



Spellman's Bertan brand of 210 Series of 125 to 225 watt high voltage power supplies provide regulated high voltage outputs from 1 to 50kV. The low noise, linear topology employed results in extremely low output ripple specifications. Units are inherently reversible by design, providing either positive or negative output polarity. The 210 is fully arc and short circuit protected. Excellent regulation specifications are featured along with outstanding stability performance.

### TYPICAL APPLICATIONS

- HiPot Testing
- CRT Testing
- Electrostatics
- E Beam Systems
- General Laboratory Usage

### SPECIFICATIONS

#### Input Voltage:

115Vac, ±10%, 50/60 Hertz @ 5 amps  
 230Vac, ±10%, 50/60 Hertz @ 2.5 amps  
 Input voltage is switch selectable

#### Output Voltage:

See "model selection" table

#### Output Polarity:

1kV to 50kV units are inherently reversible by design

#### Output Current:

See "model selection" table

#### Voltage Regulation:

Line: ≤0.001% of rated output voltage over specified input voltage range  
 Load: ≤0.005% of rated output voltage for a full load change

#### Current Regulation:

Internally set to limit at 105% of rated current at full output voltage. Maximum output current at any other voltage setting must be derated linearly down to 30% of maximum at zero output voltage

#### Ripple:

See "model selection" table

- **STANDARD RACK MOUNTED DESIGN**
- **LOW RIPPLE AND NOISE**
- **REVERSIBLE OUTPUT POLARITY**

[www.spellmanhv.com/manuals/210](http://www.spellmanhv.com/manuals/210)

#### Temperature Coefficient:

≤50ppm/°C

#### Stability:

≤0.01%/hour, 0.02% per 8 hours after a 1/2 hour warm up

#### Accuracy:

Voltage Monitor: ±(0.25% of reading + 0.25% of maximum)  
 Current Monitor: ±(0.5% of reading + 0.25% of maximum)  
 Remote Programming; ±(0.25% of setting + 0.05% of maximum) for 1kV to 30kV ±(0.5% of setting + 0.25% of maximum) for 50kV  
 Front Panel Control: ±(0.25% of setting + 0.05% of maximum) for 1kV to 30kV ±(0.5% of setting + 0.25% of maximum) for 50kV  
 Front Panel Meter: ±2% of full scale

#### Operating Temperature

0°C to +50°C

#### Storage Temperature:

-40°C to +85°C

#### Humidity:

20% to 85% RH, non-condensing

#### Input Line Connector:

A captive 3 conductor line cord and NEMA plug is provided

#### Interface Connector:

7 pin Amphenol 126-198, mating connector and pins provided

#### Output Connector:

A detachable 10 foot (3 meter) long HV cable is provided

#### Cooling:

Internal fan, forced-air cooling

#### Dimensions

1-5kV: 19.0" W X 5.25" H X 11.0" D  
 (483mm X 133mm X 279mm)  
 10-50kV: 19.0" W X 5.25" H X 16.0" D  
 (483mm X 133mm X 406mm)

#### Weight:

≤40 pounds (18.1kg) up to and including 30kV units  
 ≤50 pounds (22.7kg) for 50kV unit

#### Regulatory Approvals:

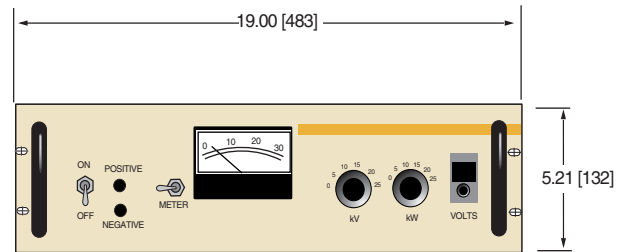
Compliant to 2004/108/EC, the EMC Directive and 2006/95/EC, the Low Voltage Directive.

**MODEL SELECTION TABLE**

210 Series	Voltage	Current	Ripple
210-01R	0 to 1kV	0 to 225mA	50mV
210-1.5R	0 to 1.5kV	0 to 130mA	100mV
210-02R	0 to 2kV	0 to 100mA	100mV
210-03R	0 to 3kV	0 to 75mA	100mV
210-05R	0 to 5kV	0 to 40mA	200mV
210-10R	0 to 10kV	0 to 15mA	500mV
210-20R	0 to 20kV	0 to 7mA	1 volt
210-30R	0 to 30kV	0 to 4.5mA	1.5 volts
210-50R	0 to 50kV	0 to 2.5mA	5 volts

DIMENSIONS: in.[mm]

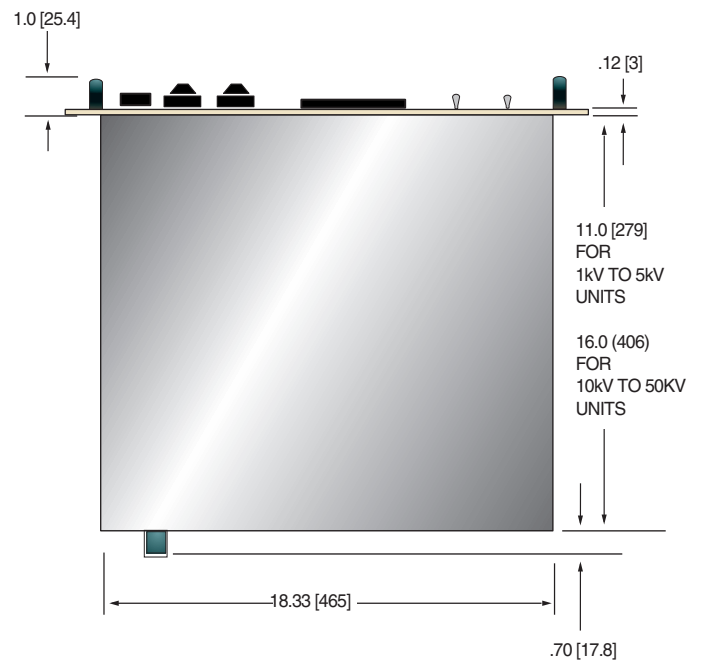
**FRONT VIEW**



**INTERFACE CONNECTOR**

PIN	SIGNAL	PARAMETERS
A	-5Vdc Reference	-5.0Vdc @ 5mA, maximum
B	Voltage Program Input	0 to -5Vdc = 0 to 100% rated voltage, Zout = 10KΩ
C	Analog Ground	Ground
D	Current Monitor	0 to 5Vdc = 0 to 100% rated current, Zout = 10KΩ
E	Voltage Monitor	0 to 5Vdc = 0 to 100% rated voltage, Zout = 10KΩ
F	Polarity Indicator	Open collector output, ON = Positive Polarity
G	n/c	none

**TOP VIEW**



**BACK VIEW**

