MS Series 3W/5W* 500VDC–10,000VDC Models Available

American High Voltage

*Higher Power Module Available

Low Ripple Fast-Reversing

Features:

- Voltage & Current Monitor
- Voltage & Resistance Programmable
- Encapsulated Aluminum Case
- Polarity reversal within 250mS
- Stability: <100PPM/ ° C
- Temperature Range: -55 ° C to 90 ° C (Case)
- 12V, 15V and 28V Input Voltages available
- Remote HV Inhibit

Electrical Characteristics:

- Input Voltage: 24 VDC ±10%
- Input Current:150mA (NL) (typ)
- Input Current:200mA (FL 3W)
- Input Current: 400mA (FL 5W)
- Load Regulation: 0.01% NL - FL (typ)
- Line Regulation: 0.01% (Vin +/- 10%)
- Slew Rate: 75V/mS
- Polarity: 250mS to settle to ±2%, 1Hz max switch rate

MS Series Description and Application Notes:

The MS series precision switching supplies are extremely efficient DC to DC converters for applications requiring a highly regulated source of high voltage that is controllable over a wide range of load conditions. These compact units are used in Mass Spectrometry and Capillary electrophoresis. The unit features a logic signal input to control output polarity reversal.

The MS Series high voltage power supplies are regulated by virtue of Pulse Width Modulation topology. The normal input voltage of 24 VDC is stepped up by resonant action to a high voltage output which is referenced to the input ground. The output high voltage return and the input power return are internally connected together.

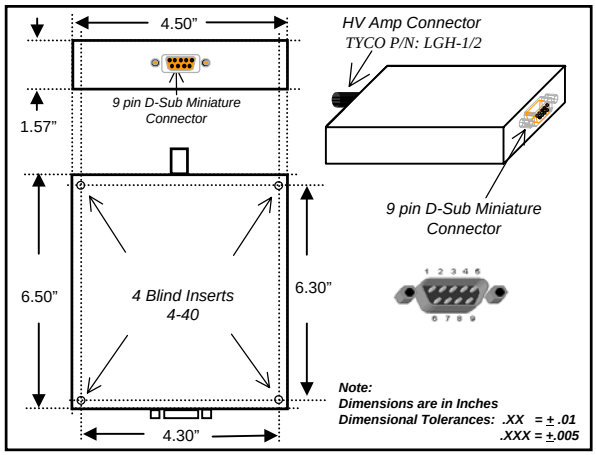
The output voltage may also be controlled in two different ways. In the voltage programming mode, a control voltage between 0 - 10 VDC will adjust the output between 0 and full output. In the resistance programming mode, a resistor placed between Pin 1 (10.0-V reference output) and Pin 7 (V control) will set the output to a voltage which depends on the value of the resistance used. Typically a 10kOhm resistor will set the output voltage to 50%. Zero resistance yields full output.

MS series power supplies are short circuit and over current protected by virtue of a 'try again' circuit which shuts down the high voltage for 2 seconds and resets a slow-start'. The maximum output current ability is set for each unit to be 120% above the nominal value determined by the maximum current. All MS units provide voltage and current monitors 1000:1 ratios.

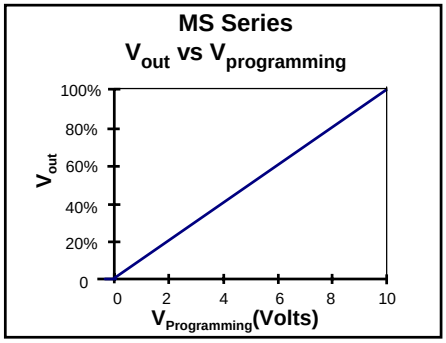
Product Selection Table

Model	Power	Output Voltage	Output Current	Ripple
MS-5	**5W**	0 to 500VDC	0 to 10.00mA	<0.02%
MS-20	**5W**	0 to 2000VDC	0 to 2.50mA	<0.02%
MS-30	**5W**	0 to 3000VDC	0 to 1.67mA	<0.02%
MS-50	**5W**	0 to 5000VDC	0 to 1.00mA	<0.02%
MS-75	**3W**	0 to 7500VDC	0 to 0.40mA	<0.02%
MS-100	**3W**	0 to 10,000VDC	0 to 0.30mA	<0.02%

MS Series Outline Drawing



Output Voltage vs. Programming Voltage



9 Pin D-sub Miniature Configuration

Pin #	Function	Parameters
1	Voltage Monitor	0-10Vdc = 0-100% of rated output
2	External Inhibit Input	Open or >10V = "Off"; <4V = "On"
3	Current Programming Input	Optional Version
4	Signal Ground	Signal Ground
5	Current Monitor	0-10Vdc = 0-100% of rated output
6	Polarity Control Input	Open or>10V = "Negative"; <4V="Positive
7	Voltage Programming Input	0-10Vdc = 0-100% of rated output
8	+24V Input	+24VDC
9	Power Ground	Power Ground

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