



- **160KV - 360KV OUTPUTS**
- **LOW RIPPLE**
- **HIGH STABILITY**
- **OVERCURRENT, OVERVOLTAGE AND ARC PROTECTION**
- **ARC DETECT**
- **LIGHTWEIGHT, COMPACT SIZE**
- **OEM CUSTOMIZATION AVAILABLE**

www.spellmanhv.com/manuals/SLS

The SLS series of high voltage power supplies provide up to 2000 watts of power with voltage outputs ranging from 160kV to 360kV. These power supplies utilize high frequency resonant inverters with proprietary controls for reliable operation in extreme environments. The high voltage multiplier unit is built with a hybrid design of solid encapsulation and air, thus reducing its overall size. Comprised of 20kV interlocking wafers, the multiplier unit offers flexible building blocks for many different output configurations.

TYPICAL APPLICATIONS

Ion Implantation Particle Accelerators
Electron Guns

SPECIFICATIONS

Input Voltage:

220Vac \pm 10%, three phase, 50/60Hz. (200Vac \pm 10% optional).

Output Voltage Range:

Models available from 160kV to 360kV and up to 2000W. Each model is available with positive or negative polarity outputs.

Voltage Regulation:

Better than 0.05% for specified line variations and load variations.

Ripple:

0.1% p-p of maximum output voltage.

Remote Voltage Control:

0 to +10V for 0 to maximum voltage. Accuracy and repeatability: 1% of maximum rating.

Remote Current Control:

0 to +10V for 0 to maximum voltage. Accuracy and repeatability: 1% of maximum rating.

Voltage Monitor:

0 to 10V equivalent to rated voltage. Accuracy, 1% reading.

Current Monitor:

0 to 10V equivalent to rated current. Accuracy, 1% reading.

Stability:

0.05% per hour after 1/2 hour warm-up.
0.05% per 8 hours.

Slow Start:

Slow start times: 6 seconds standard.

Temperature Coefficient:

0.01% per degrees C.

Protection:

Overcurrent, Overvoltage, Arc protection, Overtemperature.

Arc Detect:

If 8 arcs occur in a 10 second, non-synchronous time window, the supply reverts to the Power Down Mode with an ARC fault displayed on the front panel default diagnostic display.

Environmental:

Temperature Range:

Operating: 0°C to 40°C

Storage: -20°C to 85°C

Humidity:

10% to 70%, non-condensing.

Dimensions:

Inverter Driver Chassis:

3.50"(2U)H x 19.0"W x 19.0"D (8.9cm x 48.3cm x 48.3cm)

Multiplier Unit:

Depends on model specified.

Distance from Stack to Driver:

2.5 meters \pm 0.1 meter maximum.

Signal Connector:

25 pin, male D connector, J3.

Metering:

Front panel, 3.5 digit, digital voltage and current meters.

Front Panel Controls:

Voltage and current are continuously adjustable by ten-turn potentiometers with lockable counting dials, ON/OFF circuit breaker/lamp, high voltage ON switch/indicator and high voltage OFF switch/indicator.

Front Panel Status Indicators:

Voltage Control Mode	Overcurrent
Current Control Mode	Overvoltage
Interlock Open	Arc
Interlock Closed	Regulation Error
High Voltage Inhibit	Overtemperature
Overpower (optional)	

Regulatory Approvals:

Compliant to 2004/108/EC, the EMC Directive and 2006/95/EC, the Low Voltage Directive.

SLS SELECTION TABLE

MAXIMUM RATING kV	mA	MODEL NUMBER
160	12.5	SLS160*2000
200	10.0	SLS200*2000
260	7.7	SLS260*2000
300	6.6	SLS300*2000
360	5.5	SLS360*2000

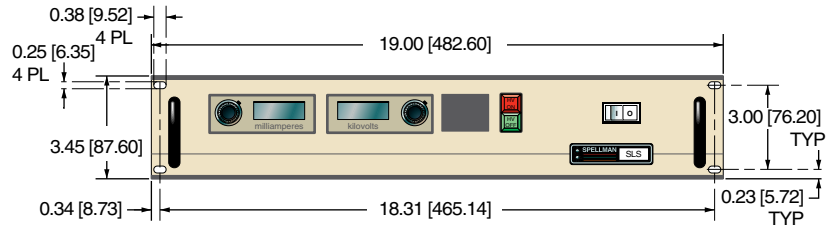
*Specify "P" for positive polarity or "N" for negative polarity
Other combinations of voltage and current are available.

SLS I/O INTERFACE CONNECTOR 25 PIN

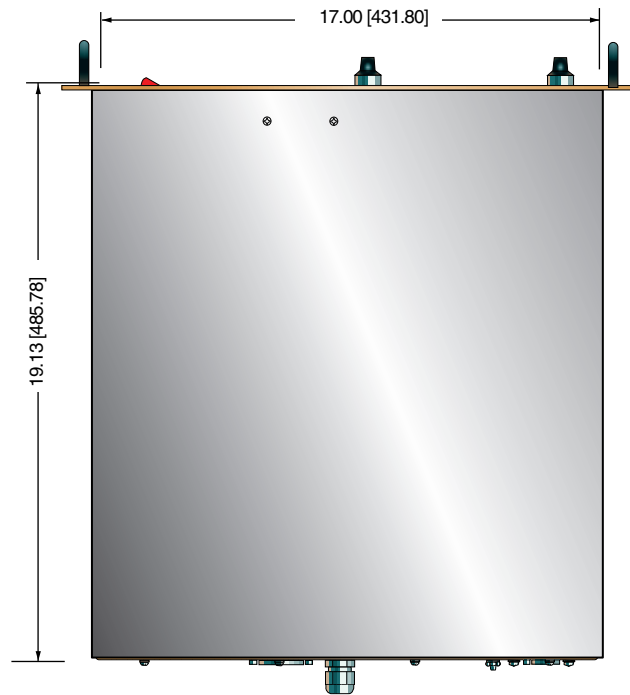
J3	SIGNAL
1	Power Supply Common
2	External Inhibit
3	External Interlock
4	External Interlock Return
5	Current Monitor
6	Voltage Monitor
7	+10V Reference
8	Remote Current Program In
9	Local Current Program Out
10	Remote Voltage Program In
11	Local Voltage Program Out
12	EFR (common)
13	EFR (normally closed)
14	Local HV OFF Out
15	HV OFF
16	Remote HV ON
17	Remote HV OFF Indicator
18	Remote HV ON Indicator
19	Remote Voltage Mode
20	Remote Current Mode
21	Spare
22	Remote PS Fault
23	+15V Output
24	Power Supply Common
25	Shield Return

DIMENSIONS: in.[mm]

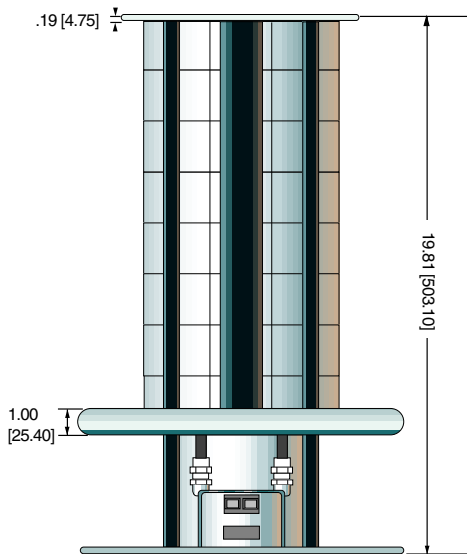
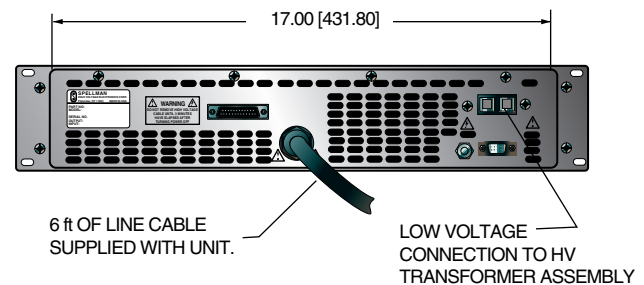
FRONT VIEW



TOP VIEW



BACK VIEW



160kV Model