



- **1-20KV @ 6-9 WATTS**
- **DC INPUT MODULAR POWER SUPPLY**
- **EXCELLENT REGULATION**
- **VERY LOW RIPPLE**
- **ARC/SHORT CIRCUIT PROTECTED**

www.spellmanhv.com/manuals/600

Spellman's Bertan brand of 605C modular high voltage power supplies offer well regulated, fixed polarity outputs up to 20kV, which operate off a +28Vdc input (+24Vdc optional). 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:

+28Vdc, $\pm 10\%$, @ 0.75 amp
+24Vdc, $\pm 10\%$, @ 1 amp (24V Option)

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

Output Connector:

59" (1.5 meter) detachable HV cable is provided

Cooling:

Convection cooled

Dimensions:

5.0"H X 2.75"W X 4.75"D (128mm x 70mm x 121mm)

Weight:

≤ 3.2 pounds (1.45kg)

Regulatory Approvals:

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

MODEL RATINGS TABLE

Model	Output Voltage	Output Current	Ripple (Vpp)
605C-10P,N	0 to 1kV	0 to 9mA	15mV
605C-15P,N	0 to 1.5kV	0 to 6mA	15mV
605C-30P,N	0 to 3kV	0 to 3mA	30mV
605C-50P,N	0 to 5kV	0 to 1.5mA	50mV
605C-100P,N	0 to 10kV	0 to 0.75mA	200mV
605C-150P,N	0 to 15kV	0 to 0.4mA	450mV
605C-200P,N	0 to 20kV	0 to 0.25mA	750mV

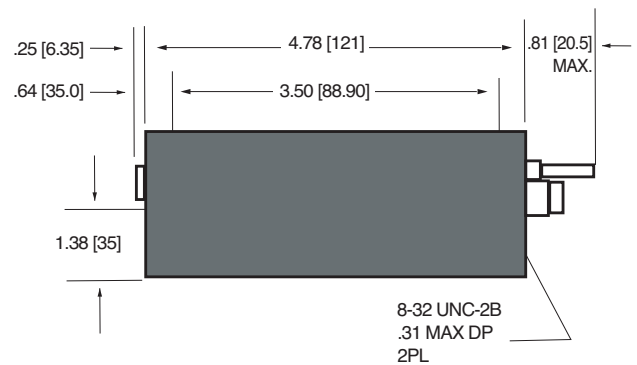
Specify "P" for positive polarity or "N" for negative polarity

DIMENSIONS: in.[mm]

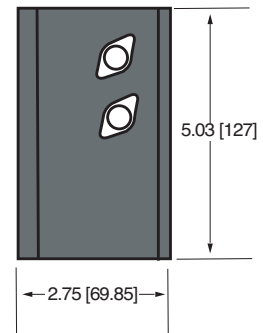
TOP VIEW



BOTTOM VIEW



FRONT VIEW



REAR VIEW



INTERFACE CONNECTOR-P2

PIN	SIGNAL	SIGNAL PARAMETERS
1	Power Ground	Power Ground
2	Power Input	+28Vdc Power Input (+24Vdc optional)
3	Signal Ground	Signal 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

