



- **500V TO 10KV @ 1.9W TO 4W**
- **LOW COST MODULAR DESIGN**
- **EXCELLENT STABILITY & REGULATION**
- **LOW NOISE & RIPPLE**
- **ARC & SHORT CIRCUIT PROTECTED**

Spellman's Bertan brand of PMT modular high voltage power supplies offer well regulated, fixed polarity outputs up to 10kV, 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

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 for a +1% input line change

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

Ripple:

See "model ratings" table

Stability:

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

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 120% 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:

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

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)

MODEL RATINGS 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
PMT-100C-P,N	0 to 10kV	0 to 0.2mA	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, 100Ω 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
PMT-100C-P,N	0 to 5 volts	10k ohms

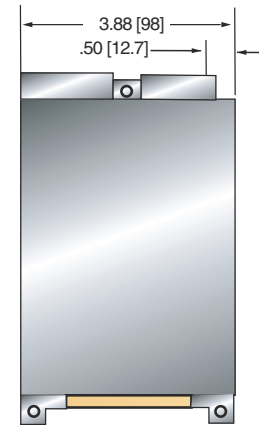
Note: The Voltage Monitor polarity matches the high voltage output polarity



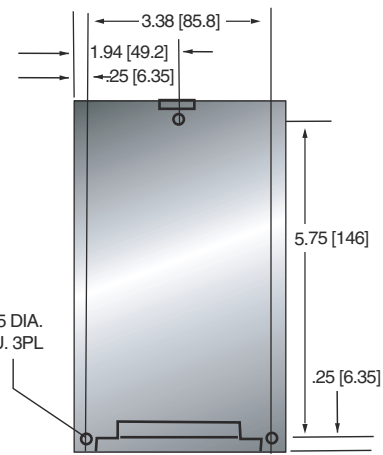
E137710
Up to 7.5kV only

DIMENSIONS: in.[mm]

TOP VIEW



BOTTOM VIEW



FRONT VIEW

