



- **INTEGRATED POWER SUPPLY/SOCKET DESIGN**
- **REGULATED OUTPUT**
- **LOW RIPPLE**
- **FULLY ENCAPSULATED**
- **ARC/SHORT CIRCUIT PROTECTED**

Spellman's PMTS is a custom designed high voltage power supply and integrated mounting socket for standard 1.125 inch (28mm) side-on photomultiplier tubes. Ten equally divided, incremental output voltages are generated and provided via the use of a 10 stage voltage multiplier arrangement.

The output voltage is programmable over the entire rated range via a ground referenced 0 to 5Vdc signal. The stable, well regulated and low ripple outputs enhance PMT operation and performance. An internal feedback divider resistor allows output regulation, provides a bleed function while also generating a ground referenced output voltage monitoring signal.

The PMTS is fully encapsulated for optimum reliability. Isolating the high voltage circuitry from the local environment minimizes contamination concerns while enhancing user safety. The Anode current signal is provided via a length of shielded coaxial cable to preserve signal integrity. A metal installation flange is provided allowing easy mounting and installation.

### SPECIFICATIONS

#### Input Voltage:

+15Vdc,  $\pm 5\%$

#### Input Current:

$\leq 200\text{mA}$  maximum, typically 100mA

#### Output Voltage:

0 to 1000 volts, via 10 equally divided incremental taps

#### Output Polarity:

Negative, with respect to ground

#### Output Current:

20 microamps, maximum

#### Voltage Regulation:

Line:  $\leq 0.005\%$  of rated output voltage over specified input voltage range

Load:  $\leq 0.005\%$  of rated output voltage for a full load change

#### Ripple:

$\leq 1.0$  millivolt peak to peak, photoelectron spikes excluded

#### Temperature Coefficient:

$\leq 100\text{ppm ppm}/^\circ\text{C}$

#### Stability:

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

#### Accuracy:

$\pm 2\%$  at maximum output

#### Operating Temperature:

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

#### Storage Temperature:

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

#### Humidity:

10% to 85% RH, non-condensing

#### Input Connector:

4 pin Molex, mating connector provided

#### PMT Current Signal Cable:

9.25" (235mm) of RG174/U, terminated as required

#### PMT Socket:

Standard 1.125" (28mm) socket for side on photomultiplier tubes

#### Cooling:

Convection cooled

#### Dimensions:

1.25" diameter X 2.52" long (31.75mm X 64mm)