



Spellman's Bertan brand of PMT modular high voltage power supplies offer well regulated, fixed polarity outputs up to 7.5kV, which operate off a low voltage DC input voltage. These fully enclosed modules are specifically designed with proprietary linear power conversion techniques to provide exceptionally low ripple and noise. The PMT is ideal for precision applications including: photomultiplier tubes, solid state detectors and ultrasonic transducers.

The output voltage can be controlled by either a local internal potentiometer or by a customer provided ground referenced signal for remote operation. Additionally a ground referenced output voltage monitor signal is provided. The PMT can be powered from either a single positive voltage source or a split  $\pm$  voltage source, providing application flexibility.

### TYPICAL APPLICATIONS

Photomultiplier tubes  
Ultrasonic transducers  
Solid state detectors

### SPECIFICATIONS

#### Input Voltage:

Option 1: +24Vdc to +30Vdc @ 400mA  
Option 3:  $\pm$ 12Vdc to  $\pm$ 18Vdc @ 400mA  
specify "-1" (option 1) or "-3" (option 3) when ordering

#### Efficiency:

$\approx$ 50%, typical

#### Output Polarity:

Positive or negative, specify at time of order

#### Output Voltage:

See "model selection" table

#### Output Current:

See "model selection" table

#### Output Power:

1.875W, 2W, 2.5W, 3W, 4W

#### Voltage Regulation:

Line:  $\pm$ 0.001% of rated output voltage for a +1% input line change

Load:  $\pm$ 0.001% of rated output voltage for a full load change

- **500V to 7.5kV @ 1.9 to 4 Watts**
- **Low Cost Modular Design**
- **Excellent Stability & Regulation**
- **Low Noise & Ripple**
- **Arc & Short Circuit Protected**
- **UL Recognized and RoHS Compliant**

#### Ripple:

See "model selection" table

#### Stability:

$\leq$ 0.005% per hour, 0.02% per 8 hours, after a 1/2 hour warm up

#### Accuracy:

Remote Programming  $\pm$ (2% of setting, +0.5% of maximum)  
Voltage Monitor  $\pm$ 2%

#### Temperature Coefficient:

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

#### Arc/Short Circuit:

All units are fully arc and short circuit protected and will limit continuous short circuit output current to less than 150% of maximum rated output current.

#### Operating Temperature

0 $^{\circ}$ C to +50 $^{\circ}$ C

#### Storage Temperature:

-40 $^{\circ}$ C to +85 $^{\circ}$ C

#### Humidity:

20% to 85% RH, non-condensing

#### Interface Connector:

12 position card edge connector, mate provided with unit

#### Output Connector:

A captive 24" (610mm) of RG-59B/U shielded cable, unterminated is provided

#### Cooling:

Convection cooled.

#### Dimensions:

3.875" W X 1.25" H X 6.3125" D (98mm x 32mm x 160mm)

#### Weight:

$\leq$ 2.0 pounds (0.9kg)

#### Regulatory Approvals:

Designed to meet EEC EMC Directive. Compliant to EEC Low Voltage Directive. UL/CUL recognized File E148969. RoHS compliant.

### MODEL SELECTION TABLE

Model	Output Voltage	Output Current	Ripple (Vpp)
PMT-05C-P,N	0 to 500V	0 to 8mA	5mV
PMT-10C-P,N	0 to 1kV	0 to 4mA	4mV
PMT-20C-P,N	0 to 2kV	0 to 2mA	2mV
PMT-30C-P,N	0 to 3kV	0 to 1mA	6mV
PMT-50C-P,N	0 to 5kV	0 to 0.5mA	10mV
PMT-75C-P,N	0 to 7.5kV	0 to 0.25mA	100mV

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

### INTERFACE CONNECTOR

Signal	Parameters	Option 1 Pin Number	Option 3 Pin Number
+ Power Input	+24Vdc to +30Vdc or +12Vdc to +18Vdc	3&4	3 & 4 & 5
- Power Input	-12Vdc to -18Vdc	n/a	2 & 6
Ground	Ground	1 & 12	1 & 12
Voltage Monitor	See Voltage Monitor Table	11	11
+9Vdc Reference	+9.0Vdc, 10mA maximum	10	10
Voltage Program Input	0 to 9Vdc = 0 to 100% rated output, 100kΩ Zin	8	8
Local Voltage Program	Internal program potentiometer wiper, 0 to 9Vdc	9	9

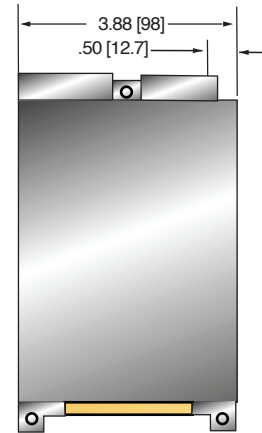
### VOLTAGE MONITOR TABLE

Model	Signal Voltage	Signal Impedance
PMT-05C-P,N	0 to 5 volts	50k ohms
PMT-10C-P,N	0 to 1 volts	10k ohms
PMT-20C-P,N	0 to 2 volts	25k ohms
PMT-30C-P,N	0 to 3 volts	30k ohms
PMT-50C-P,N	0 to 5 volts	100k ohms
PMT-75C-P,N	0 to 7.5 volts	200k ohms

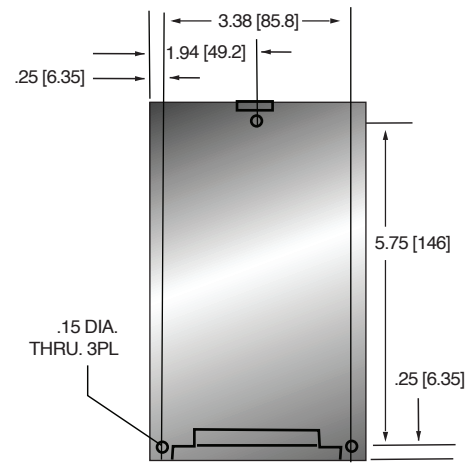
Note: The Voltage Monitor polarity matches the high voltage output polarity

DIMENSIONS: in.[mm]

#### TOP VIEW



#### BOTTOM VIEW



#### FRONT VIEW

