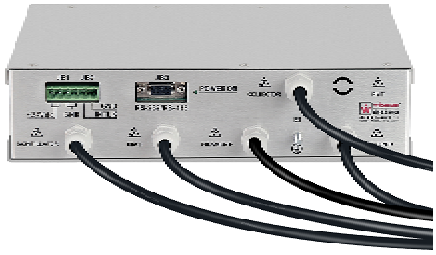
- FOR SEM, ELECTRON BEAM
- HIGH REALITY, STABILITY, LOW NOISE
- INTEGRATED OUTPUT MULTIPLE, MAX INTEGRATED SIX CHANNELS
- RS232/485 OPTIONAL
- OVER CURRENT/VOLTAGE PROTECTION
- ARC, SHORT CIRCUIT PROTECTION
- OEM CUSTOMIZATION AVAILABLE



INTRODUCTION

Wisman's EM series is specialized in giving power to Scanning Electron Microscopes ,providing acceleration, bias and filament sources in a compact package. EM series integrates the scillnator power supply, PMT power supply and collector power supply which are usually used in SEM. Wisman’s unique high voltage package and encapsulation technology improve EM series’ power supply in dimension, cost and performance. EM series is with high regulation, high reliability, low ripple and high stability. Accelerator supply can program voltage from 0 to -30kV at 300uA.The floating bias and filament suppliers referenced to the accelerator is provided by EM series. EM series is controlled by digital communication, which will minimize external noise to the system. EM series is with the function of accelerator current monitor, arc, short circuit, overvoltage and overcurrent protection.

APPLICATION

SEM（Scanning Electron Microscope）,Electron Beam, Metal 3D Printer, Vacuum Gun, Ion Beam Etching, Focus Ion Beam Lithography, Scientific Experiment, Industrial Applications

SELECTION TABLE

MODEL	ACCELERATOR		FILAMENT		BIAS		SCINTILLATOR		COLLECTOR		PMT	
	kV	uA	V	A	kV	uA	kV	uA	kV	uA	kV	uA
EM20N6	-15	200	3	3	-2	150	10	250	0.4	500	1.5	1000
EM30N9	-30	200	3	3	-2	150	10	250	0.4	500	1.5	1000

SELECTION EXAMPLE

EM	30	N	9	L	TR
Series Number	Max Output Voltage (kV)	Output Polarity: Negative	Max Output Power (kV)	Output Cable: Independently output Multiple cables output	Optional: TR:RS-232 Interface AB:RS-485 Interface

APPLICATION SPECIFIC

SPECIFICATION

INPUT VOLTAGE		+24Vdc, ±5%
ACL Accelerator power supply	Voltage	EM20N4 output from 20Vto -20kV；EM30N6 Output from 30V to -30kV；
	Current	Maximum 200uA
	Load Regulation	< ±100ppm(from no load to full load).
	Line Regulation	<±100ppm(input voltage changes 10%).
	Ripple	≤10ppm.
	Temperature coefficient	100ppm/℃.
	Stability	10ppm/3min. After 1 hour’s warm up.
BIAS Bias power supply	Output	Output voltage ranges from 0 to -2000Vdc，Output current 0~150uA.
	Load Regulation	≤0.2% (from no load to full load).
	Line Regulation	≤0.1%(input voltage changes 10%).
	Ripple	≤10ppm.
	Temperature coefficient	25ppm/℃.
	Stability	1% /10min,After 1 hour’s warm up
FIL+ Filament power supply	Output	Output current 0~3A, load 1Ω
	Load Regulation	±0.1% (from no load to full load).
	Line Regulation	±0.1%(input voltage changes 10%).
	Ripple	≤0.1%.
	Temperature coefficient	300ppm/℃.
	Stability	100ppm/10min,After 1 hour’s warm up
SCI Scintillator Power supply	Output	Output voltage ranges from 0 to 10kVdc，Output current 0~250uA.
	Load Regulation	≤0.001% (from no load to full load).
	Line Regulation	≤0.001%(input voltage changes 10%).
	Ripple	≤0.001%.
	Temperature coefficient	25ppm/℃.
	Stability	≤0.007% /hr.≤0.01% /8hr,After 1 hour’s warm up.
COL Collector power supply	Output	Output voltage ranges from 0 to 400Vdc，Ouput current 0~500uA.
	Load Regulation	±0.001% (from no load to full load).
	Line Regulation	±0.001%(input voltage changes 10%).
	Ripple	≤0.001%.
	Temperature coefficient	25ppm/℃.
	Stability	≤0.007% /hr.≤0.01% /8hr,After 1 hour’s warm up.
PMT Microchannel plate power supply	Output	Output voltage ranges from0 to1500Vdc，Output current from0 to1000uA.
	Load Regulation	±0.001% (from no load to full load).
	Line Regulation	±0.001%(input Voltage changes 10%).
	Ripple	≤0.001%.
	Temperature coefficient	25ppm/℃.
	Stability	≤0.007% /hr.≤0.01% /8hr.After 1 hour’s warm up.

SPECIFICATION

Operation Temperature	0℃ ~ +40℃.
Storage Temperature	-40℃ ~ +85℃.
Cooling	Convection cooling, inlet through side panel, outlet from rear panel.
Humidity	10%~90% RH, non condensing。
Dimensions	EM20N4:250mmX180mmX60mm；EM30N6:250mmX190mmX105mm
Weight	5kg。

+24Vdc

Jb1	Signal	JB3	Signal
1	+24Vdc±5%	3	GND
2	+24Vdc±5%	4	GND

INTERLOCK

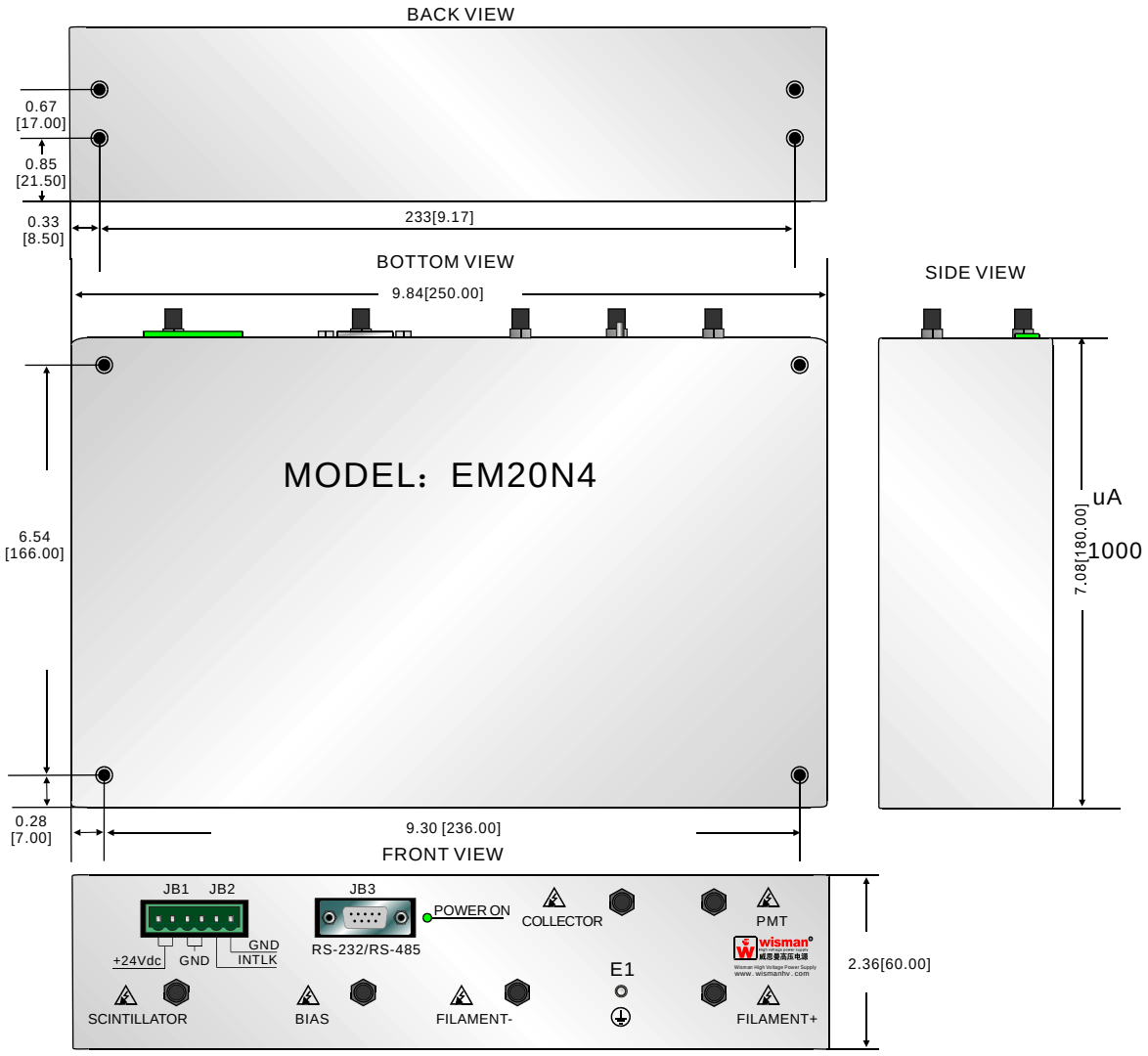
JB2	Signal	JB2	Signal
1	INTLK Signal	2	GND

RS-232/RS-485

JB3	Signal	JB3	Signal
1	Spare	6	Spare
2	TXD/Transmit Data	7	Spare
3	RXD/Receive Data	8	RS485B(Optional)
4	Spare	9	RS485A(Optional)
5	GND		

EM DIMENSIONS

DIMENSIONS:in[mm]



APPLICATION SPECIFIC

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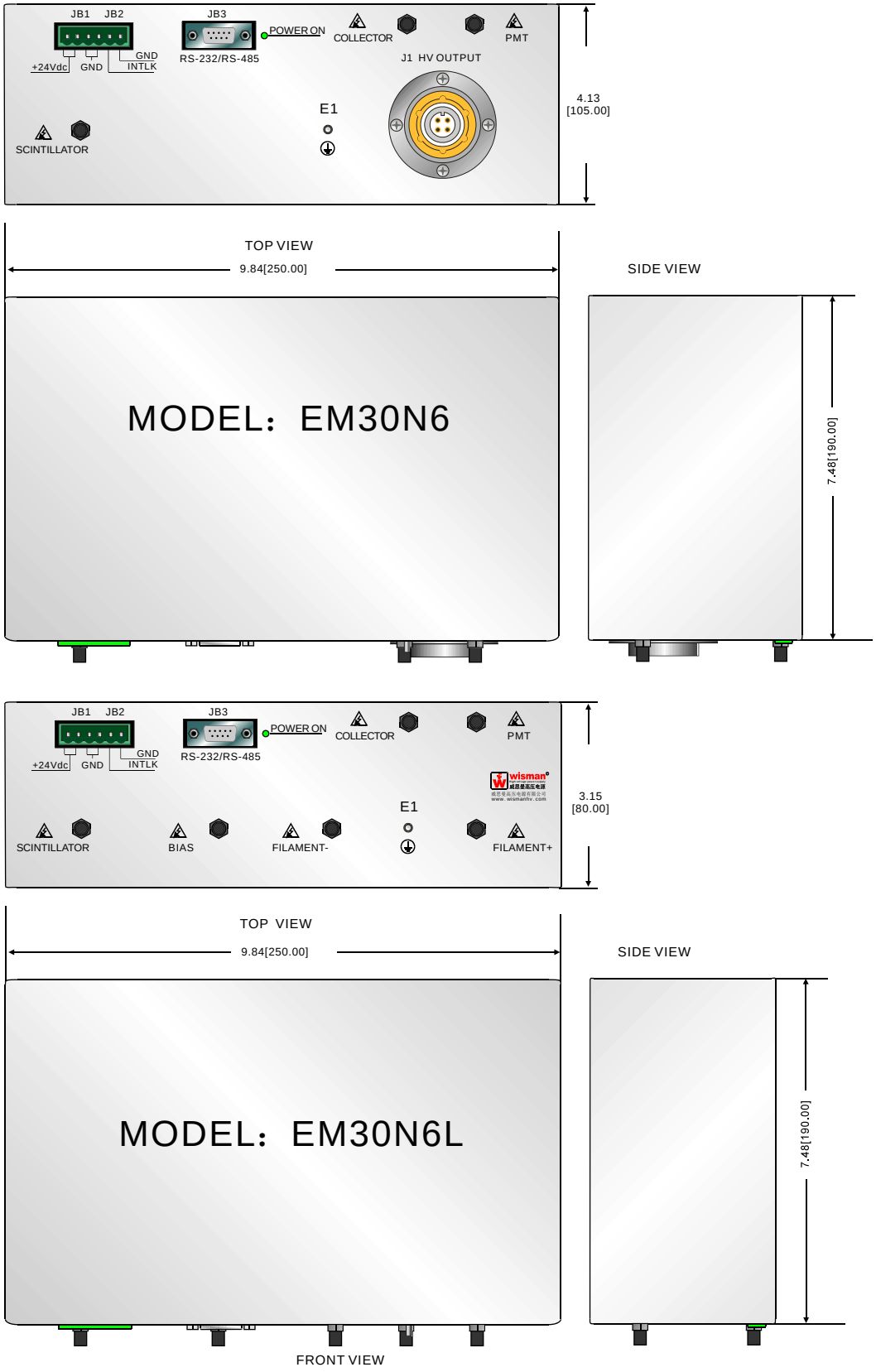

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