



- **NIM CONFIGURATION**
- **LOW RIPPLE AND NOISE**
- **REMOTELY PROGRAMMABLE**
- **REVERSIBLE OUTPUT POLARITY**

www.spellmanhv.com/manuals/NIMAC

Spellman's Bertan brand of NIM-AC Series high voltage power supplies utilize a precision regulated linear topology, making them ideally suited for sensitive detector applications. These stable, low noise, high voltage power supplies are arc and short circuit protected for safe, reliable operation.

All units require AC input line power, either 115Vac or 220Vac and therefore can operate without a NIM bin DC power supply.

All models feature reversible polarity. The polarity switch is located either internally or on top of the unit, depending upon the model. An LED front panel polarity indicator is provided.

Programming these units can be done via the provided front panel controls.

SPECIFICATIONS

Input Voltage:

Model 353

115Vac, $\pm 10\%$ @ 0.25amps or 220Vac,
 $\pm 10\%$ @ 0.125 amps, 50/60 Hertz

Models 313B, 315B, 323PS and 325

115Vac, $\pm 10\%$ @ 1amp or 220Vac, $\pm 10\%$ @ 0.5 amps,
50/60 Hertz

Output Voltage:

See "model selection" table

Output Polarity:

Polarity reversal for single width Model 353 is achieved by rotating an internal polarity selector plug. Models 313B, 315B, 323PS and 325 have a screwdriver accessible switch located on the top of the unit. Polarity setting is indicated via an LED indicator on the front panel.

Output Current:

See "model selection" table

Voltage Regulation:

Line: $\leq 0.001\%$ of rated output voltage over specified
input voltage range

Load: $\leq 0.002\%$ of rated output voltage for a full
load change

Current Regulation:

Internally set to limit at less than 110% of rated current.

Supply will self-restore upon removal of overload condition

Ripple:

See "model selection" table

Temperature Coefficient:

$\leq 50\text{ppm}/^\circ\text{C}$

Stability:

$\leq 0.01\%$ /hour, 0.02% per 8 hours after a 1/2 hour warm up

Front Panel Features:

Metering:

Model 313B and 353 have a 0 to 3kV high voltage output meter. Meter accuracy is $\pm 5\%$.

Model 323PS and 325 have a 3.5 digit digital meter for monitoring both output voltage and output current. A selector switch determines which parameter is displayed. Meter accuracy is $\pm 0.5\% + 10\text{ V}$ for voltage readings, and $\pm 0.5\% + 10\mu\text{A}$ for current readings.

Controls:

Calibrated, direct reading, front panel output voltage controls are provided. Models 313B, 315B and 353 employ a 500 volt/step switch and a 10 turn potentiometer. Models 323PS: 3 turns; Model 315B: 5 turns.

Remote Control:

Model 353 has provisions for remote high voltage inhibit control via an open collector or relay closure to ground applied at a rear panel BNC connector.

Models 313B, 315B, 323PS and 325 have remote high voltage output programming capability. This is accomplished via a 0 to -5 volt (equals 0 to 100% of rated output) signal being applied at the remote interface connector. Input impedance is $10\text{M}\Omega$.

Operating Temperature

0°C to +50°C

Storage Temperature:

-40°C to +85°C

Humidity:

20% to 85% RH, non-condensing

Power Input Connector:

Standard captive North American 3 conductor line cord and plug

353 Inhibit Connector:

BNC receptacle UG-290/U

313B, 315B, 323PS, 325 Programming Connector:

BNC receptacle UG-290/U

Output Connector:

SHV (Kings 1707-1 or equivalent)

Cooling:

Convection cooled

Dimensions

Single Width:

1.35" W X 8.7" H X 9.7" D

(34mm X 221mm X 246mm)

Double Width:

2.7" W X 8.7" H X 9.7" D

(69mm X 221mm X 246mm)

Weight:

Model 353:

4.5 lbs (2.1kg)

Models 313B, 315B, 323PS and 325:

11 lbs (5 kg)

MODEL SELECTION TABLE

Model	Width	Voltage	Current	Ripple
353	Single	0 to ±3kV	0 to 2mA	5mV
325	Double	0 to ±5kV	0 to 5mA	25mV
323PS	Double	0 to ±3kV	0 to 10mA	10mV
313B	Double	0 to ±3kV	0 to 10mA	10mV
315B	Double	0 to ±5kV	0 to 5mA	25mV