



- **1-30KV @ 12-30 WATTS**
- **AC INPUT MODULAR POWER SUPPLY**
- **115/230 VAC SELECTABLE**
- **EXCELLENT REGULATION**
- **VERY LOW RIPPLE**
- **ARC AND SHORT CIRCUIT PROTECTED**

[www.spellmanhv.com/manuals/600](http://www.spellmanhv.com/manuals/600)

Spellman's Bertan brand of 603C modular high voltage power supplies offer well regulated, fixed polarity outputs up to 30kV, that operate off a standard switch selectable 115/230Vac input. These fully enclosed modules are designed for bench top or OEM applications like spectrometers, detectors, imaging and electron beam usage.

The output voltage can be controlled by either a local internal potentiometer or by a customer provided ground referenced signal for remote operation. Additionally ground referenced output voltage and current monitor signals are provided. A high voltage enable signal input allows remote control of the supply.

### TYPICAL APPLICATIONS

Spectrometers  
Detectors

### SPECIFICATIONS

#### Input Voltage:

115Vac,  $\pm 10\%$ , 50/60 Hertz @ 1.0 amp  
230Vac,  $\pm 10\%$ , 50/60 Hertz @ 0.5 amp  
Input voltage is fused and switch selectable

#### Output Polarity:

Positive or negative, specify at time of order

#### Output Voltage:

See "model ratings" table

#### Output Current:

See "model ratings" table

#### Voltage Regulation::

Line:  $\pm 0.001\%$  of rated output voltage over specified input voltage range  
Load:  $\pm 0.002\%$  of rated output voltage for a full load change

#### Ripple:

See "model ratings" table

#### Stability:

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

#### Accuracy:

Local Control  $\pm 0.2\%$   
Remote Programming  $\pm (0.1\% \text{ of setting} + 0.1\% \text{ of maximum})$   
Voltage Monitor  $\pm (0.1\% \text{ of reading} + 0.1\% \text{ of maximum})$   
Current Monitor  $\pm (2\% \text{ of reading} + 1\% \text{ of maximum})$

#### Temperature Coefficient:

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

#### Arc/Short Circuit:

All units are fully arc and short circuit protected and will limit continuous short circuit output current to less than 110% of maximum rated output current.

#### Operating Temperature:

0°C to +50°C

#### Storage Temperature:

-40°C to +85°C

#### Humidity:

20% to 85% RH, non-condensing

#### Interface Connector:

9 pin Molex connector, mating connector and pins provided

#### AC Input Line Connector:

3 position terminal block

#### Output Connector:

10' (3 meter) detachable HV cable is provided for units up to 5kV; 10kV through 20kV: 59" (1.5 meter) cable, 30kV: 78" (2 meter) cable

#### Cooling:

Convection cooled

#### Dimensions:

5.0"H X 5.5"W X 8.5"D (127mm x 140mm x 216mm)

#### Weight:

$\leq 8.0$  pounds (3.64kg)

#### Regulatory Approvals:

Compliant to 2004/108/EC, the EMC Directive and 2006/95/EC, the Low Voltage Directive. UL/CUL recognized, File E137710.

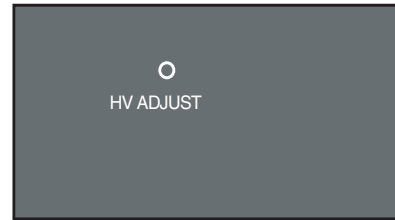
### MODEL RATINGS TABLE

Model	Output Voltage	Output Current	Ripple (Vpp)
603C-10P,N	0 to 1kV	0 to 30mA	15mV
603C-15P,N	0 to 1.5kV	0 to 20mA	15mV
603C-30P,N	0 to 3kV	0 to 10mA	30mV
603C-50P,N	0 to 5kV	0 to 5mA	50mV
603C-100P,N	0 to 10kV	0 to 2mA	200mV
603C-150P,N	0 to 15kV	0 to 1.5mA	450mV
603C-200P,N	0 to 20kV	0 to 1.0mA	800mV
603C-300P,N	0 to 30kV	0 to 0.4mA	6 volts

Specify "P" for positive polarity or "N" for negative polarity

DIMENSIONS: in.[mm]

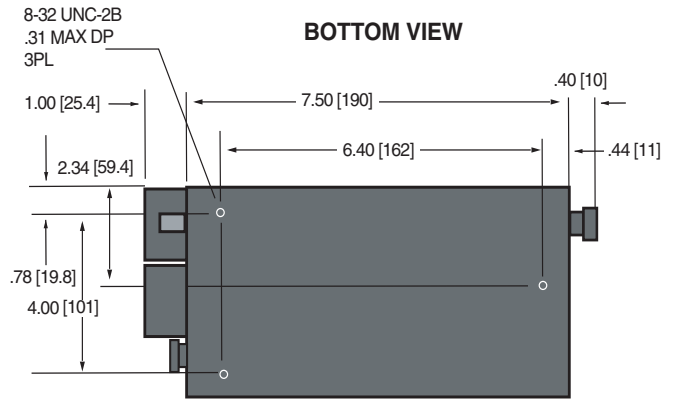
### TOP VIEW



### INTERFACE CONNECTOR-P2

PIN	SIGNAL	SIGNAL PARAMETERS
1	n/c	None
2	n/c	None
3	Signal Ground	Ground
4	Voltage Program	0 to 5Vdc = 0 to 100% rated output, 1MΩ Zin
5	+5.0Vdc Reference	+5.0Vdc, 10mA maximum
6	kV Monitor	0 to 5Vdc = 0 to 100% rated output, 10KΩ Zout
7	mA Monitor	0 to 5Vdc = 0 to 100% rated output, 10KΩ Zout
8	Trip Input	Connect to ground to trip unit off
9	Local Voltage Program	Internal program potentiometer wiper, 0 to 5Vdc

### BOTTOM VIEW

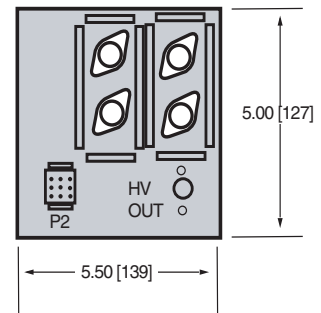


### AC INPUT TERMINAL BLOCK

Terminal	Function
1	115/230 Vac Input
2	Neutral
3	Ground



### FRONT VIEW



### REAR VIEW

