



- **OPTIONAL USB2.0, RS-232 OR RS-422 IS AVAILABLE.**
- **OUTPUT VOLTAGE FROM 0KV TO 30KV**
- **ULTRA LOW NOISE 10PPM**
- **OVERVOLTAGE & SHORT CIRCUIT PROTECTION**
- **VOLTAGE & CURRENT PROGRAMMING.**
- **LOCAL AND REMOTE CONTROL.**
- **SAFETY INTERLOCK.**
- **OEM CUSTOMIZATION AVAILABLE.**

B
MODULES

INTRODUCTION

Wisman's MRA Series of regulated voltage power supplies offer output voltages to 30KV. The MRA incorporates local and remote programming, safety interlock, short-circuit and overload protection. An optional USB 2.0, RS-232 or RS-422 is available.

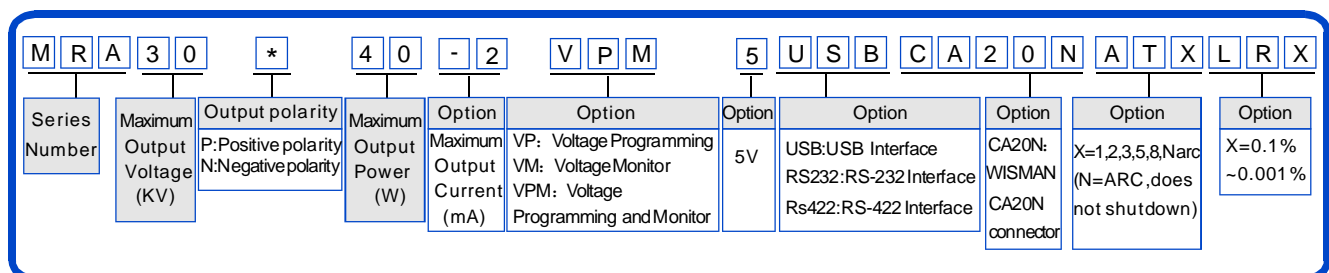
TYPICAL APPLICATIONS

High voltage testing, Electron Beam/Ion Beam, Mass spectrometry, Electrostatic chuck(ESC), Scintillators, Electron Guns, Ion Guns, Nuclear, Instruments, Electrostatic lenses, Spectroscopy, Electrophoresis, Electrospinning, Capacitor charging, General Laboratory Usage, DNA sequencing, protein extraction, electrostatic printing, high voltage bias, medical industry, scientific experiments, industrial applications.

MRA SELECTION TABLE

KV	mA	P(W)	MODEL	KV	mA	P(W)	MODEL	KV	mA	P(W)	MODEL
6	0.25	1.5	MRA6*1.5	15	0.1	1.5	MRA15*1.5	25	0.06	1.5	MRA25*1.5
	1	6	MRA6*6		0.4	6	MRA15*6		0.24	6	MRA25*6
	1.67	10	MRA6*10		0.67	10	MRA15*10		0.40	10	MRA25*10
	3.33	20	MRA6*20		1.33	20	MRA15*20		0.80	20	MRA25*20
	5	30	MRA6*30		2	30	MRA15*30		1.2	30	MRA25*30
	6.67	40	MRA6*40		2.67	40	MRA15*40		1.6	40	MRA25*40
10	0.15	1.5	MRA10*1.5	20	0.25	1.5	MRA20*1.5	30	0.05	1.5	MRA30*1.5
	0.60	6	MRA10*6		1	6	MRA20*6		0.2	6	MRA30*6
	1	10	MRA10*10		1.67	10	MRA20*10		0.33	10	MRA30*10
	2	20	MRA10*20		3.33	20	MRA20*20		0.67	20	MRA30*20
	3	30	MRA10*30		5	30	MRA20*30		1	30	MRA30*30
	4	40	MRA10*40		6.67	40	MRA20*40		1.33	40	MRA30*40

MRA SELECTION EXAMPLE





MRA SPECIFICATIONS

PARAMETER	DESCRIBE
Input	24Vdc±5% , 5.0A maximum.
Output	6KV, 10KV, 15KV, 20KV, 25KV, 30KV Maximum output Voltage option. 1.5W, 6W, 10W, 20W, 30W, 40W Maximum output power option.
Stability	0.01% per hours, 0.02% per 8 hours after 1/2 hour warm-up.
Temperature Coefficient	≤25ppm/°C.
Ripple	0.1% p-p of maximum rated output voltage.
Voltage/Current Monitor	0 to 10 volt corresponds to 0 to maximum output, Zout=11KΩ , accuracy: ±1%.
Voltage Local Programming	Internal potentiometer to set voltage from 0 to maximum output voltage.
Voltage Remote Programming	0 to +10Vdc proportional from 0 to maximum output voltage, Zin=10MΩ .
Voltage Load Regulation	0.01% (no load to full load change).
Voltage Line Regulation	±0.01% (input voltage line change±10%).
Operating Temperature	0°C to +40°C.
Storage Temperature	-40°C to +85°C .
Cooling	Convection cooled
Humidity	20% to 85% RH, non-condensing.
Dimensions	2.56" H x 4.53" W x 5.91" D (65.00mm x 115.00mm x 150.00mm).
Weight	1.55kg.

MRA POWER INPUT

J4		SINGAL
1	+24V Input	+24 Volts@ 5A, max
2	24V Gnd	Power Ground

MRA ANALOG INTERFACE

J1		SINGAL
1	+10V Reference	+10 Volts @ 1mA
2	Voltage Monitor	0-10 volts=0 to maximum output.
3	Voltage Program Input	0-10volts= 0 to maximum output.
4	Local Voltage Program	10 turn pot , screwdriver adjust
5	Current Monitor	0-10 volts=0 to maximum output.
6	Current Program Input	0-10 volts=0 to maximum output.(option)
7	Local Current Program	10 turn pot, screwdriver adjust(option)
8	Interlock Output	Ground=HV ON
9	Interlock Return	Ground

RS-232/RS-422 DIGITAL INTERFACE

J3		SINGAL		J3		SINGAL	
1	N/C	6	RA+/RA+ Receive	7	RB-/RB- Receive	8	TB-/TB- Transmit
2	TXD/Transmit Data	9	TA+/TA+ Transmit				
3	RXD/Receive Data						
4	N/C						
5	SGND						

USB DIGITAL INTERFACE

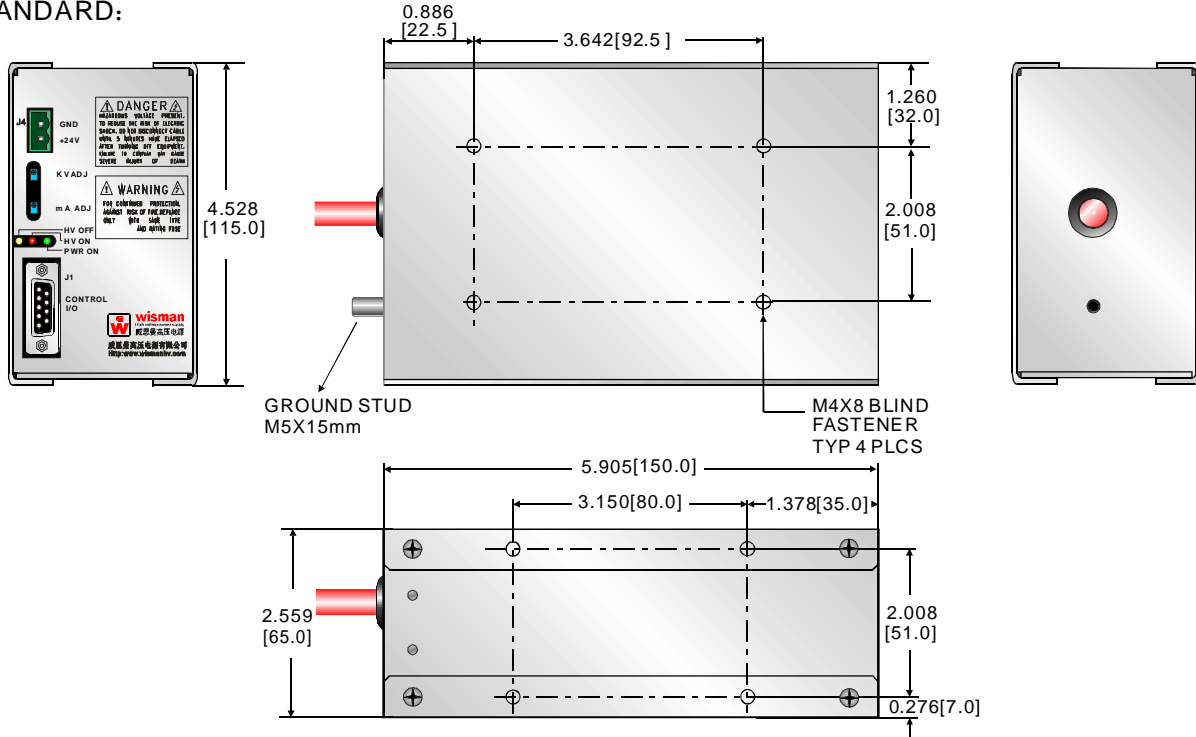
J2		SINGAL
1	VBUS	+5Ddc
2	D-	Data-
3	D+	Data+
4	SGND	USB GND

DIMENSIONS

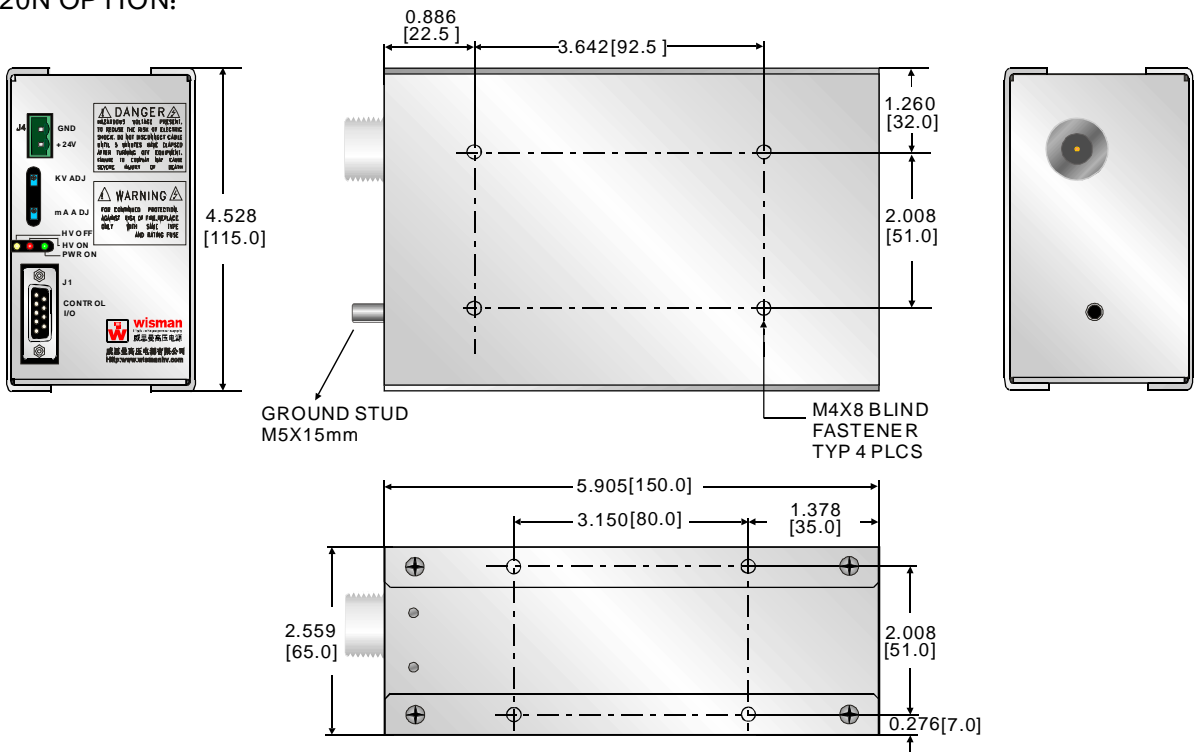
B
MODULES

DIMENSIONS:in.[mm]

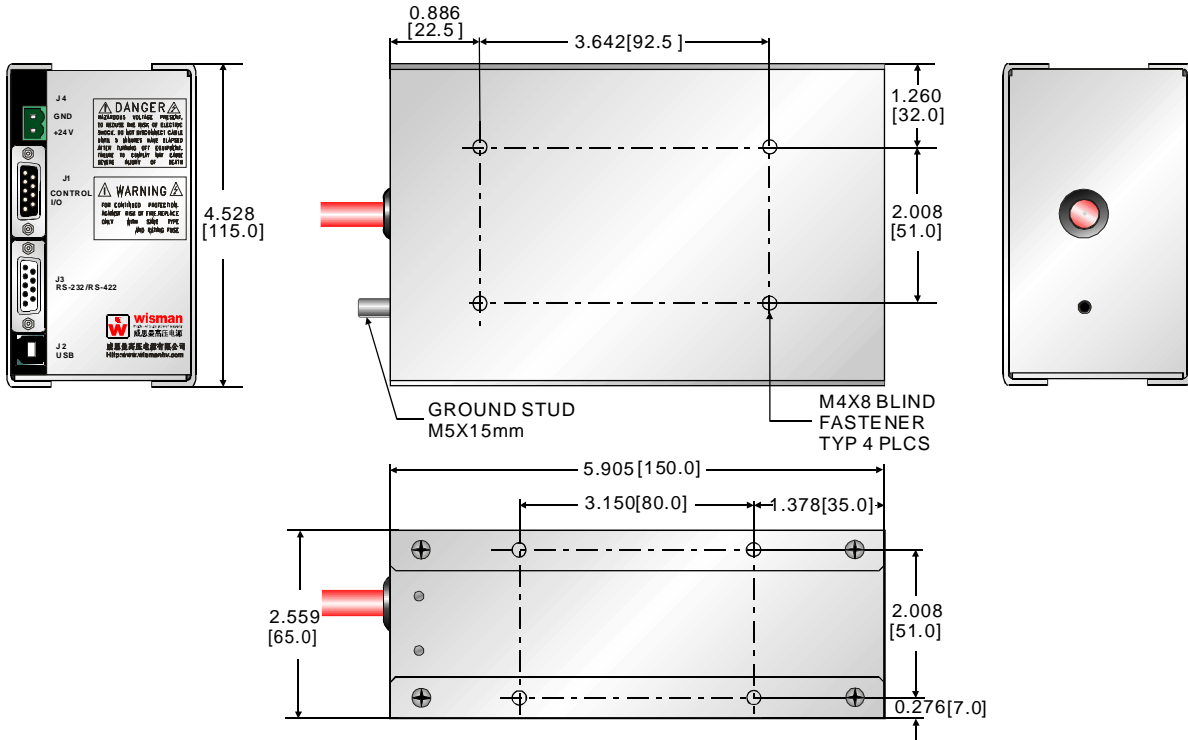
STANDARD:



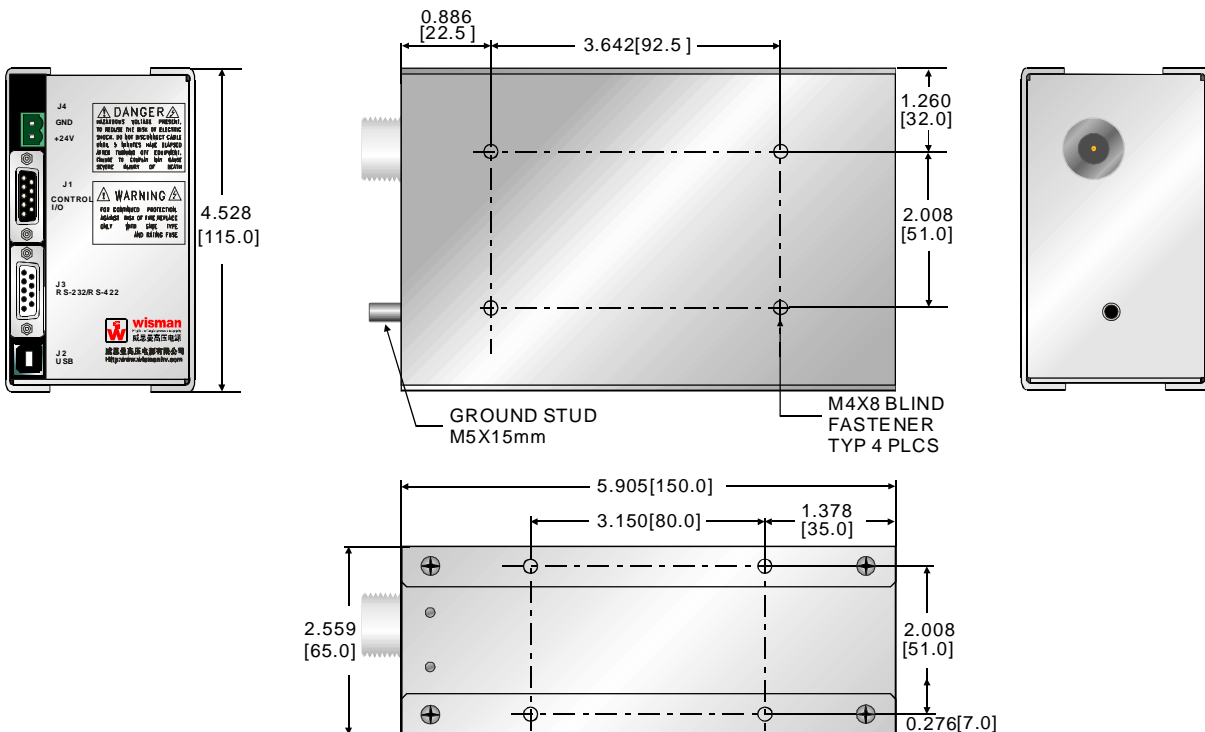
CA20N OPTION:



OPTION(RS232/RS422/USB):



CA20N OPTION(RS232/RS422/USB) :



B MODULES