MRB

±10kV~±70kV
100W~280W
HIGH VOLTAGE
MODULE

wisman®
High voltage power supply
威思曼高压电源

ISO9001:2015

- *RS-232, RS-485 OPTIONAL*
- *±10kV~±70kV,100W~280W*
- *ARC, OVER VOLTAGE & SHORT CIRCUIT PROTECTION*
- *VOLTAGE ADJUST, CURRENT ADJUST AVAILABLE*
- *SAFETY INTERLOCK*
- *OEM CUSTOMIZATION AVAILABLE*

INTRODUCTION

Wisman MRB series of modular high-stability precision high-voltage power supplies. MRB series module power supplies has good regulation performance, and provides unipolar high voltage transmission output or bipolar high voltage output, singular high voltage output maximum voltage 70kV, 280W, bipolar output maximum voltage 140kV,± 70kV..MRB series module power supplies can be monitored by internal, external and computer precision measurement and control. RS-232 and RS-485 digital control interfaces are available. MRB series has over voltage/current protection, safety interlock, etc.

TYPICAL APPLICATIONS

High voltage testing, electrostatic discharge test(ESD), ,electrostatic chuck(ESC), electron beams, ion beams, high voltage bias, hi-pot testing, electro spinning, capacitor charging, semiconductor testing, electronic component aging, electric power cable test, cathode radial cable, science, laboratory applications, chemical applications, industrial applications.

MRB SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
10	10	100	MRB10*100	60	1.67	100	MRB60*100	120	0.83	100	MRB120PN100
	15	150	MRB10*150		2.5	150	MRB60*150		1.25	150	MRB120PN150
	20	200	MRB10*200		3.33	200	MRB60*200		1.67	200	MRB120PN200
	28	280	MRB10*280		4.67	280	MRB60*280		2.33	280	MRB120PN280
20	5.0	100	MRB20*100	70	1.43	100	MRB70*100	140	0.71	100	MRB140PN100
	7.5	150	MRB20*150		2.14	150	MRB70*150		1.07	150	MRB140PN150
	10	200	MRB20*200		2.86	200	MRB70*200		1.43	200	MRB140PN200
	14	280	MRB20*280		4.0	280	MRB70*280		2.0	280	MRB140PN280
30	3.3	100	MRB30*100	80	1.25	100	MRB80PN100				
	5.0	150	MRB30*150		1.88	150	MRB80PN150				
	6.67	200	MRB30*200		2.5	200	MRB80PN200				
	9.33	280	MRB30*280		3.5	280	MRB80PN280				
40	2.5	100	MRB40*100	100	1.0	100	MRB100PN100				
	3.75	150	MRB40*150		1.5	150	MRB100PN150				
	5.0	200	MRB40*200		2.0	200	MRB100PN200				
	7.0	280	MRB40*280		2.8	280	MRB100PN280				

MRB SELECTION EXAMPLE

MRB	70	*	280	VIP	10	VIM	10	M1	TR	AX
Series Number	Maximum Output Voltage (kV)	Output polarity: N:Negative P:Positive	Maximum Output Power (W)	Option: VP：Voltage Programming IP：Current Programming VIP：Voltage and current Programming	Option: 10:0 to10Vdc=0 to maximum output 5:0 to5Vdc=0 to maximum output	Option: VM:Voltage Monitor IM:Current Monitor VIM:Voltage/Current Monitor	Option: 10:0 to+10Vdc=0 to maximum output 5:0 to+5Vdc=0 to maximum output	Option: M1,M2, M3,M4	Option: TR: RS-232 AB: RS-485	Option: X=0,1,2,3,5,8,N 0 means no arc, N means no shutdown

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B DOUBLE MODULES

MRB SPECIFICATIONS

PARAMETER	DESCRIBE
Input	±50kV: +24Vdc±10%,12.5A max. ±70kV: +48Vdc±10%, 6.0A max
Output	±10kV，±20kV，±30kV，±40kV，±60kV，±70kV 100W, 150W, 200W, 280W
Stability	25ppm/hr after 2 hour warm-up period
Temperature Coefficient	≤25ppm/℃
Ripple	≤1%rms(>20kHZ),0.1%rms(≤20kHz)
Voltage/Current Monitor	0~+10Vdc correspond to 0~100% output. Zout = 10kΩ, accuracy = ± 1%
Voltage Local Programming	Internal potentiometer to set voltage from 0 to maximum output voltage
Voltage Remote Programming	0~+10Vdc proportional from 0 to maximum output voltage, Zin=10MΩ
Current Local Programming	Internal potentiometer to set beam current between from 0 to full output voltage
Current Remotel Programming	0~+10Vdc proportional from 0 to full
Voltage Load Regulation	0.01% (no load to full load change)
Voltage Line Regulation	±0.01% (input voltage line change±10%)
Current Load Regulation	0.01% (no load to full load change)
Current Line Regulation	±0.01% (input voltage line change30%~100%)
Operating Temperature	0℃~+40℃
Storage Temperature	-40℃~+85℃
Cooling	Free convection for P≤100W, Fan (30CFM) assisted for P≥100W
Humidity	20%~85% RH, non-condensing
DIMENSIONS 1kV~100kV	5.31” H x 7.47” W x 9.83” D (135mm x 190mm x250mm) — Weight 8.05kg
DIMENSIONS 100kV~140kV	4. 72” H x 11.97” W x11.97” D (160mm x 210mm x335mm) — Weight 14.2kg

MRB POWER INPUT/ CONNECTOR

SIGNAL			
POWER IN	POWER IN	GND	POWER GND

DIGITAL INTERFACE

J3	SIGNAL	PARAMETER
1	GND	GND
2	Voltage Monitor	0~+10Vdc=0 to full scale, Zout=10KΩ
3	Current Monitor	0~+10Vdc=0 to full scale, Zout=10KΩ
4	Interlock Output	Connect to pin 1 to HV enable supply
5	+10Vdc Reference	+10Vdc at 1mA ,maximum
6	N/C	SPARE
7	Voltage Program In	0~+10Vdc=0 to full scale, Zin=10MΩ
8	Local Voltage Program	0~+10Vdc,screwdriver adjust
9	Power Supply Fault	0=Fault
10	Reset	Reset=0
11	NC	Optional Interlock configuration
12	NC	Optional Interlock configuration
13	Local Current Program	0~10Vdc, screwdriver adjust
14	Current Program In	0~+10Vdc=0 to full scale, Zin=10MΩ
15	Interlock Return	Ground

RS-232/RS-485 DIGITAL INTERFACE Ⓓ

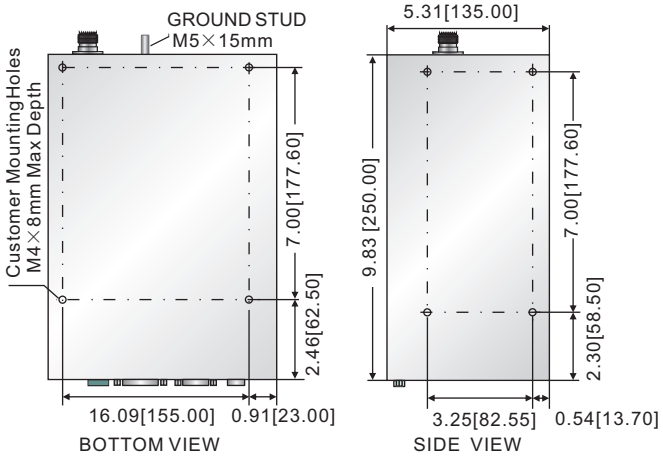
PIN	SIGNAL	PIN	SIGNAL
1	N/C	6	N/C
2	TXD/Transmit Data	7	RS-485B
3	RXD/Receive Data	8	N/C
4	N/C	9	RS-485A
5	SGND		

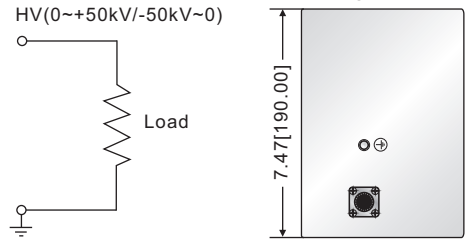
B DOUBLE MODULES

DIMENSIONS

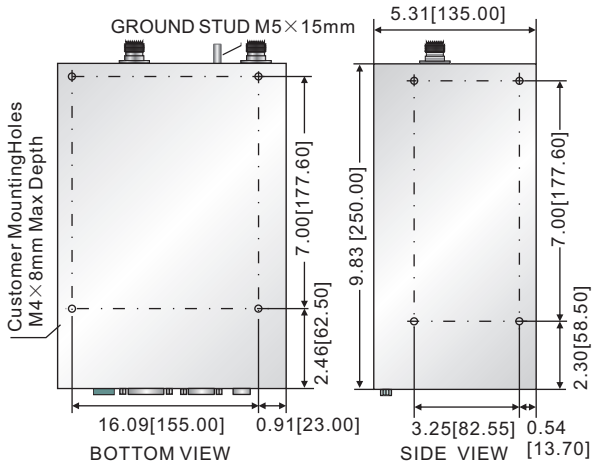
DIMENSIONS:in.[mm]

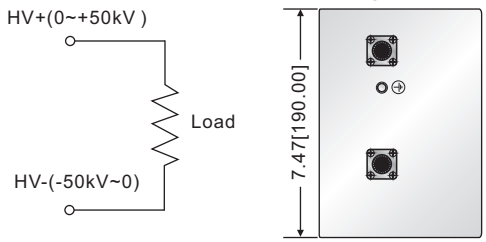
M1:1kV ~ 60kV 150W Monopole Output



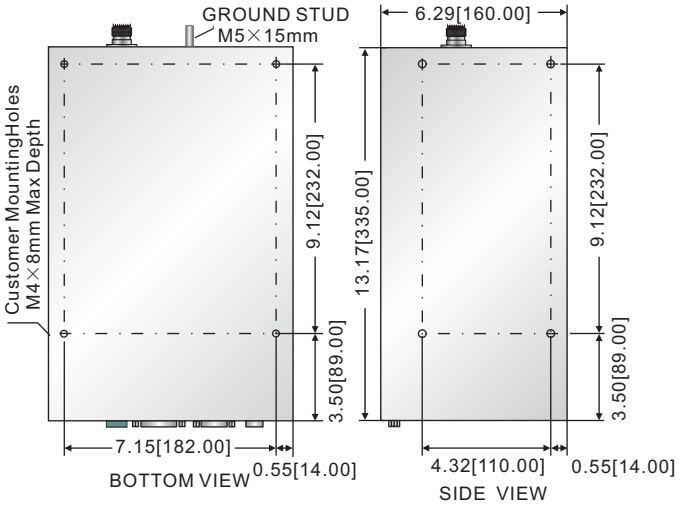


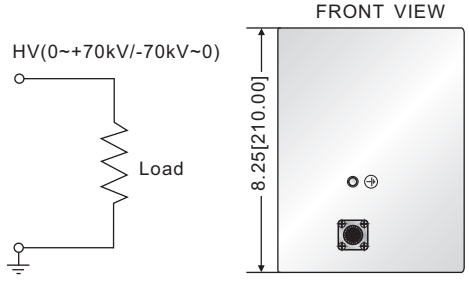
M2:-60kV ~ +60kV 150W Bipolar Output



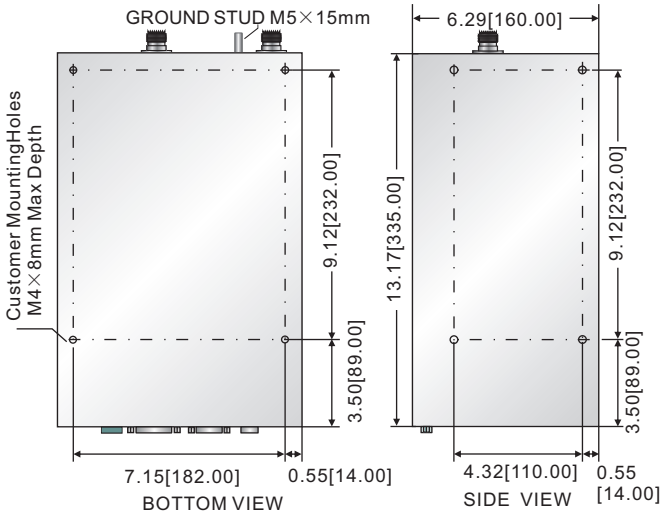


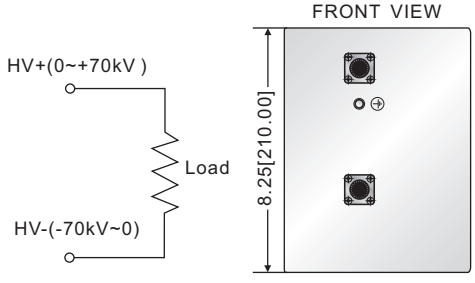
M3:1kV ~ 70kV 280W Monopole Output





M4:-70kV ~ +70kV 280W Bipolar Output





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