



- **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

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 $\pm(0.1\%$ of setting + 0.1% of maximum)
Voltage Monitor $\pm(0.1\%$ of reading + 0.1% of maximum)
Current Monitor $\pm(2\%$ of reading + 1% 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 $+50^\circ\text{C}$

Storage Temperature:

-40°C to $+85^\circ\text{C}$

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:

≤ 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.

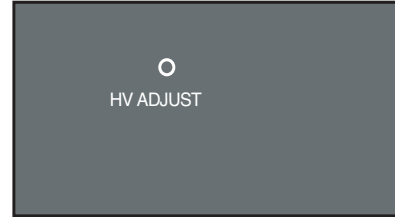
MODEL RATINGS TABLE

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]

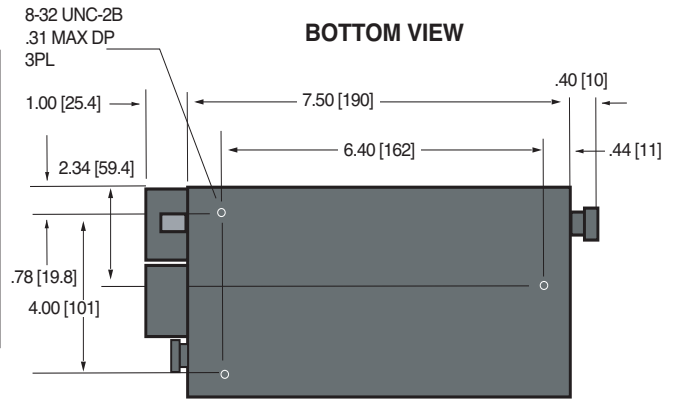
TOP VIEW



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

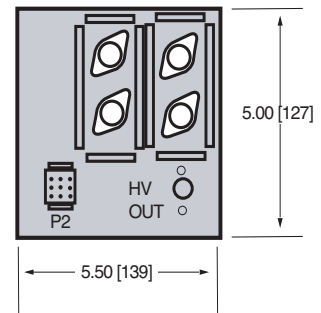


AC INPUT TERMINAL BLOCK

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



FRONT VIEW



REAR VIEW

