



- HIGH STABILITY: 10PPM/HR
- ULTRA LOW NOISE 10PPM
- ULTRA LOW TEMPERATURE COEFFICIENT 10PPM/°C
- EXTRA-SMALL AND LIGHT WEIGHT
- SIX-SIDED SHIELDED
- EXTERNAL POTENTIOMETER OR AN EXTERNAL VOLTAGE REFERENCE
- CUSTOMIZATION AVAILABLE

## INTRODUCTION

Wisman's MCP series of high voltage 0.5~2W micro-modules that provide output voltages ranging from 100V to 2kV. MCP modules are compact six-sided shielded modules with ultra-low noise, high stability and ultra-low temperature coefficient. All models are provided with external potentiometer or an external voltage monitoring panel. This series modules have protection functions including over current protection, arc fault protection and short circuit protection.

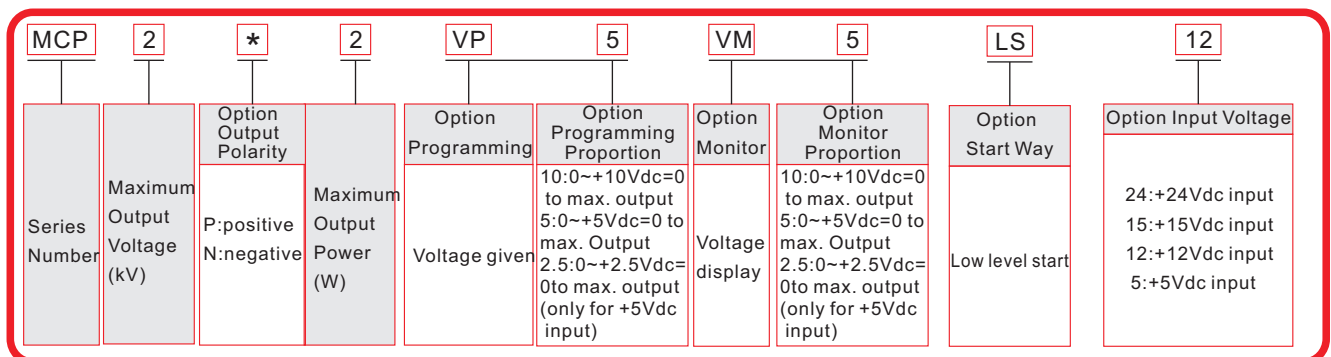
## TYPICAL APPLICATIONS

Mass spectrometry photomultiplier tubes (PMT), solid state detectors, Piezo crystal devices, ultrasonic transducers, microchannel plates (MCP), spectroscopy, scintillation counters, electron multiplier detectors, nuclear Instruments, electrophoresis, semiconductor testing, DNA sequencing, radiation counter, electron and ion beams, electrostatic chuck, high voltage, bias hipot testing, precision lenses, image intensifiers, semiconductor testing, chemical applications, laboratory applications, industrial application supplies.

## MCP SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
0.1	5.00	0.5	MCP0.1*0.5	0.5	1.00	0.5	MCP0.5*0.5	1.5	0.33	0.5	MCP1.5*0.5
	10.00	1	MCP0.1*1		2.00	1	MCP0.5*1		0.67	1	MCP1.5*1
	20.00	2	MCP0.1*2		4.00	2	MCP0.5*2		1.33	2	MCP1.5*2
0.2	2.50	0.5	MCP0.2*0.5	1	0.50	0.5	MCP1*0.5	2	0.25	0.5	MCP2*0.5
	5.00	1	MCP0.2*1		1.00	1	MCP1*1		0.50	1	MCP2*1
	10.00	2	MCP0.2*2		2.00	2	MCP1*2		1.00	2	MCP2*2

## MCP SELECTION EXAMPLE





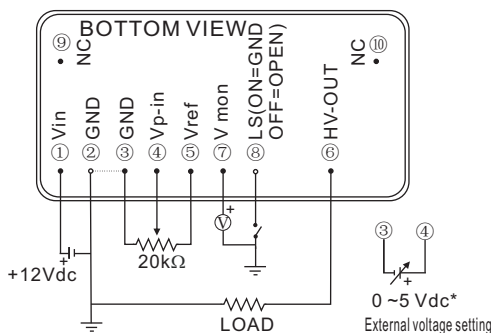
**MCP SPECIFICATIONS**

PARAMETER	DESCRIBE
Input Voltage	+12Vdc±2%, input current≤350mA, +24Vdc±2%, +15Vdc±2%, +5Vdc±2% input available.
Output	0.1kV, 0.2kV, 0.5kV, 1kV, 1.5kV, 2kV available.
Stability	0.001%/hr after a 30 minute warm-up period.
Temperature Coefficient	<10ppm/°C
Ripple	0.001% p-p of maximum output voltage.
Voltage Programming	By external 20kΩ potentiometer or external voltage control(Vp-in)0~+5Vdc. Zin = 100kΩ.
Voltage Monitor	0~+5Vdc=0 to 100% output. Zout = 20kΩ. Accuracy=±1%.
Voltage Line Regulation	±0.001% (input voltage change ±2%).
Voltage Load Regulation	±0.01% (no load to full load change).
Operating Temperature	0°C~+50°C.
Storage Temperature	-40°C~+85°C.
Humidity	0%~90% RH, non-condensing.
Cooling	Convection cooled.
Dimensions	0.47" H x 0.98" W x 1.79" D (12.00mm x 25.00mm x45.50mm).
Weight	25g

**MCP PIN INFORMATION**

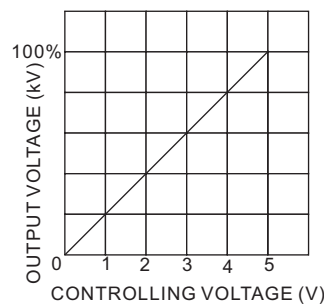
PIN	DESCRIPTION
1	Input voltage +12Vdc±2%, Option +24Vdc±2%, +15Vdc±2%, +5Vdc±2%
2	Power Ground
3	Signal Ground
4	Voltage Programming, 0~+5Vdc=0~100% rated output, Zin=100kΩ
5	+5Vdc Reference
6	HV Output
7	Voltage monitor, 0~5Vdc=0~+100% rated output, Zout=20kΩ
8	LS: GND=ON, OPEN=OFF(OPTION)
9	NC
10	NC

**MCP CONNECTION DIAGRAM**

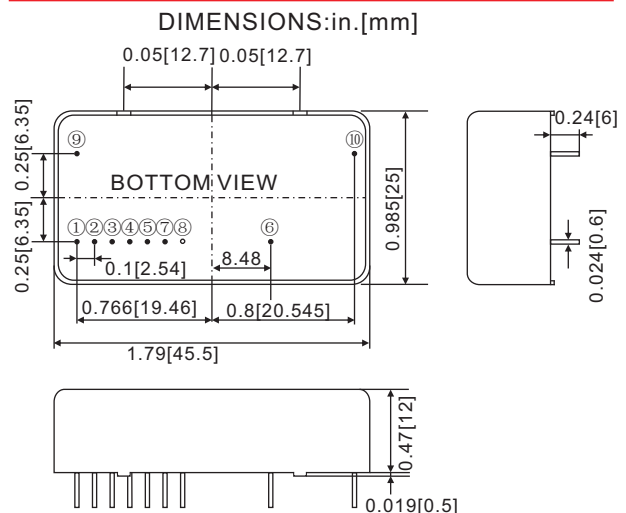


The case is internally connected to pin②, Pins ② and ③ are internally connected, and make sure to connected to the ground.  
\* The instability in the external controlling voltage should be minimised as it directly affects the output voltage quality.

**OUTPUT VOLTAGE CONTROLLING CHARACTERISTIC**



**MCP DIMENSIONS**



**A**  
**MICRO-MODULES**