



- **COMPACT DESIGN AND LIGHTWEIGHT**
- **LOW COST PER WATT**
- **LOW EMI AND RFI**
- **CONSTANT VOLTAGE/CONSTANT CURRENT OPERATION WITH AUTOMATIC CROSSOVER**
- **ARC DETECT, ARC QUENCH AND ARC COUNT**
- **SYSTEM STATUS INDICATORS**
- **OEM CUSTOMIZATION AVAILABLE**

[www.spellmanhv.com/manuals/SA](http://www.spellmanhv.com/manuals/SA)

SA power supplies are available in 13 models with voltage outputs ranging from 1kV to 70kV. Similar to the SR power supplies, they incorporate series resonant inverter technology with a patented control circuit. This enables the supplies to operate without damage or interruption in rugged environments that frequently pose threats to conventional high voltage power supplies. In addition, the SA Series protect your load from excessive peak current when an arcover condition is sensed. Parallel operation options to increase power and current capabilities are available for SA models with power outputs of 8kW, 12kW and higher.

### TYPICAL APPLICATIONS

Sputtering	CW Lasers
Analytical X-ray	Ion Implantation
Electron Beam Systems	Capacitor Charging
Radar Modulators	

### OPTIONS

<b>200-1P</b>	200Vac Single Phase Input
<b>200-3P</b>	200Vac Three Phase Input
<b>220-1P</b>	220Vac Single Phase Input
<b>AOL</b>	Adjustable Overload Trip
<b>FG</b>	Floating Ground
<b>CPC</b>	Constant Power Control
<b>APT</b>	Adjustable Power Trip
<b>RMI</b>	Remote Mode Indicators
<b>ROA</b>	Remote Overvoltage Adjust
<b>NSS</b>	No Slow Start
<b>SS(x)</b>	Nonstandard Slow Start
<b>SL</b>	Mounting Slides
<b>BFP</b>	Blank Front Panel

### SPECIFICATIONS

#### Input:

208Vac $\pm$ 10%, 50 or 60Hz, three phase.

#### Output:

13 models from 1kV to 70kV. Each model is available with positive, negative or reversible polarity outputs.

#### Output Controls:

Voltage and current are continuously adjustable over entire range via ten-turn potentiometers with lockable counting dials.

#### Voltage Regulation:

Load: 0.005% of full voltage +500mV for full load change.  
Line:  $\pm$ 0.005% of full voltage +500mV over specified input range.

#### Current Regulation:

Load: 0.05% of full current  $\pm$ 100 $\mu$ A for any voltage change.  
Line:  $\pm$ 0.05% of full current over specified input range.

#### Ripple:

0.1% +1Vrms for three phase models only.  
0.3% +1Vrms for single phase models only.

#### Temperature Coefficient:

100ppm/ $^{\circ}$ C. Higher Stability (50ppm/ $^{\circ}$ C) available on special order.

#### Stability:

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

#### Metering:

Digital voltage and current meters, 1% accuracy.

#### System Status Display:

"Dead Front" type indicators provide status of up to 14 system operations including voltage and current regulation, fault conditions and circuit control.

#### Output Cable:

10 ft. (3.05m) shielded high voltage cable, removable at rear panel.

#### Dimensions:

5 $\frac{1}{4}$ "H (3U) x 19"W x 22"D rack mount.  
(13.3cm x 48.3cm x 55.9cm)

#### Regulatory Approvals:

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

#### SA SELECTION TABLE

MAXIMUM RATING		MODEL NUMBER
kV	mA	
1	4000	SA1PN4
2	2000	SA2PN4
3	1330	SA3PN4
4	1000	SA4PN4
6	667	SA6PN4
10	400	SA10*4
15	267	SA15*4
20	200	SA20*4
30	133	SA30*4
40	100	SA40*4
50	80	SA50*4
60	67	SA60*4
70	57	SA70*4

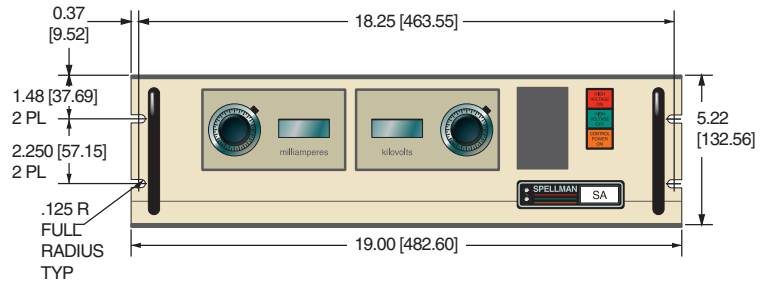
\*Specify "P" for positive, "N" for negative, or "PN" for reversible polarity. Higher voltage or intermediate voltage models available on special order. From 1kV to 6kV, reversible polarity is accomplished by an internal wiring change. From 10kV to 70kV, polarity is reversed by exchanging internal high voltage assemblies.

#### SA TERMINAL BLOCK 18 PIN

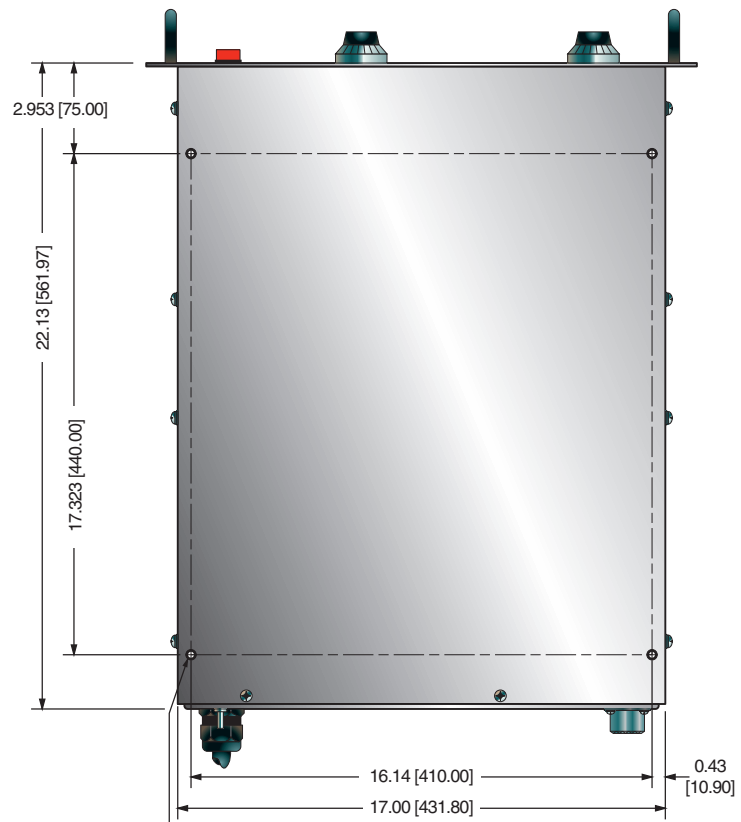
TB1	SIGNAL
1	P.S. Common
2	Inhibit
3	External Interlock In
4	External Interlock Out
5	mA Test point Out
6	kV Test point Out
7	+10Vdc Reference
8	mA Program In
9	Local mA Program Out
10	kV Program In
11	Local kV Program Out
12	Remote Pwr On In
13	Remote Pwr On Out
14	Remote HV Off
15	Remote HV Off/On Common
16	Remote HV On
17	HV Off Indicator
18	HV On Indicator

DIMENSIONS: in.[mm]

#### FRONT VIEW



#### TOP VIEW



#### BACK VIEW

