

PRECISION HIGH VOLTAGE MODULE  
6 INDEPENDENT -200V TO +200V O/PS @100UA EACH

APPLIED  
KILOVOLTS

MS0.2MZZ065

Application:

Beam steering, focus and bias supplies, deflector plates, electron guns & ion beams

- High Stability, low ripple
- Externally programmable - through zero control
- Short circuit and flashover proof
- 24 hour burn in



This power supply provides six outputs each separately programmable from -200V to +200V with respect to Gnd.

It is intended for steering, focusing & biasing of electron & ion beam applications. Biasing steering plates in pairs, this can control X, Y & Z directions. Each output is controllable cleanly through zero.

Please consult the factory for special variants of this supply including high speed versions.

ELECTRICAL SPECIFICATIONS: **MS0.2MZZ065**

**ELECTRICAL SPECIFICATION**

Input:	+24V dc $\pm 0.5V$ <0.5A. 0V input common to HV return and chassis. +15V dc $\pm 0.5V$ <0.05A , & -15Vdc $\pm 0.5V$ <0.05A.
Control of output:	-10V to +10V for -100% to 100% $\pm 2\%$ , ( $Z_{in} = 200Kohm$ )
Output Current:	100 $\mu$ A per channel
Voltage monitor:	-8V to +8V $\pm 2\%$ for -100% to 100%. ( $Z_{out} = 10k$ )
Current Monitor:	Not available
Ripple:	<25mV pk to pk
Line regulation:	<100ppm for 1V change in input voltage
Load regulation:	<100ppm for 10uA to maximum load
Temperature co-efficient:	<25ppm/ $^{\circ}C$
Drift (after 1 hour warm up):	<0.01% per hour, <0.05 over an 8 hour period
Protection (all outputs):	Protected against intermittent arcing and continued short circuit to ground. While able to source or sink 100uA, the unit will be damaged by sustained sinking of a beam current in excess of 200uA.

**MECHANICAL SPECIFICATION**

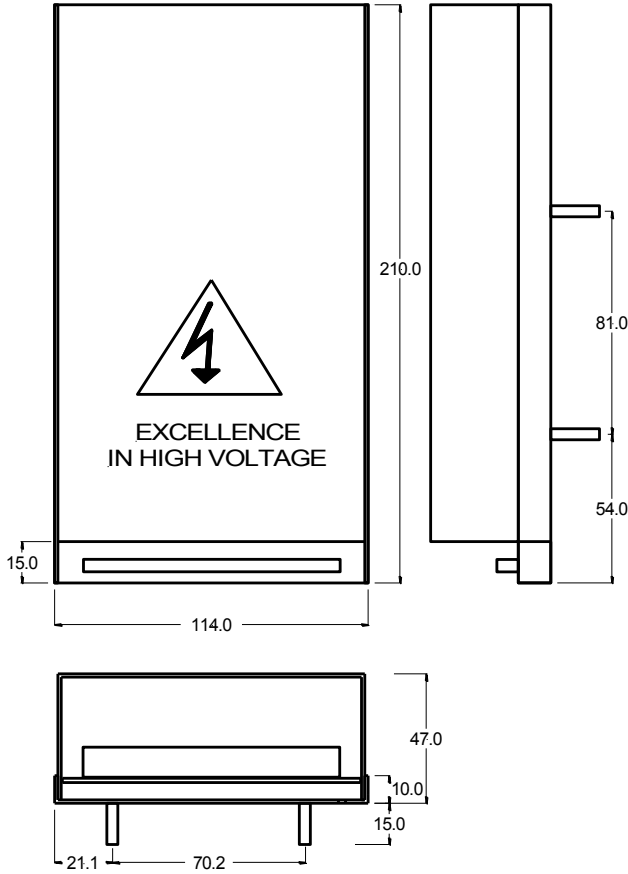
Dimensions:	210 x 114 x 47 mm
Mounting centres:	2 off M4 studs
Input / control:	40 Way IDC header, 0.05" pitch, straight latching, bump/clip polarised (Thomas & Betts 635-4034ES) Mating connector supplied.
Mating Output Socket:	QM 12 way plug, Souriau SMS 12 P1, plus SMS12H1 (Hood) plus 12 off T2P20FC1LT Trident 20AWG socket contacts

# MS0.2MZZ065

## 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 24V dc, impulse limited to overvoltage Category I (of IEC60364-4-443). For use in an environment of pollution degree 2.



## INPUT PIN ASSIGNMENTS

1	1 control i/p	21	6 control i/p
2	Signal gnd	22	Signal gnd
3	1 Voltage Monitor o/p	23	6 Voltage Monitor o/p
4	Signal gnd	24	Signal gnd
5	2 control i/p	25	Linked to pin 27
6	Signal gnd	26	Linked to pin 28
7	2 Voltage Monitor o/p	27	Linked to pin 25
8	Signal gnd	28	Linked to pin 26
9	3 control i/p	29	Linked to pin 31
10	Signal gnd	30	Linked to pin 32
11	3 Voltage Monitor o/p	31	Linked to pin 29
12	Signal gnd	32	Linked to pin 30
13	4 control i/p	33	nc
14	Signal gnd	34	+15V input <sup>2</sup>
15	4 Voltage Monitor o/p	35	Signal gnd <sup>1</sup>
16	Signal gnd	36	-15V input
17	5 control i/p	37	0V Pwr Gnd <sup>2</sup>
18	Signal gnd	38	0V Pwr Gnd <sup>2</sup>
19	5 Voltage Monitor o/p	39	+24V input
20	Signal gnd	40	+24V input

## Notes:

1. Program Lo and monitor Lo are all connected to pin 35, Signal Ground.
2. Separate signal 0V (+15V) and Power 0V (+24V) grounds are provided, these are held to within +0.5V by back to back diodes or may optionally be connected by an on board link.

## OUTPUT PIN ASSIGNMENT

1	o/p 1	5	o/p 5	9	nc
2	o/p 2	6	o/p 6	10	nc
3	o/p 3	7	nc	11	0V Load Return
4	o/p 4	8	nc	12	0V Load Return

## PART NUMBER SELECTION

MS0.2MZZ065

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