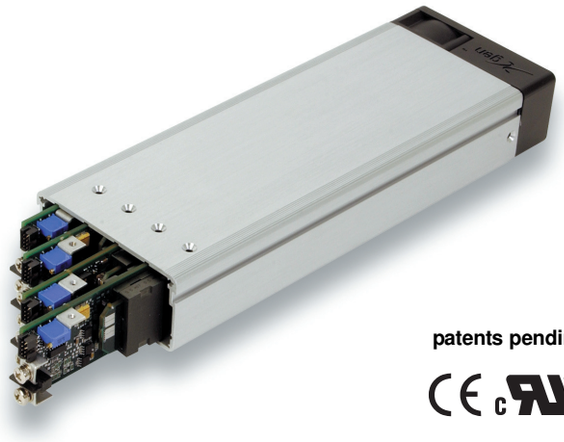


patents pending

# Medical Power Supply

## Low Noise 1U size



### PLUG & PLAY POWER
**next generation power source**

### FEATURES

- **Low Acoustic Noise 54dBA**
- **EN60601-1 and UL2601-1 approved**
- **Less than 300µA leakage current**
- **4000VAC isolation**
- **Slimmest 600W configurable power**
- **Extra low profile: 1U height (40mm)**
- **Ultra high efficiency, up to 89%**
- **Plug & Play Power**
  - **allows fast custom configuration**
  - **allow easy logistics**
- **FLEXIMOUNT Flexible mounting system**
- **Few electrolytic capacitors (all long life)**
- **Series / Parallel of multiple outputs**
- **5V bias standby voltage provided**
- **Individual output control signals**

### APPLICATIONS INCLUDE

- **Radiological imaging**
- **Clinical diagnostics**
- **Medical lasers**
- **Clinical chemistry**
- **For non-medical applications see Xkite**

**The Xrite family of low noise medically approved power supplies provides up to 400W in a slimline 1U x 260 x 89mm package. Ideal for acoustoc sensitive medical equipment, the Xrite family carries full safety agency approvals to EN60601-1 and UL2601-1, meeting the stringent creepage requirements in this compact package. Providing up to 8 isolated outputs, the Xrite family is the most flexible power supply in its class and brings affordable configurable power to the 200-400W medical market.**

The Xrite family consists of 2 *powerPac* models in 200W and 400W power levels. Each *powerPac* model may be populated with up to 4 *powerMods* selected from the table of *powerMods* shown below. Simply select your appropriate *powerPac* and *powerMods* to get your instant custom power solution.

This slimline product boasts unrivalled power density, providing significant system space savings. Combined with ultra-high efficiencies, the Xrite family provides system designers with flexible instant solutions that significantly shorten system design-in time. For alternative power interfaces contact **support@excelsys.com**

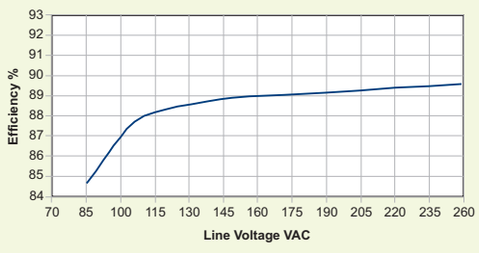
***powerMods***

| 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 |

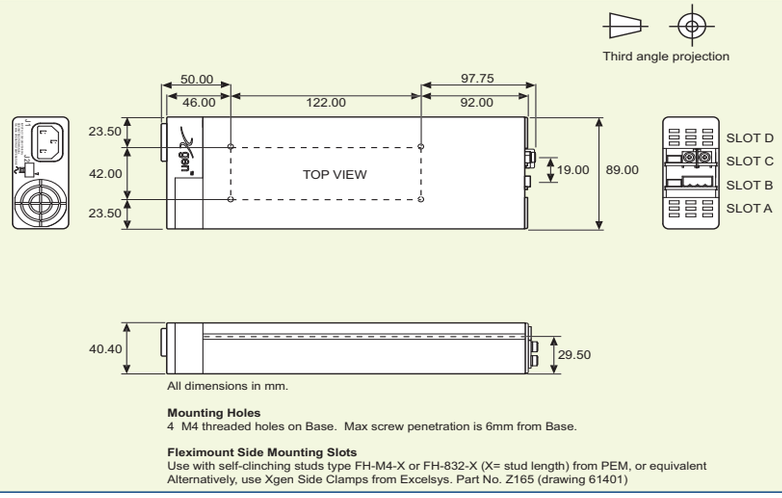
***powerPacs***

| | MODEL | Watts |
|---|---|---|
| Xrite | XRA | 200W |
| | XRB | 400W |

### 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

# 200W/400W Low Noise Medically Approved Power Supply



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

## INPUT

| Parameter | Conditions/Description | 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** XRA<br>XRB | | | | 200<br>400 | W<br>W |
| **Input Current** XRA<br>XRB | 85VAC in 200W out<br>85VAC in 400W out | | 4.5<br>5.5 | | A<br>A |
| **Inrush Current** | 230VAC @ 25°C | | | 50 | A |
| **Undervoltage Lockout** | Shutdown | 65 | | 74 | VAC |
| **Fusing** XRA<br>XRB | 250V 5 x 20mm<br>250V 5 x 20mm | | F5A HRC<br>F6.3A 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 Regulation** | For 25% to 75% load change | | | ±0.2 | % |
| **Cross Regulation** | | | | ±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** | 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 | | | 300 / 30 | ms |
| **Rise Time** | Monotonic | | | 5 | ms |
| **Hold-up Time** | For nominal output voltages at full load | 20 | | | 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, 400W @ 24V | | 89 | | % |
| **Safety Agency Approvals** | EN60601-1, UL2601-1, CSA601-1 UL File No. E230761 | | | | |
| **Leakage Current** | 250VAC, 60Hz, 25°C | | | 300 | µA |
| **Signals** | See Xgen Series datasheet | | | | |
| **Bias Supply** | Always ON. Current 250mA | 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* | | | 1.0<br>0.9 | 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** | 2.5% per °C above 40°C. See Designers Manual for full deratings | | | | |
| **Relative Humidity** | Non-condensing | 5 | | 95 | %RH |
| **Acoustic Noise** | Background noise 28.6dBA, Noise measured 1m from unit | | 54 | | dBA |
| **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.



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