See individual powerMod datasheets

# Xgen Series

The Xgen series power supplies combine feature-laden front-ends (**powerPacs**) with slide-in output converters (**powerMods**). The plug-together architecture facilitates 'instant' custom power solutions with industry leading 15W/in<sup>3</sup> power density and up to 90% conversion efficiency.

## powerPacs (6slot package, 127mm wide)

Family	MODEL	Watts
Xcite	XCA	400W
	XCB	700W
	XCC	1000W
	XCD	1200W

The Xhite family is designed specifically for extended temperature applications fully specified from -20°C to +70°C with no derating !!!

The Xqite family is designed specifically for acoustic sensitive applications.

## powerPacs (4slot package, 89mm wide)

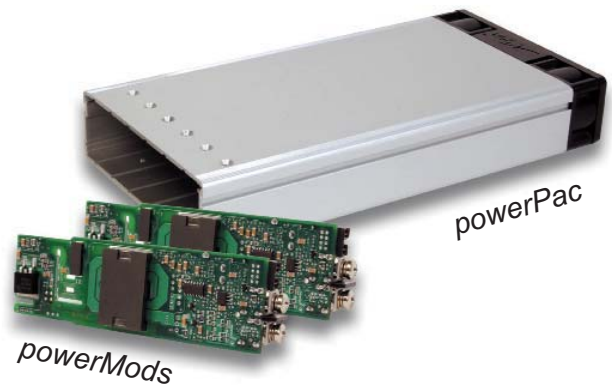
Family	MODEL	Watts
Xlite	XLA	200W
	XLB	400W
	XLC	600W

## powerMods (for use with all powerPac models)

MODEL	Vmin	Vnom	Vmax	Imax	Watts
Xg1	1.5	2.5	3.6	50A	125W
Xg2	3.2	5.0	6.0	40A	200W
Xg3	6.0	12.0	15.0	20A	240W
Xg4	12.0	24.0	30.0	10A	240W
Xg5	28.0	48.0	58.0	6A	288W
Xg7	5.0	24.0	28.0	5A	120W
Xg8	5.0	24.0	28.0	3A	72W
	5.0	24.0	28.0	3A	72W

	Family	MODEL	Watts
Med	Xvite	XVA	400W
		XVB	700W
		XVC	1000W
		XVD	1200W
HT	Xhite	XHA	400W
		XHB	600W
QT	Xqite	XQA	400W
		XQB	900W

	Family	MODEL	Watts
Med	Xmite	XMA	200W
		XMB	400W
		XMC	600W



## HOW TO ORDER

**Configured Units** may be specified and ordered using the part numbering system shown opposite. For example, part number XVC123400-01 specifies the following 1000W medical power supply.

- 2.5V @ 50A 5V @ 40A 12V @ 20A 24V @ 10A
- Thermal signals suite fitted to powerPac

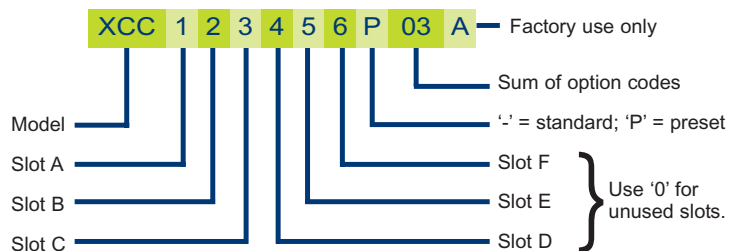
**Accessories** may be ordered directly using the part numbers shown.

Part	Part No.	
Left Slot Cover	XB1	<i>Note that unused slots should be fitted with appropriate slot covers.</i>
Inner Slot Cover	XB2	
Right Slot Cover	XB3	
Series Link	XS1	
Parallel Link	XP1	

**powerPacs** may be ordered directly using the model number shown in the tables followed by the appropriate option code suffix. E.g. XVB-01 is the part number for 700W powerPac with medical approval and thermal signals.

**powerMods** may be ordered directly using the model numbers shown in the powerMod table. E.g. Xg2 is the part number for a 5V 40A module.

**powerKits** consist of application specific powerPacs and a selection of powerMods packaged in a convenient carry case. Particularly useful for systems designers. See powerKit datasheet.



## Xgen Option Codes

- 01 Thermal Signals
- 02 Reverse Fan (*not available on 1200W models*)

## Preset Units

Units are shipped with nominal output voltages unless presetting is specified. Excelsys can preset units to your exact requirements, through use of appropriate parallel and series links and through voltage adjustment to specific preset levels. See [www.excelsys.com](http://www.excelsys.com) for more details.

## On-line Configuration and Ordering

Now build your Xgen product on-line using our configuration wizard. Simply enter your Volts and Amps requirements and the wizard will do the rest.