Not Intended For New Designs

- ***1-50kV @ 15-30W***
- ***Standard Rack Mounted Design***
- ***Low Ripple and Noise***
- ***Digital Metering***
- ***Reversible Output Polarity***

www.spellmanhv.com/manuals/205B

Spellman's Bertan brand of 205B Series 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. These 15 to 30W units are inherently reversible by design, providing either positive or negative output polarity. The 205B 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

OPTIONS

RF Isolated (Floating) Output

SPECIFICATIONS

Input Voltage:

115Vac, ±10%, 50/60Hz @ 1A
230Vac, ±10%, 50/60Hz @ 0.5A
Input voltage is switch selectable

Output Voltage:

See "model selection" table

Output Polarity:

All units are reversible polarity by design

Output Current:

See "model selection" table

Voltage Regulation:

Line: ≤50ppm/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:

Current Monitor: ±(0.5% of reading + 0.25% of maximum)
Remote Programming: ±(0.1% of setting + 0.1% of maximum)
Voltage Monitor: ±(0.1% of reading + 0.1% of maximum)
Front Panel Meter: Voltage ±(0.1% of setting + 0.1% of maximum)
Current: ±(0.25% of setting + 0.25% of maximum)
Front Panel Control: ±(0.25% of setting + 0.05% of maximum)

Operating Temperature:

0°C to +50°C

Storage Temperature:

-40°C to +85°C

Humidity:

20% to 85%RH, non-condensing

Input Line Connector:

IEC320 EMI filter/ input connecter, a detachable line cord is provided

Interface Connector:

9 pin "D" connector, a mating connector is provided

Output Connector:

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

Cooling:

Convection cooled

Dimensions:

1-20kV:19.0″ W X 3.5″ H X 9.625″ D
(483mm X 89mm X 244mm)
30-50kV:19.0″ W X 5.25″ H X 16.0″ D
(483mm X 133mm X 406mm)

Weight:

≤20lbs (9.1kg) up to and including 20kV units,
≤35lbs (15.9kg) for 30kV and 50kV units

Regulatory Approvals:

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

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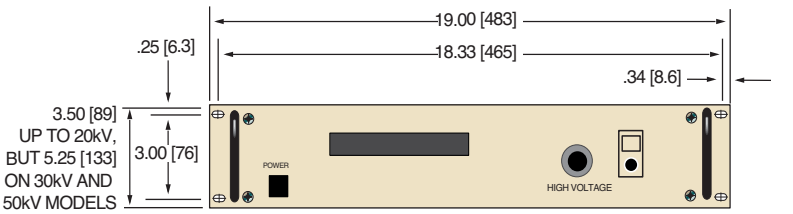
MODEL SELECTION TABLE

205B Series	Voltage	Current	Ripple
205B-01R	0 to 1kV	0 to 30mA	10mV
205B-03R	0 to 3kV	0 to 10mA	30mV
205B-05R	0 to 5kV	0 to 5mA	50mV
205B-10R	0 to 10kV	0 to 2.5mA	100mV
205B-20R	0 to 20kV	0 to 1mA	300mV
205B-30R	0 to 30kV	0 to 0.5mA	400mV
205B-50R	0 to 50kV	0 to 0.3mA	2V

DIMENSIONS: in.[mm]

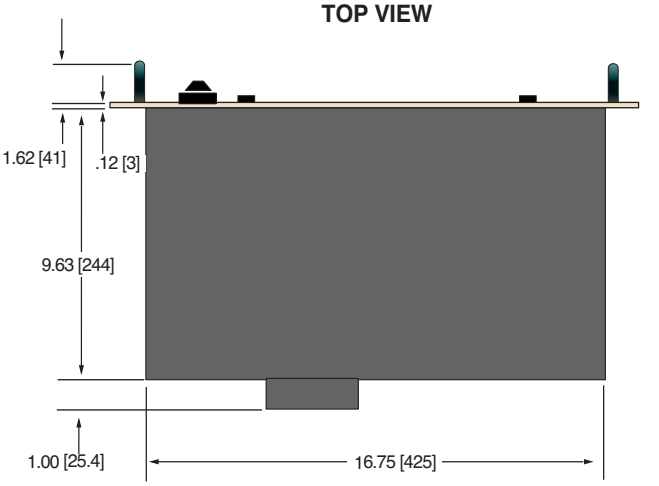
FRONT VIEW



INTERFACE CONNECTOR

PIN	SIGNAL	PARAMETERS
1	Voltage Monitor	0 to 5Vdc = 0 to 100% rated voltage, Zout = 10KΩ
2	N/C	No Connection
3	Enable	TTL "0" disables HV, TTL "1" or open enables HV
4	+5Vdc Reference	+5.0Vdc @ 10mA, maximum
5	Current Monitor	0 to 5Vdc = 0 to 100% rated current, Zout = 10KΩ
6	Voltage Program Input	0 to 5Vdc = 0 to 100% rated voltage, Zin = 1MΩ
7	Analog Ground	Ground
8	Digital Ground	Ground (for use only with 200-C488, sold separately)
9	Polarity Indicator	Open collector, 30V @ 25mA, positive = ON

TOP VIEW

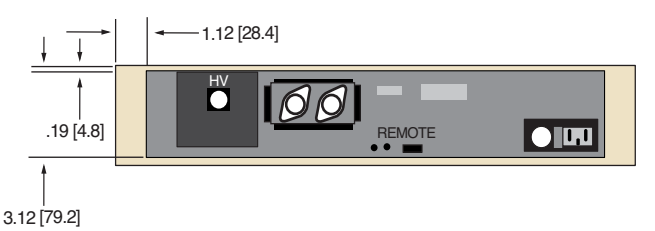


OPTIONS:

Isolated (Floating) Output-Option RF

Units can be provided with the output capable of floating up to ±2kV from ground. All controls, programming and monitoring functions are normally referenced to ground. The high voltage output polarity with respect to the floating input terminal is reversible. Floating input connector is Spellman P/N JDK. Mating connector is provided with each unit (Spellman P/N PDB, MHV type UG-932/U). Replace "R" suffix with "RF" for this option.

BACK VIEW



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