



- HIGH STABILITY 10PPM/HR
- ULTRA LOW NOISE 10PPM
- ULTRALOW TEMPERATURE COEFFICIENT 10PPM/°C
- VERY COMPACT AND LIGHTWEIGHT
- SIX-SIDE SHIELDED
- EXTERNAL POTENTIOMETER OR AN EXTERNAL VOLTAGE REFERENCE
- OEM CUSTOMIZATION AVAILABLE



3W~5W
45X23X17

A
MICRO-MODULES

INTRODUCTION

Wisman's MCA series of high voltage 3~5W micro-modules that provide output voltages ranging from 100V to 2kV. MCA 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.

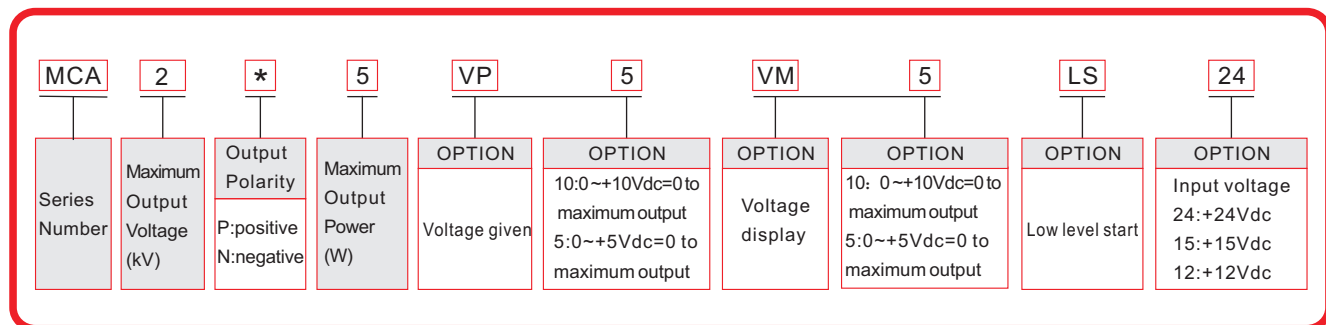
TYPICAL APPLICATIONS

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.

MCA SELECTION TABLE

| kV | mA | P(W) | MODEL | kV | mA | P(W) | MODEL | kV | mA | P(W) | MODEL |
|-----|-------|------|----------|-----|-------|------|----------|-----|------|------|----------|
| 0.1 | 30.00 | 3 | MCA0.1*3 | 0.5 | 6.00 | 3 | MCA0.5*3 | 1.5 | 2.0 | 3 | MCA1.5*3 |
| | 40.00 | 4 | MCA0.1*4 | | 8.00 | 4 | MCA0.5*4 | | 2.67 | 4 | MCA1.5*4 |
| | 50.00 | 5 | MCA0.1*5 | | 10.00 | 5 | MCA0.5*5 | | 3.33 | 5 | MCA1.5*5 |
| 0.2 | 15.00 | 3 | MCA0.2*3 | 1 | 3.00 | 3 | MCA1*3 | 2 | 1.5 | 3 | MCA2*3 |
| | 20.00 | 4 | MCA0.2*4 | | 4.00 | 4 | MCA1*4 | | 2.00 | 4 | MCA2*4 |
| | 25.00 | 5 | MCA0.2*5 | | 5.00 | 5 | MCA1*5 | | 2.5 | 5 | MCA2*5 |

MCA SELECTION EXAMPLE



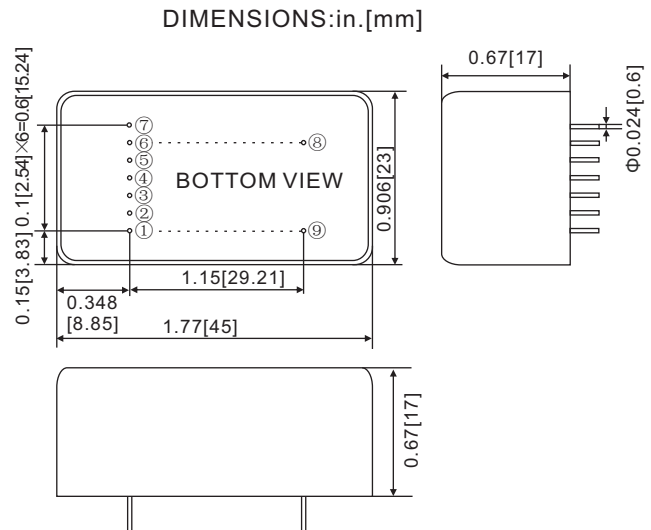
MCA SPECIFICATIONS

| PARAMETER | DESCRIBE |
|-------------------------|---|
| Input Voltage | +24Vdc±2%, input current ≤ 0.5A. +12Vdc±2%, +15Vdc±2% available. |
| Output | 0.1kV~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~+5 Vdc. Zin = 100kΩ . |
| Voltage Monitor | 0 ~+5Vdc=0 to 100% output. Zout = 20kΩ. Accuracy=± 1% . |
| Voltage Line Regulation | ±0.001% for ±2% change of input voltage. |
| Voltage Load Regulation | 0.01% of maximum output voltage, no load to full load. |
| Operating Temperature | 0°C~ +50°C. |
| Storage Temperature | -40°C~+85°C |
| Humidity | 0%~ 90% RH, non-condensing. |
| Cooling | Convection cooled. |
| Dimensions | 0.67" H x 0.91" W x 1.77" D (17.00mm x 23.00mm x45.00mm). |
| Weight | 30g. |

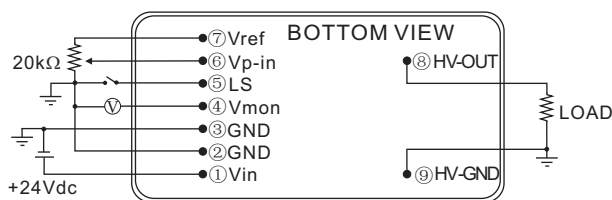
MCA PIN INFORMATION

| PIN | DESCRIPTION |
|-----|---|
| 1 | Power Input +24Vdc±2%,Option+12Vdc±2% ,+15Vdc±2% |
| 2 | Signal Ground |
| 3 | Power Ground |
| 4 | Voltage monitor,0~5Vdc corresponds to 0 to 100% of rated output |
| 5 | LS/HS(Optional),GND=ON |
| 6 | Voltage Programming,0~5Vdc corresponds to 0 to 100% of rated output |
| 7 | +5Vdc Reference |
| 8 | High Voltage Output |
| 9 | High Voltage Ground |

MCA DIMENSIONS



MCA CONNECTION DIAGRAM



- External potentiometer of T.C ≤ 100 ppm/°C, P.C $\geq 1/4$ W is recommended. The instability in the external controlling voltage should be minimised as it directly affects the output voltage quality.
- ⑤ are internally connected optional (isolated from CASE).