

MS005MAAxxx

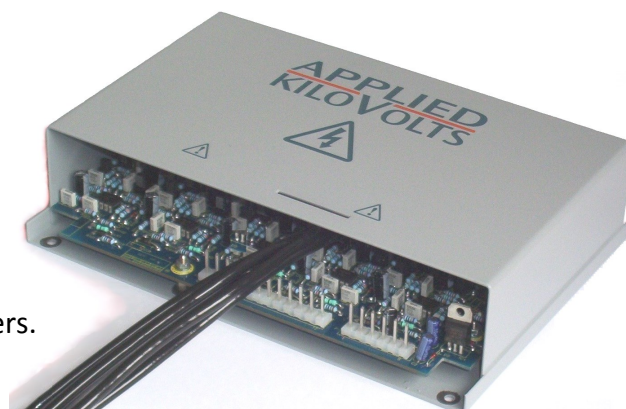
5 independent 5kV o/ps @300uA each

PRECISION HIGH VOLTAGE MODULE

Applications:

Beam steering, Focus and bias supplies,
Deflector Plates, Electron guns & Ion beams,
Surface Science Instruments, and Mass Spectrometers.

- High Stability, Low Ripple
- Each o/p Factory configured Polarity
- Externally programmable
- Short circuit and flashover proof
- 24 hour burn in



The 5x5 MS005MAA provides 5 separately controlled 0 to 5kV outputs, at up to 300µA. Each one can be configured by the factory as positive or negative (combinations of polarity are possible e.g. 3 positive and 2 negative). Each channel is controlled by its own 0 to +10V control signal, and each has its own 0 to +10V monitor output. The module is powered from 24V DC, and draws 2 Amps fully loaded.

Electrical Specification

| | |
|------------------------------|--|
| Input | +24V dc $\pm 5\%$ <2A. 0V input common to HV return and chassis. |
| Control of outputs | 0V to +10V for 0% to 100% $\pm 2\%$, ($Z_{in} = 200\text{Kohm}$) |
| Output Polarity | Each channel can be factory set as either Positive or Negative. Combinations such as 3 positive and 2 negative are possible. |
| Output Current | 300µA per channel |
| Voltage monitor | 0V to +10V $\pm 2\%$ for 0% to 100%. ($Z_{out} = 10\text{k}$) |
| Current Monitor | Not available |
| Ripple | <150mV pk to pk |
| Line regulation | <50ppm for 1V change in input voltage |
| Load regulation | <50ppm |
| Temperature co-efficient | <200ppm/°C |
| Drift (after 1 hour warm up) | <0.1% per hour, <0.5 over an 8 hour period |
| Protection (all outputs) | Protected against intermittent arcing and continued short circuit to ground |

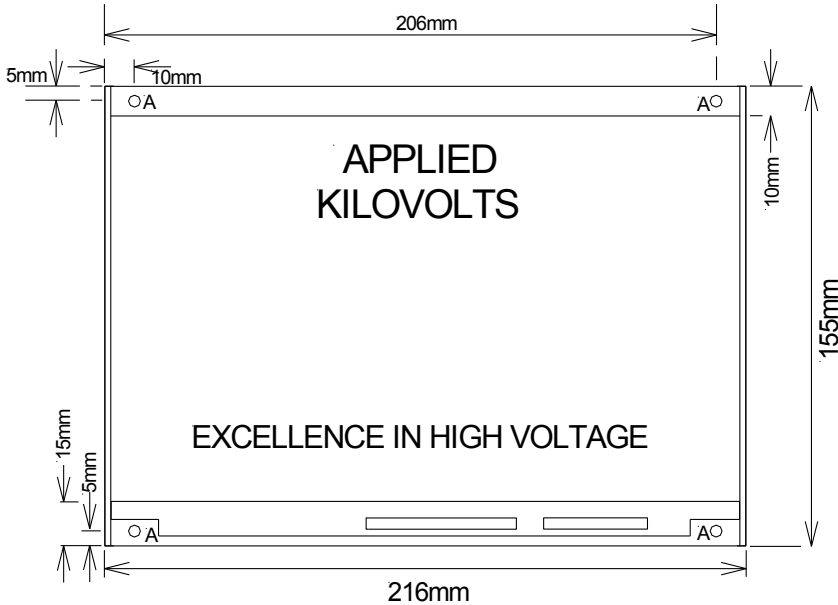
Mechanical Specification

| | |
|------------------|--|
| Dimensions | 216 x 155 x 52 mm |
| Mounting centres | 4 off M4 studs |
| Input / control | Molex 0.2" 6 way and 12 way connectors |
| Output | By 0.5 metre screened cables (URM43) |

Environmental Specification

| | | | |
|------------------------|-----------------|------------------------------------|----------------------------------|
| Temperature, operating | +10°C to +50°C. | Humidity (RH) <30°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 |

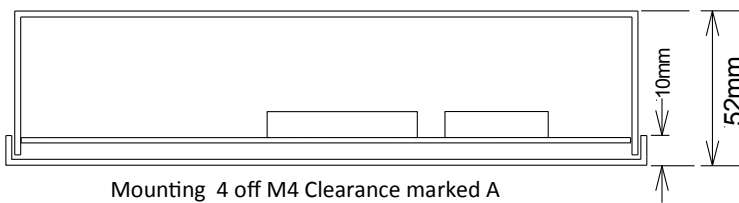
The unit is to be supplied from a current limited supply providing 24Vdc, impulse limited to overvoltage Category I (of IEC60364-4-443) . For use in an environment of pollution degree 2.



Input Pin Assignment 12 Way

| | | | |
|----|-----------------------|----|-----------------------|
| 1 | 1 control i/p | 7 | 4 control i/p |
| 2 | 1 Voltage Monitor o/p | 8 | 4 Voltage Monitor o/p |
| 3 | 2 control i/p | 9 | 5 control i/p |
| 4 | 2 Voltage Monitor o/p | 10 | 5 Voltage Monitor o/p |
| 5 | 3 control i/p | 11 | +24V input |
| 6 | 3 Voltage Monitor o/p | 12 | Signal gnd |
| 7 | 4 control i/p | 27 | Linked to pin 25 |
| 8 | 4 Voltage Monitor o/p | 28 | Linked to pin 26 |
| 9 | 5 control i/p | 29 | Linked to pin 31 |
| 10 | 5 Voltage Monitor o/p | 30 | Linked to pin 32 |
| 11 | +24V input | 31 | Linked to pin 29 |
| 12 | Signal gnd | 32 | Linked to pin 30 |

Note : Control Voltages must be between -0.5V & 10.2V



Input Pin Assignment 6 Way

| | | | |
|---|--------|---|--------|
| 1 | +24V | 4 | 0V Pwr |
| 2 | +24V | 5 | nc |
| 3 | 0V Pwr | 6 | nc |

Part Number Selection

| | | | | | | | | | |
|-------------|---------------------------------------|--------|-----------|--------------|---|--------------|----------------|------------------------|-----------------------------|
| Series Code | MS | o/p kV | 005 = 5kV | Multiple o/p | M | Options Code | AA= no options | o/p Polarity Selection | No of +ve 0 No of -ve |
| Example: | MS005MAA302 = 3 +ve o/ps & 2 -ve o/ps | | | | | | | | |

Applied Kilovolts Ltd

An Adaptas Solutions Company

Woods Way, Goring by Sea, BN12 4QY. United Kingdom.

Tel: +44 (0) 1903 708 850 Fax: +44 (0) 1903 708 851

Web: appliedkilovolts.com

E-mail: sales@appliedkilovolts.com

Copyright © 2020
Applied Kilovolts Ltd

MS005 Iss 7.1 19/06/20. Page 2 of 2