PRECISION HIGH VOLTAGE MODULES

MP001, MP2.5, MP003

MP Series

Application: (2W max)

Photomultipliers, electron multipliers, mass spectrometers, lens & bias supplies, surface science & analysis, test equipment.

- High stability, low ripple, low drift
- Short circuit & flashover proof
- PCB mounting
- 24 hour burn in
- Positive & negative versions
- 0V-10V control input

This range of power supplies are miniature versions of the HP family giving up to 1kV, 2.5kV, or 3kV, at 2W. The units, which are programmable by a 0 to +10 volt signal, are intended to be mounted on a printed circuit board and offer high stability together with low drift. They use high frequency pulse width modulated switching techniques in conjunction with a ferrite step-up transformer to control the output voltage.

ELECTRICAL SPECIFICATIONS: **MP SERIES**

UNIT TYPE	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE AT FULL LOAD	SIZE (mm)	WEIGHT (kg)
MP001PAA200	50V to 1kV	2mA	<50mV (pk-pk)	81 x 56.5 x 20	0.3
MP001NAA200	-50V to –1kV	2mA	<50mV (pk-pk)	81 x 56.5 x 20	0.3
MP2.5PAA200	100V to 2.5kV	1mA	<125mV (pk-pk)	81 x 61.5 x 35	0.3
MP2.5NAA200	-100V to -2.5kV	1mA	<125mV (pk-pk)	81 x 61.5 x 35	0.3
MP003PAA200	125V to 3kV	700uA	<150mV (pk-pk)	81 x 61.5 x 35	0.3
MP003NAA200	-125V to 3kV	700uA	<150mV (pk-pk)	81 x 61.5 x 35	0.3

ELECTRICAL SPECIFICATION

Input:	+24 volt dc ±10% <0.25A 0V input common to HV return and chassis
Control of output:	0 to +10V gives zero to max o/p, tolerance ±2%. Zin >100Kohm
Voltage monitor:	0V to +10V ±2% for 0% to 100% (Zout= 10k)
Temp-Co:	<200ppm /°C
Current monitor:	Not Available
Line regulation:	<100ppm for a 1V change in input voltage
Load regulation:	<100ppm for load changes from 10% to 100%
Protection (all outputs):	Protected against intermittent arcing and continued short circuit to ground

MP Series

MECHANICAL SPECIFICATION

Mountings:	Blind Fasteners in base M2.5 see 'H' Outline Drgs
Input & Control:	PCB Pins

ENVIRONMENTAL SPECIFICATION

Temperature, operating:	+10°C to +50°C	Humidity (RH) <31°C non-condensing:	80% maximum
Temperature, storage:	-35°C to +85°C	Humidity (RH) >30°C non-condensing:	Decrease linearly to 50% at 40°C
Altitude, operating:	Up to 2,000m	Altitude, storage:	Up to 18,000m

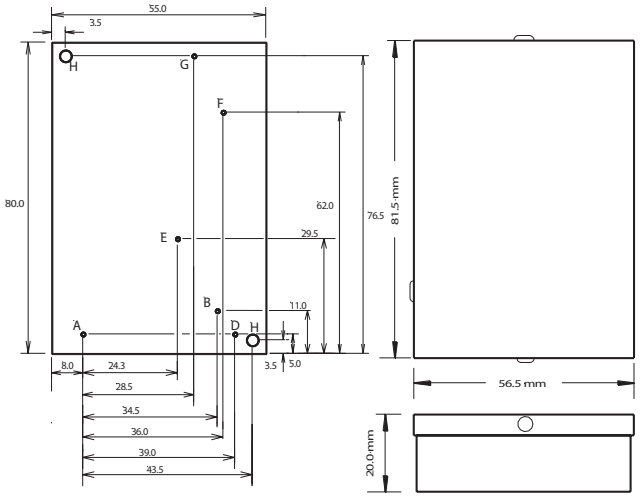
The unit is to be supplied from a current limited supply providing 24V dc, impulse limited to overvoltage Category I (of IEC60364-4-443).
For use in an environment of pollution degree 2.

PIN ASSIGNMENTS

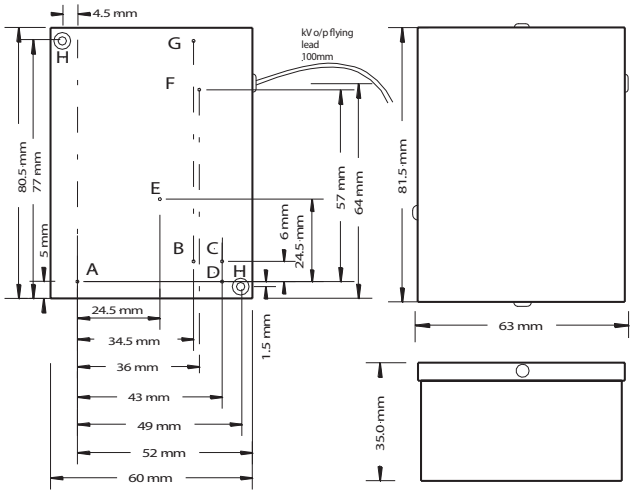
1	+24V dc input
2	+V Control Input
3	0V Control[3]
4	0V Power return
5	Voltage monitor o/p[1]
6	1kV o/p[2] or nc
7	HV return

Notes:

1. Voltage Monitor is optional on 1kV unit only.
   It is fitted as standard on the 2.5kV and 3kV versions.
2. 1kV unit only Output is via the pin in the underside
   2.5kV & 3kV units: Output is via the flying lead.
3. 2.5kV & 3kV units only



PCB FOOTPRINT
AS SEEN FROM ABOVE



PART NUMBER SELECTION

SERIES CODE: MP

O/P kV	POLARITY	OPTIONS CODE	TEMP CO
001= 1kV	P= +ve	AA= no options	<200ppm/°C
2.5= 2.5kV	N= -ve	AV = Voltage Monitor Fitted[1]	
003=3kV			

Example: -ve 1kV MP series with Voltage Monitor: MP001NAV200

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