Not Intended For New Designs

- ***Standard Rack Mounted Design***
- ***Low Ripple and Noise***
- ***Reversible Output Polarity***

www.spellmanhv.com/manuals/210

Spellman's Bertan brand of 210 Series of 125 to 225W 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%, 50/60Hz @ 5A
230Vac, ±10%, 50/60Hz @ 2.5A
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

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

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

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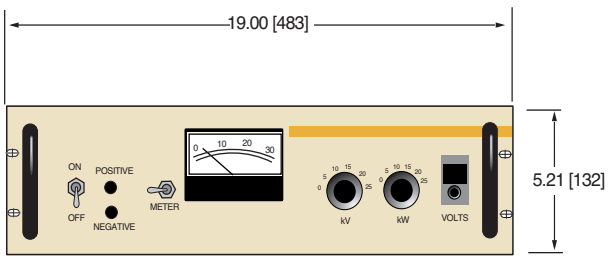
MODEL SELECTION TABLE

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	1V
210-30R	0 to 30kV	0 to 4.5mA	1.5V
210-50R	0 to 50kV	0 to 2.5mA	5V

DIMENSIONS: in.[mm]

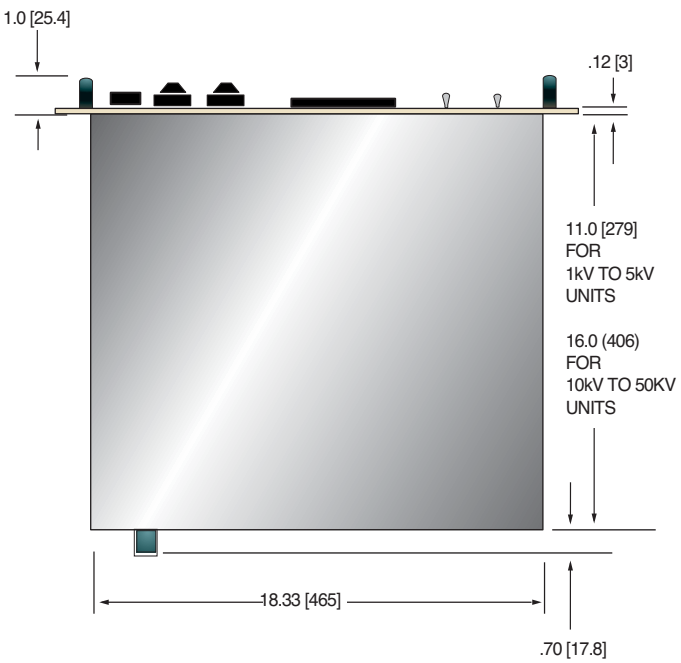
FRONT VIEW



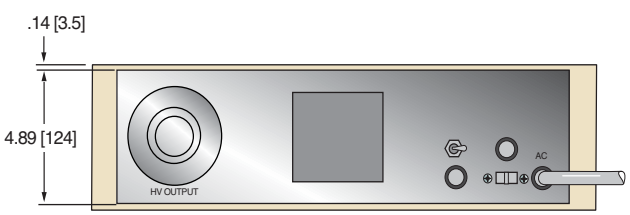
INTERFACE CONNECTOR

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	No Connection

TOP VIEW



BACK VIEW



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