# Xvite

patents pending

## Medically Approved

Ultra-high efficiency 1U size

### PLUG & PLAY POWER
next generation power source

### FEATURES

- UL60601-1 and EN60601-1 approved
- Less than 300µA leakage current
- 4000VAC isolation
- 1450W peak power for 10sec
- Extra low profile: 1U height (40mm)
- Ultra high efficiency up to 90%
- Plug & Play Power
  - allows fast custom configuration
  - allow easy 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

- Clinical diagnostic equipment
- Medical lasers
- Dialysis equipment

- For Standard applications see XCE

**The XVE addition to the Xgen family of medically approved power supplies provides up to 1340W (peak power 1450W) in the most compact package of 1U x 268mm x 127mm. Boasting an industry leading 17W/in$^3$ and 90% efficiency, the XVE can provide up to 12 isolated DC outputs. The XVE employs innovative plug & play architecture allowing users to instantly configure a custom power solution in less than 5 minutes!**

Ultra high efficiencies and high power density are made possible through the combination of low loss technologies and best field-proven techniques in planar magnetics and surface mount electronics. The significant system space savings and reduced heat dissipation radically simplify system design.

The XVE can be populated with up to 6 *powerMods* selected from the table of *powerMods* shown below.

All configurations carry full safety agency approvals including UL60601-1and EN60601-1 and are CE marked. For alternative power interfaces contact support@excelsys.com

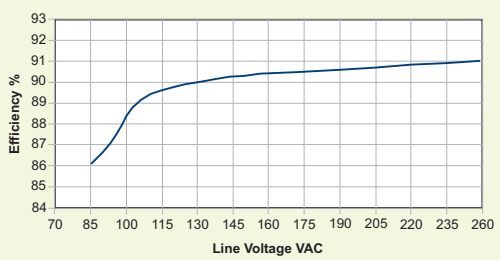
### *powerMods*

| 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 V1 | 5.0 | 24.0 | 28.0 | 3A | 72W |
| V2 | 5.0 | 24.0 | 28.0 | 3A | 72W |

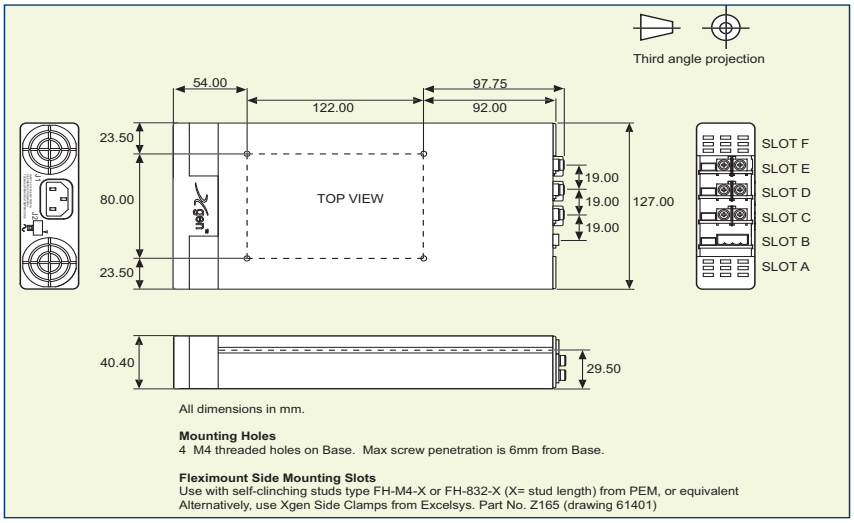
### *powerPacs*

| MODEL | Watts |
|---|---|
| XVE | 1340W |

### EFFICIENCY (typical)




### MECHANICAL SPECIFICATIONS




All dimensions in mm.

**Mounting Holes**
4 M4 threaded holes on Base. Max screw penetration is 6mm from Base.

**Fleximount Side Mounting Slots**
Use with self-clinching studs type FH-M4-X or FH-832-X (X= stud length) from PEM, or equivalent
Alternatively, use Xgen Side Clamps from Excelsys. Part No. Z165 (drawing 61401)

Xgen Series

**SPECIFICATION** applies to configured units consisting of ***powerMods*** modules plugged into the appropriate ***powerPac***

## INPUT

| Parameter | Conditions/Decription | Min | Nom | Max | Units |
|---|---|---|---|---|---|
| **Input Voltage Range** | Universal Input | 85<br>120 | | 264<br>380 | VAC<br>VDC |
| **Input Frequency Range** | | 47 | | 63 | Hz |
| **Power Rating** XVE | See Xgen Designers' Manual for derating versus input line voltage | | | 1340(1450) | W |
| **Input Current** XVE | 85VAC in 1000W out | | 14.0 | | A |
| **Inrush Current** | 230VAC @ 25°C | | | 25 | A |
| **Undervoltage Lockout** | Shutdown | 65 | | 74 | VAC |
| **Fusing** XVE | 250V | | F15A HRC | | |

## OUTPUT

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|---|---|---|---|---|---|
| ***powerMod* Power** | As per *powerMod* table | | | | |
| **Output Adjustment Range** | Manual: Multi-turn potentiometer. As per *powerMod* table<br>Electronic: See Xgen Designers' Manual | | | | |
| **Minimum Load** | | | 0 | | A |
| **Line Regulation** | For ±10% change from nominal line | | | ±0.1 | % |
| **Load & Cross Regulation** | For 25% to 75% load change | | | ±0.2 | % |
| **Transient Response** | For 25% to 75% load change Voltage Deviation<br>Settling Time | | | 10<br>250 | %<br>µs |
| **Ripple and Noise** | 20MHz Bandwidth | | | 1.0 | % pk-pk |
| **Overvoltage Protection** | Two-level. 1st level: Vset Tracking. 2nd level: Vmax (Latching) | 110 | | 125 | % |
| **Overcurrent Protection** | Straight line with hiccup activation at <30% of Vnom<br>See Designer's Manual for full details | 110 | | 120 | % |
| **Remote Sense** | Max. line drop compensation. (except Xg7, Xg8) | | | 0.5 | VDC |
| **Overshoot** | | | | 2 | % |
| **Turn-on Delay** | From AC In / Enable signal | | | 700 / 30 | ms |
| **Rise Time** | Monotonic | | | 5 | ms |
| **Hold-up Time** | For nominal output voltages at full load. 230VAC/115VAC | 15 | | | ms |
| **Output Isolation** | Output to Output / Output to Chassis | 500 / 500 | | | VDC |

## GENERAL

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|---|---|---|---|---|---|
| **Isolation Voltage** | Input to Output<br>Input to Chassis | 4000<br>1500 | | | VAC<br>VAC |
| **Efficiency** | 230VAC, 1340W @ 24V | | 90 | | % |
| **Safety Agency Approvals** | EN60601-1, UL2601-1, CSA601-1 UL File No. E230761 | | | | |
| **Earth Leakage Current** | 250VAC, 60Hz, 25°C | | | 300 | µA |
| **Signals** | See Xgen Series datasheet | | | | |
| **Bias Supply** | Always ON. Current 30mA | 4.9 | 5.0 | 5.1 | VDC |
| **Reliability** | Failures per million hours at 25°C and full load *powerMod*<br>See Designers' Manual. *powerPac* excludes fans *powerPac* | | | 0.98<br>0.92 | fpmh<br>fpmh |

## EMC

| Parameter | Standard | | Level | | Units |
|---|---|---|---|---|---|
| **Emissions** | | | | | |
| **Conducted** | EN55011, EN55022, FCC | | Level B | | |
| **Radiated** | EN55011, EN55022, FCC | | Level B | | |
| **Harmonic Distortion** | EN61000-3-2 | | Compliant | | |
| **Flicker and Fluctuation** | EN61000-3-3 | | Compliant | | |
| **Immunity** | | | | | |
| **Electrostatic Discharge** | EN61000-4-2 | | Level 4 | | |
| **Radiated RFI** | EN61000-4-3 | | Level 3 | | |
| **Fast Transients - burst** | EN61000-4-4 | | Level 4 | | |
| **Input Line Surges** | EN61000-4-5 | | Class 4 | | |
| **Conducted RFI** | EN61000-4-6 | | 10 | | V/m |
| **Voltage Dips** | EN61000-4-11 (EN55024) | | 10 | | ms |

## ENVIRONMENTAL

| Parameter | Conditions/Description | Min | Nom | Max | Units |
|---|---|---|---|---|---|
| **Operating Temperature** | | -20 | | +70 | ℃ |
| **Storage Temperature** | | -40 | | +85 | ℃ |
| **Derating** | See Designers Manual for full deratings versus temperature | | | | |
| **Relative Humidity** | Non-condensing | 5 | | 95 | %RH |
| **Shock** | 3000 Bumps, 10G (16ms) half sine | | | | |
| **Vibration** | 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. 1450W peak for 10s; Duty cycle 8%. powerMod output power must not exceed normal ratings



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