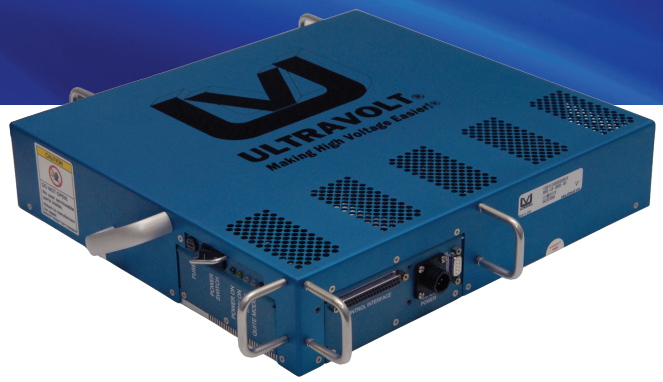
MMS-eB SERIES

Multi-Module Solution - Electron Beam



The multi-module solution - electron beam, or the MMS-eB Series, provides all the power sources needed to operate a variety of industry-standard precision electron guns. This highly advanced solution offers exceptional performance, including PPM level temperature coefficient, ripple, regulation, and stability. The MMS-eB Series is configurable as a 3-, 4-, or 5-bias electron gun high-voltage power supply for beam, filament, extractor, suppressor, and lens voltages. Users can specify which UltraVolt modules to place within the system, selecting from standard E Series and A-F Series power supplies.

- Optimal for electron guns
- Exceptional stability and ultra-low noise
- PPM level temp coefficient, ripple, regulation and stability
- Half-quiet and Full-quiet mode capability
- Wide variety of cables and connectors available
- <200ppm to <1ppm ripple
- <300ppm 3-year output stability
- Low common mode noise

PARAMETER	CONDITIONS	MODELS	UNITS
INPUT		ALL MODELS	
Voltage Range	Full Power	24 ± 10%	VDC
Current	Full Load, Max Eout	≤3.5	A
OUTPUT		ALL MODELS	
Accelerator		Any UltraVolt E Series or A Series power supply up to 15kV	-
Filament		Current regulated up to 3A with 0.1% accuracy and 10ppm temperature coefficient	-
Suppressor		Any A-F Series UltraVolt power supply up to 6kV	-
Extractor		Any standard E Series UltraVolt power supply	-
Lens		Any standard E Series UltraVolt power supply	-
TEMPERATURE		ALL MODELS	
Operating	Full Load, Max Eout, Case Temp.	+18 to +40	°C
Storage	Non-Operating, Case Temp.	- 30 to +60	°C
STABILITY		ALL MODELS	
Short term	30 Min. warmup, per 8 hr/ per day	<10	PPM/°C
Long term	Per week	<15	PPM/°C
Long term	3-year	<300	PPM/°C
HUMIDITY		ALL MODELS	
Operating	Standard Package	25% to 70% (non-condensing)	-
Storage	Standard Package	0 to 95% (non-condensing)	-
PACKAGING		ALL MODELS	
Chassis Length	Standard Package	14.4 (365)	in (mm)
Chassis Width	Standard Package	13.4 (340)	in (mm)
Chassis Height	Standard Package	3.0 (76)	in (mm)
Weight	Overall	<35	lbs

Note: Contact factory for detailed configuration specific datasheet.

Specifications subject to change without notice.

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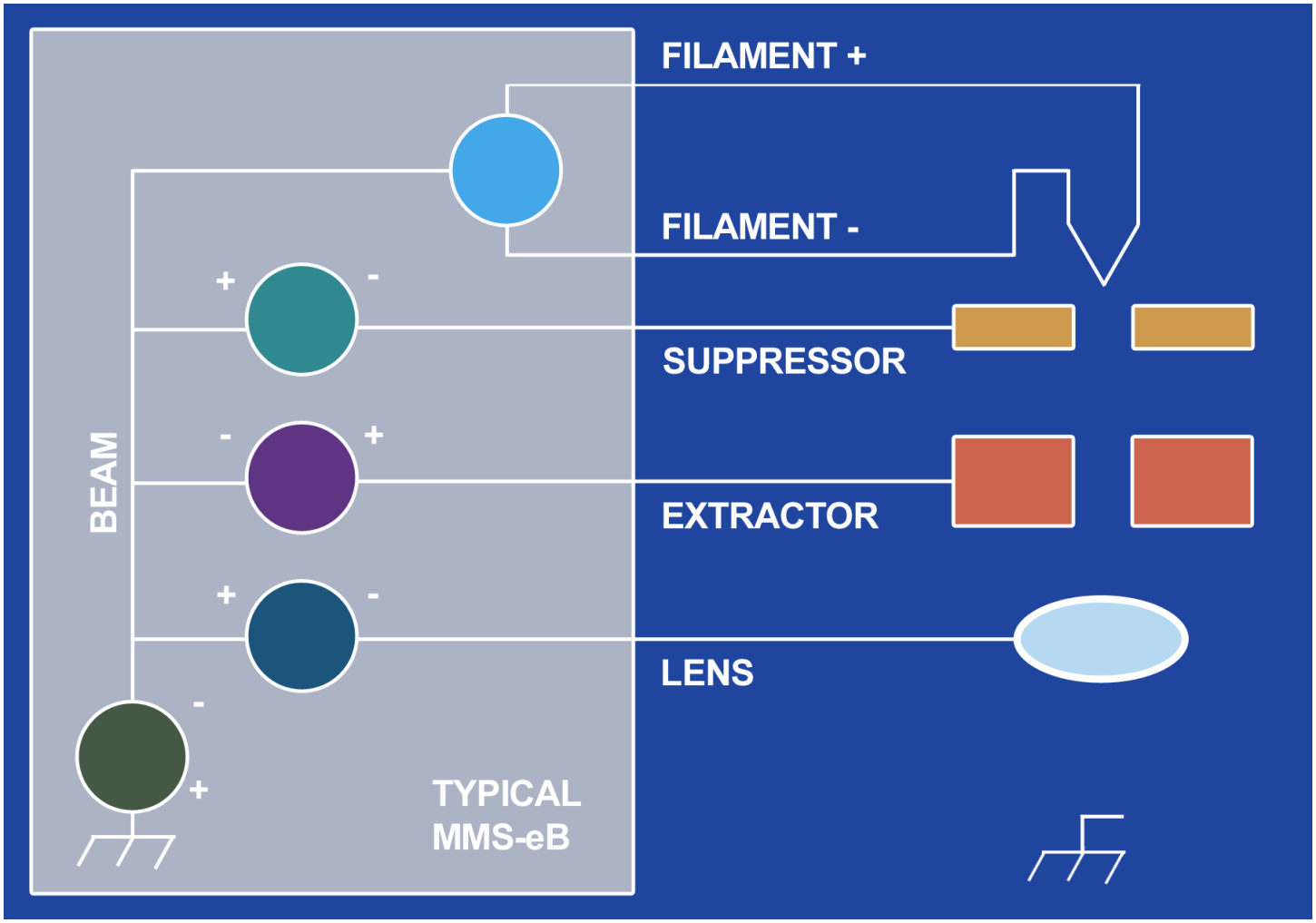
MMS-eB BLOCK DIAGRAM



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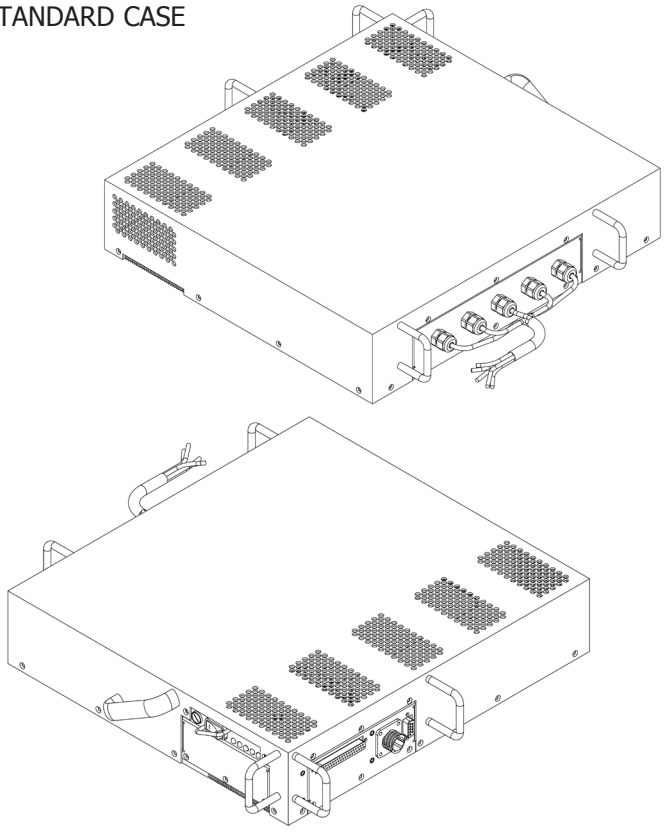
STANDARD CASE



SIZE

Dimensions: 14.4 in L (356mm) x 13.4 in (340mm) W x 3.0 in (76mm) H
Weight: <35lbs

NOTES

Output Connections:
HV Output:
#1 - Filament A (+)
#2 - Filament B (-)
#3 - Suppressor
#4 - Extractor
#5 - Lens
HV Return: #8-32 x 0.250" (6.35mm) Blind Pem
Chassis Ground: #8-32 x 0.500" (12.7mm), through Stud
Contact the factory for outline drawings of the chassis.

ORDERING INFORMATION	
TYPE:	DESCRIPTION:
MMS-EB-*	Contact the factory for configuration specific part number.

Manufactured in USA

CONNECTIONS	
PIN	FUNCTION
1	Power Ground
2	Fused Power +5VDC Output (250mA)
3	Fused Power +5VDC Output (250mA)
4	Power Ground
5	Fused Power +15VDC Output (50mA)
6	Power Ground
7	Fused Power -15VDC Output (50mA)
8	Power Ground
9	Digital Ground
10	Quiet Mode CTRL Input (Standard=0, Quiet=1)
11	Quiet Mode Input (1/2 Quiet=0, Full Quiet=1)
12	MMS System Enable/Disable Output (Enable=1, Disable=0)
13	Monitor Select Bit (Iout=1, Eout=0)
14	Interlock Status Output (Good=1, Bad=0)
15	MMS System Status Output (Good=1, Bad=0)
16	Digital Ground
17	N/C
18	Temperature Monitor Output (Scaled to 100mV/°C)
19	+10V Reference Output
20	Signal Ground
21	Accelerator CTRL Input (0 to +10VDC = 0 to -15kV)
22	Accelerator Monitor Output (Monitor select bit Iout=1, Eout=0)
23	Signal Ground
24	Filament CTRL Input (0 to +10VDC = 0 to 3A)
25	Filament Monitor Output (Monitor select bit Iout=1, Eout=0)
26	Signal Ground
27	Suppressor CTRL Input (0 to +10VDC = 0 to -1000V)
28	Suppressor Monitor Output (Monitor select bit Iout=1, Eout=0)
29	Signal Ground
30	Extractor CTRL Input (0 to +10VDC = 0 to +15kV)
31	Extractor Monitor Output (Monitor select bit Iout=1, Eout=0)
32	Signal Ground
33	Lens CTRL Input (0 to +10VDC = 0 to +15kV)
34	Lens Monitor Output (Monitor select bit Iout=0, Eout=0)
35	N/C
36	N/C
37	N/C

Rev. B 10/14

1800 Ocean Avenue, Ronkonkoma, NY 11779
Phone: 1-631-471-4444 Fax: 1-631-471-4696 www.ultravolt.com