



Spellman's XLG Series of X-Ray generators are well regulated high voltage power supplies with output voltages to 130kV and very low ripple achieved through the use of advanced resonant conversion techniques. Extremely stable voltage and emission current outputs result in significant performance improvements over previously available technology. The XLG Series provides all the power, control and support functions required for X-Ray applications including a regulated dc filament supply. These units incorporate local and remote programming, monitoring, safety interlock, short-circuit and overload protection.

TYPICAL APPLICATIONS

Plating Measurement
Mineral Analysis
X-Ray Fluorescence

OPTIONS

APT Adjustable Power Trip
AT Arc Trip
SS(x) Non-Standard Slow Start
NSS No Slow Start
IO Instant ON
LL(x) Extra Length HV Cable
SL Slides

FRONT PANEL STATUS INDICATORS:

| | |
|------------------|----------------------|
| Overvoltage | Voltage Control Mode |
| Overtemperature | Current Control Mode |
| Regulation Error | Interlock Open |
| Arc | Interlock Closed |
| HV ON: Red | HV OFF: Green |

SPECIFICATIONS

Input Voltage:

115Vac±10%, 50-60Hz single phase or
220Vac±10%, 50-60Hz single phase.
For input current see table on page 2.

Voltage and Current Control:

Local: continuously adjustable from zero to maximum rating via a ten-turn potentiometer with a lockable counting dial.
Remote: 0 to +10Vdc proportional from 0 to full output.
Accuracy: ±1%. Input Impedance: 10Mohm.

- **Output Voltages to 130kV**
- **Integrated Ground Referenced Filament Supply**
- **Low Ripple**
- **"Hot Anode"**
- **Positive Polarity**
- **Local & Remote Programming**
- **OEM Customization Available**

Filament:

Specify at time of order:
FH: 9A, 3V.
FL: 3A, 3V.
Preheat level is 0.45 amps in standby

Voltage Regulation:

Load: 0.005% of full output voltage no load to full load.
Line: 0.005% for input voltage range change.

Current Regulation:

Load: 0.05% of full current ±100µA from 0 to full voltage.
Line: 0.05% of rated current over specified input range.

Ripple:

0.03% rms below 1kHz.
0.75% rms above 1kHz.

Temperature Coefficient:

100ppm/°C.

Stability:

0.01%/8 hrs after 1/2 hour warm-up.
0.02% per 8 hours (typical).

Cooling:

Free air convection.

Metering:

Digital voltage and current meters (3.5 digits),
1% accuracy.

HV Output Cable:

10' (3.3m) of shielded HV cable removable at rear.

I/O Connectors:

25 pin D-type for control interface with
mating connector provided.

Dimensions:

30 to 60kV:
3.5"H x 19"W x 19"D (8.9cm x 48.3cm x 48.3cm).
80 to 130kV:
3.5"H x 19"W x 24"D (8.9cm x 48.3cm x 61.0cm).

Regulatory Approvals:

Compliant to EEC EMC Directive. Compliant to EEC
Low Voltage Directive. RoHS Compliant.

Electronic Component (Power Source)

XLG series is intended for installation as a component of a system.

It is designed to meet CE standards, with conditions of acceptance often being: customer provided enclosure mounting, EMC filtering, and appropriate protection, and isolation devices. The XLG series is not intended to be operated by end users as a stand-alone device. The XLG series power supply can only be fully assessed when installed within a system, and as a component part within that system.

XLG INPUT CURRENT

| MODEL | 115Vac | 220Vac |
|-----------|--------|---------|
| 3W-30W | 0.6A | 0.3125A |
| 40W-60W | 1.2A | 0.625A |
| 70W-150W | 3.0A | 1.56A |
| 160W-260W | 5.25A | 2.71A |

XLG SELECTION TABLE 0.1mA, 0.2mA, 0.5mA

| kV | 0.1mA | 0.2mA | .5mA |
|-----|------------|------------|-------------|
| 30 | XLG30P3* | XLG30P6* | XLG30P15* |
| 35 | XLG35P3.5* | XLG35P7* | XLG35P17.5* |
| 40 | XLG40P4* | XLG40P8* | XLG40P20* |
| 50 | XLG50P5* | XLG50P10* | XLG50P25* |
| 60 | XLG60P6* | XLG60P12* | XLG60P30* |
| 80 | XLG80P8* | XLG80P16* | XLG80P40* |
| 100 | XLG100P10* | XLG100P20* | XLG100P50* |
| 120 | XLG120P12* | XLG120P24* | XLG120P60* |
| 130 | XLG130P13* | XLG130P26* | XLG130P65* |

*Specify FH for High power (27W) filament, FL for Low power (9W) filament.

XLG SELECTION TABLE 1.0mA, 2.0mA, 3.0mA

| kV | 1.0mA | 2.0mA | 3.0mA |
|-----|-------------|-------------|------------|
| 30 | XLG30P30* | XLG30P60* | XLG30P90* |
| 35 | XLG35P35* | XLG35P70* | XLG35P105* |
| 40 | XLG40P40* | XLG40P80* | XLG40P120* |
| 50 | XLG50P50* | XLG50P100* | XLG50P150* |
| 60 | XLG60P60* | XLG60P120* | XLG60P180* |
| 80 | XLG80P80* | XLG80P160* | --- |
| 100 | XLG100P100* | XLG100P200* | --- |
| 120 | XLG120P120* | XLG120P240* | --- |
| 130 | XLG130P130* | XLG130P260* | --- |

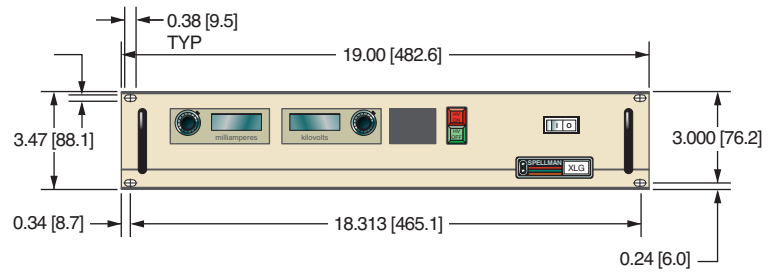
*Specify FH for High power (27W) filament, FL for Low power (9W) filament.

XLG CONNECTOR 25 PIN

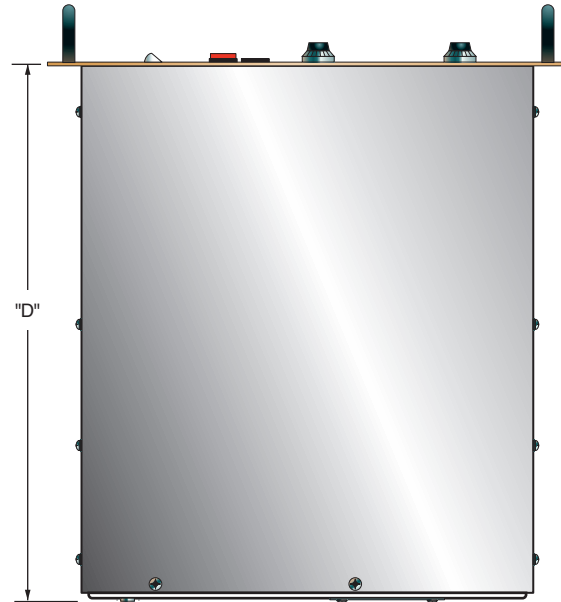
| PIN | SIGNAL | SIGNAL PARAMETERS |
|-----|---------------------------|------------------------------------|
| 1 | Power Supply Common | Signal Ground |
| 2 | External Inhibit | Ground=Inhibit, Open=HV On |
| 3 | External Interlock | +15V at Open, <15mA at Closed |
| 4 | External Interlock Return | Return for Interlock |
| 5 | Current Monitor | 0 to 10V=0 to 100% Rated Output |
| 6 | kV Test Point | 0 to 10V=0 to 100% Rated Output |
| 7 | +10V Reference | +10V, 1mA Max |
| 8 | Remote Current Program In | 0 to 10V=0 to 100% Rated Output |
| 9 | Local Current Program Out | Front Panel Program Voltage |
| 10 | Remote Voltage Program In | 0 to 10V=0 to 100% Rated Output |
| 11 | Local Voltage Program Out | Front Panel Program Voltage |
| 12 | Power Monitor | 0 to 10V=0 to 100% Rated Output |
| 13 | Remote Power Program In | (Optional) |
| 14 | Local HV Off Out | +15V at Open, <25mA at Closed |
| 15 | HV Off | Connect to HV OFF for Fp Operation |
| 16 | Remote HV On | +15V, 10mA Max=HV Off |
| 17 | Remote HV Off Indicator | 0=HV On, +15V, 10mA Max=HV Off |
| 18 | Remote HV On Indicator | 0=HV Off, +15V, 10mA Max=HV On |
| 19 | Remote Voltage Mode | Open Collector 50V Max, 10mA Max |
| 20 | Remote Current Mode | On=Active |
| 21 | Remote Power Mode | |
| 22 | Remote PS Fault | 0=Fault, +15V, 0.1mA Max=No Fault |
| 23 | +15V Output | +15V, 100mA Max |
| 24 | Power Supply Common | Signal Ground |
| 25 | Shield Return | Shield Return |

DIMENSIONS: in.[mm]

FRONT VIEW



TOP VIEW



BACK VIEW

