

PPM3-102 Series

Photo Multiplier DC/DC Converter Module
21~27 VDC Input / 1000 VDC Output

DESCRIPTION

This compact, high performance, photomultiplier power supply module has considerable advantages in size, weight and specification over other competitive units for PM applications; and for those applications where 3W output power is sufficient and high performance is essential. The unit is configured for direct PCB mounting and the low case profile and small size make it ideal for "designing-in" to equipment as a component. Line, Load and Ripple performance, together with many other aspects of the specification, are all you would expect from this professional photomultiplier module, and due to the wide input range of 21V to 27V DC, the unit can be used with various types of DC input supply.

Operation: With an output of 1kV at 3mA, the control of output voltage is achieved by applying a positive 0-10V DC voltage to the control pin. Alternatively, an internal DC reference voltage is brought out to another pin, so that an external potentiometer can be connected to control or to pre-set the output voltage. The input/output voltage rate-of-response or slew rate is usually fast; for example, the resistively loaded output will change from 10% to rated voltage in less than 15ms, with fall time over the same levels being less than 40ms.

Construction: The PPM3/102 is intended for circuit board mounting, and the gold-plated connecting pins can be used to plug in, or to be soldered to a Printed Circuit Board. A machined aluminium alloy case is used for good heat dissipation, and screening. A tapped hole and screw for fixing are provided at each corner of the underside of the case. Case finish is semi-matt black paint with screen-printed legends. Each unit has its own serial number label which provides manufacturing date traceability together with pin connections.

Safety: The amount of stored energy is usually small, as indicated by the good output voltage slew rate. However, any high voltage power supply is capable of generating voltages which can be lethal, and so should only be installed, tested and used by personnel who have received appropriate training and who are fully aware of the hazards that exist.

SPECIFICATION

Input Voltage:	+21V to +27V DC (case internally connected to 0V).
Input Current:	240mA max.
Output Voltage:	1000V max.
Output Current:	3.0mA (minimum load impedance 50k)
Output Polarity:	Positive or Negative to order.
Load Regulation:	<0.1V (100ppm) output change, for a change from zero to full load current.
Line Regulation:	<0.1V (100ppm) output change, for a change of input supply voltage from 21V to 27V.
Output Ripple:	15mV peak to peak, typically 5mV.
Voltage Control:	1V to 10V for 100V to 1000V output (input impedance 500k)
Temperature Coefficient:	Better than 50ppm/°C at max voltage output.
Operating Temperature:	0°C to 50°C at up to 90% RH non-condensing.
Altitude (Operating):	Sea level to 3000 metres.
Protection:	Under overload conditions the supply will become a constant current source between 3 and 4mA until the overload is removed.
Mechanical Specification:	Weight: 110g. Size 77mm (3.03") x 54mm (2.12") x 23mm (0.90") (high). Case fixings: 4 tapped holes, 8mm deep, are provided together with M2 screws.
Ordering Information:	PPM3/102N - negative output. PPM3/102P - positive output.

CE These component power supplies meet the requirements of EC Directive 73/23/EEC (LVD)



FEATURES

- Small size, lightweight
- High performance for precision applications
- Plug-in for Circuit Board Mounting
- Positive and negative polarities available
- Radiation screened construction
- DC 0-10V programming signal
- High reliability
- Short circuit & overload protected
- Low cost
- CE Marked (LVD)

APPLICATIONS

- Photomultipliers
- Precision Electrostatic Lenses and beam position controls
- Spectroscopy
- Image Intensifiers
- Microchannel Plates



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