



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

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

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

All units require  $\pm 24\text{Vdc}$  and  $\pm 12\text{Vdc}$  as provided by a standard NIM bin, or the MINI-BIN, model number BIN-6DC.

All models feature reversible polarity, the internal polarity switch is easily accessible. An LED front panel polarity indicator is provided.

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

## SPECIFICATIONS

### Input Voltage:

Model 342A  
 $\pm 24\text{Vdc} \pm 1\%$ , @ 83mA;  $\pm 12\text{Vdc} \pm 1\%$ , @ 50mA

Models 362 and 365  
 $\pm 24\text{Vdc} \pm 1\%$ , @ 160mA;  $\pm 12\text{Vdc} \pm 1\%$ , @ 60mA

### Output Voltage:

See "model selection" table

### Output Polarity:

Polarity reversal on Model 342A is achieved by rotating a single polarity selector plug located inside the unit. For dual output models 362 and 365, there are independent polarity selector plugs. 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 342A has a 0 to 2kV high voltage output meter. Meter accuracy is  $\pm 5\%$ .

Models 362 and 365 have two 0 to maximum output, 10 division meters to display both high voltage outputs.

#### Controls:

Model 342A has a 0 to 1000 volt, 10 turn precision potentiometer and a 2 step switch (500 volts/step) for setting the high voltage output.

Model 362 has a 2 turn potentiometer and counting dial for setting the high voltage output.

Model 365 has a 5 turn potentiometer and counting dial for setting the high voltage output.

#### ON/OFF Switch:

A front panel switch controls high voltage operation. Models 362 and 365 have two switches, for independent control of each high voltage output.

#### Remote Control:

Model 342A has provisions for remote high voltage inhibit control via an open collector or relay closure to ground applied at a rear panel BNC connector or NIM power connector pin.

Models 362 and 365 have provisions for remote high voltage inhibit via an open collector or relay closure to ground applied at the remote interface connector. Remote high voltage output programming is accomplished via a 0 to -5 volt (equals 0 to 100% of rated output) 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 NIM bin power connector

**342A Inhibit Connector:**

BNC receptacle UG-290/U

**362, 365 Programming Connector:**

Amphenol 126-220

**Output Connector:**

Kings 1707-1. Dual output units have 2 connectors

**Cooling:**

Convection cooled

**Dimensions**1.35" W X 8.7" H X 9.7" D  
(34mm X 221mm X 246mm)**Weight:**

≤4 pounds (1.8kg)

**MODEL SELECTION TABLE**

Model	Voltage	Output Type	Current	Ripple
342A	0 to ±2kV	Single	0 to 1mA	2mV
362	0 to ±2kV	Dual	0 to 1mA	2mV
365	0 to ±5kV	Dual	0 to 0.3mA	5mV