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X-RAY GENERATOR

- *OPTIONAL USB2.0,RS-232 OR RS-485 IS AVAILABLE.*
- *OUTPUT VOLTAGE FROM 10kV TO 30kV*
- *ADJUSTABLE INTEGRATED FILAMENT SUPPLY*
- *OVER VOLTAGE & SHORT CIRCUIT PROTECTION*
- *VOLTAGE & CURRENT PROGRAMMING.*
- *LOCAL AND REMOTE CONTROL.*
- *SAFETY INTERLOCK.*
- *OEM CUSTOMIZATION AVAILABLE.*

INTRODUCTION

Wisman's XRA series of X-ray generator is a dedicated high stability modular high voltage power supply, XRA modular high voltage power supply is ideal for OEM. The maximum output voltage 10kV~30kV,maximum power 6W~100W . XRA series are a compact, integrated X-ray tube filament power supply adjustable between 0~3.5A at 0~5.5V. XRA series are provided Arc, short circuit, overload protection and safety interlock function. Optional USB2.0, RS-232 or RS-485 digital interface.

TYPICAL APPLICATIONS

Grounded cathode X-ray tubes from Kevex, Oxford, RTW, Superior, Varian and Trufocus .Thickness, ESD,Sulfur-detector X-ray fluorescence instrument, X-ray imaging, X-ray diffractometer „Non-destructive testing ,Portable X-ray machine, Rohs detector,Precious metal detector ,Life Science,Medical industry,Science experiment and so on.

XRA SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
10	0.6	6	XRA10*6	15	0.4	6	XRA15*6	25	0.24	6	XRA25*6
	0.9	9	XRA10*9		0.6	9	XRA15*9		0.36	9	XRA25*9
	1.5	15	XRA10*15		1	15	XRA15*15		0.6	15	XRA25*15
	3	30	XRA10*30		2	30	XRA15*30		1.2	30	XRA25*30
	6	60	XRA10*60		4	60	XRA15*60		2.4	60	XRA25*60
	7.5	75	XRA10*75		5	75	XRA15*75		3	75	XRA25*75
	10	100	XRA10*100		6.67	100	XRA15*100		4	100	XRA25*100
12	0.5	6	XRA12*6	20	0.3	6	XRA20*6	30	0.2	6	XRA30*6
	0.75	9	XRA12*9		0.45	9	XRA20*9		0.3	9	XRA30*9
	1.25	15	XRA12*15		0.75	15	XRA20*15		0.5	15	XRA30*15
	2.5	30	XRA12*30		1.5	30	XRA20*30		1.0	30	XRA30*30
	5	60	XRA12*60		3	60	XRA20*60		2.0	60	XRA30*60
	6.25	75	XRA12*75		3.75	75	XRA20*75		2.5	75	XRA30*75
	8.33	100	XRA12*100		5	100	XRA20*100		3.33	100	XRA30*100

XRA SELECTION EXAMPLE

XRA	30	*	100	VIP	10	VIM	10	TR	AX	LX
Series Number	Max. Output Voltage (KV)	Output polarity P:Positive polarity N:Negative polarity	Max. Output Power (W)	Option VP:Voltage Programming IP:Current Programming VIP:Voltage and Current Programming	Option 10:0~+10Vdc Programming= 0 to max. output 5:0 ~ +5Vdc Programming= 0 to max. output	Option VM:Voltage Monitor IM:Current Monitor VIM:Voltage and Current Monitor	Option 10:0 ~+10Vdc Monitor = 0 to max. output 5:0~+5Vdc Monitor = 0 to max. output	Option Rs232 RS485 USB	Option X=0,1,2,3,5,8,N.Arc (N=ARC, does not shutdown)	Option LX=Unshield cable 1m (X option) LCX:shield cable 1m (X option) CA20N:WISMAN CA20N connector

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XRA SPECIFICATIONS

PARAMETER	DESCRIBE
Input	+24Vdc±10% , 5.0A maximum.
Output	10kV~30kV Maximum output Voltage option. 6W~100W Maximum output power option.
Stability	0.01% per hours, 0.02% per 8 hours after 1/2 hour warm-up.
Temperature Coefficient	≤25ppm/℃.
Ripple	0.1% p-p of maximum rated output voltage.
Voltage/Current Monitor	0 ~ +10Vdc corresponds to 0 to maximum output, Zout=10kW, 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=10MW.
Current Local Programming	Internal potentiometer to set current from 0 to maximum output current.
Current Remote Programming	0 ~ +10Vdc proportional from 0 to maximum output current, Zin=10MW.
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 current line change±10%).
DC Filament Supply	Current: 0.3~3.5A, adjustable;Voltage: 0~5.5V adjustable;Filament Preheat.
Operating Temperature	0℃~+50℃.
Storage Temperature	-40℃~+85℃.
Cooling	0~60W:Convection cooled; 60W~100W:fan cooled.
Humidity	20%~85% RH, non-condensing.
Dimensions	2.56 ” H x 4.53 ” W x 5.91 ” D. (65.00mm x 115.00mm x150.00mm).
Weight	1.55kg.

XRA POWER INPUT/ FILAMENT OUTPUT CONNECTOR

J4	SIGNAL	
1	+24Vdc Input	+24Vdc±10% ,max. current 5A
2	+24Vdc Ground	Power Ground
3	Filament output	+5.5V@3.5A, max
4	Ground	Ground

XRA ANALOG INTERFACE

J1	SIGNAL	
1	+10Vdc Reference	+10Vdc Reference
2	Voltage Monitor	0~+10Vdc=0 to max. voltage output
3	Voltage Program Input	0~+10Vdc=0 to max. voltage output
4	Local Voltage Program	0~+10Vdc,screwdriver adjust
5	Current Monitor	0~+10Vdc=0 to max. current output
6	Current Program Input	0~+10Vdc=0 to max. current output
7	Local Current Program	0~+10Vdc,screwdriver adjust
8	Outside Interlock	Ground=HV ON
9	Interlock Return	Ground

RS-232/RS-485 DIGITAL INTERFACE D

J3	SIGNAL	J3	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		

USB DIGITAL INTERFACE D

J2	SIGNAL	
1	VBUS	+5Vdc
2	D-	Data-
3	D+	Data+
4	SGND	USB GND

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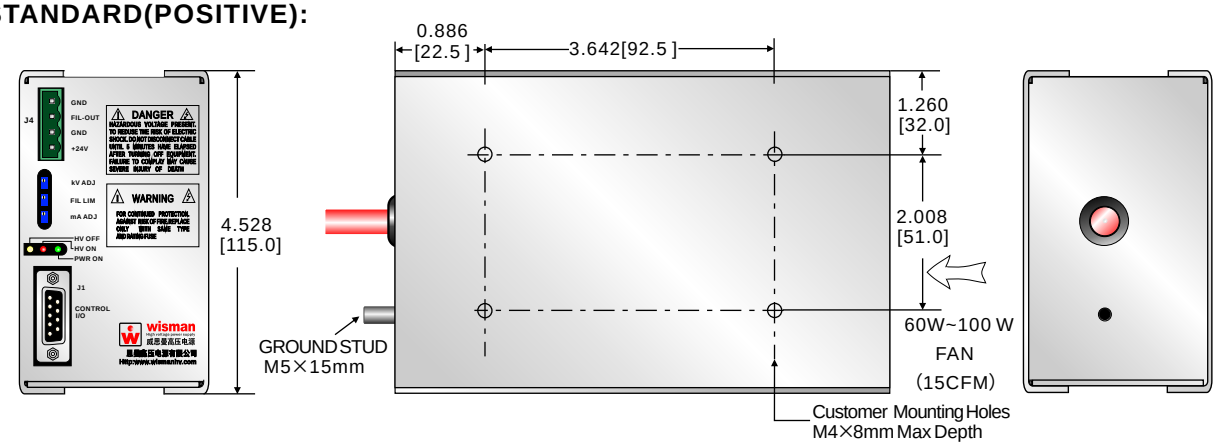
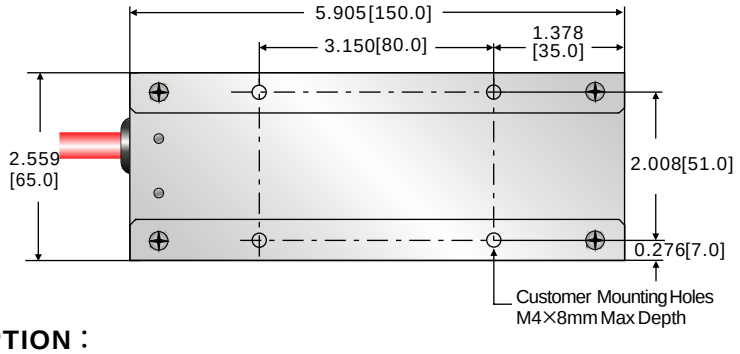
X-RAY GENERATOR

XRA DIMENSIONS

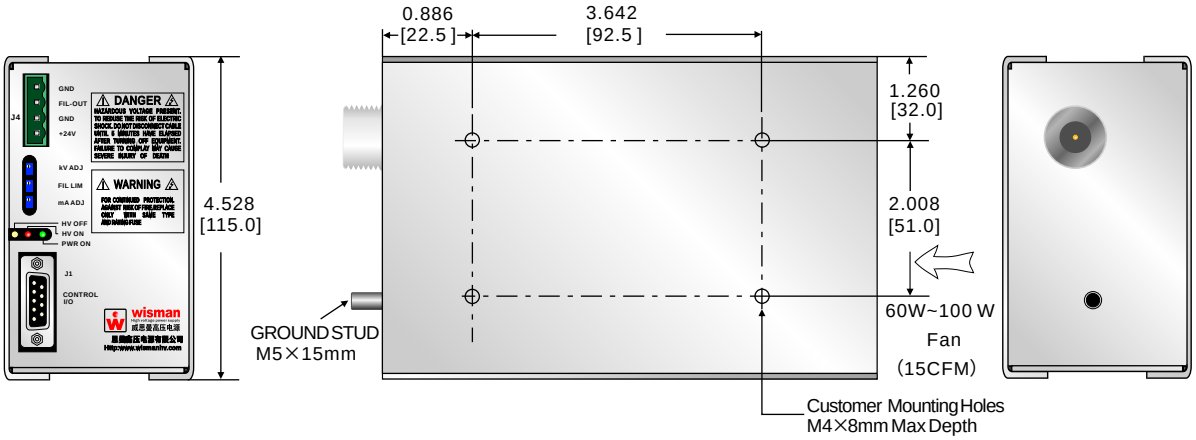
DIMENSIONS:in.[mm]

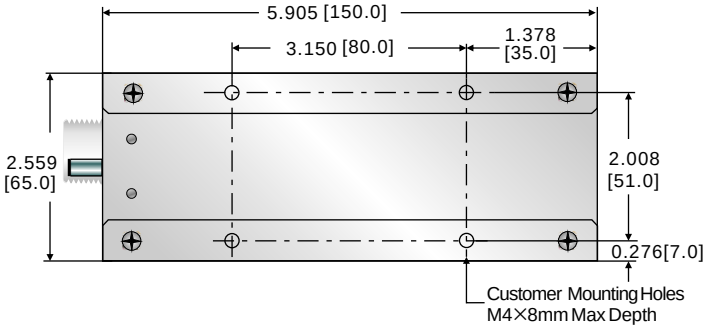
STANDARD(POSITIVE):



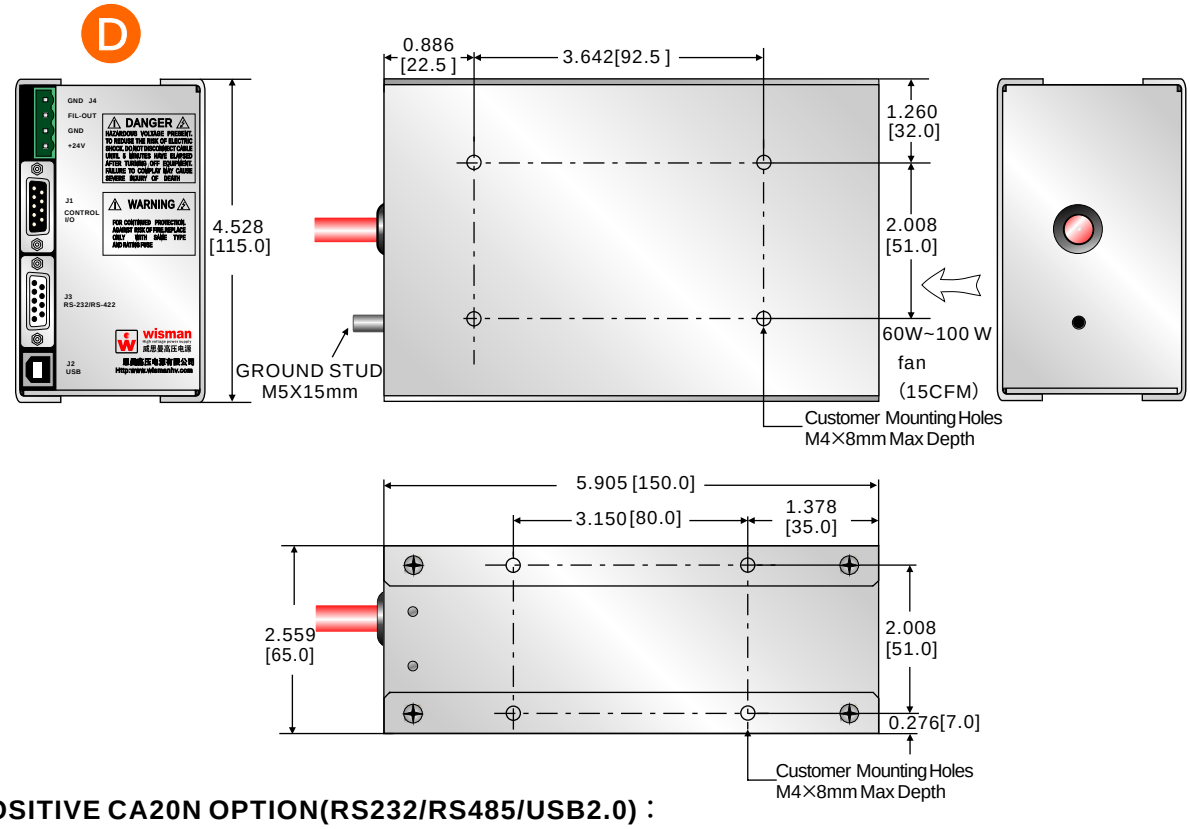


POSITIVE CA20N OPTION：





POSITIVE OPTION(RS232/RS485/USB2.0)：



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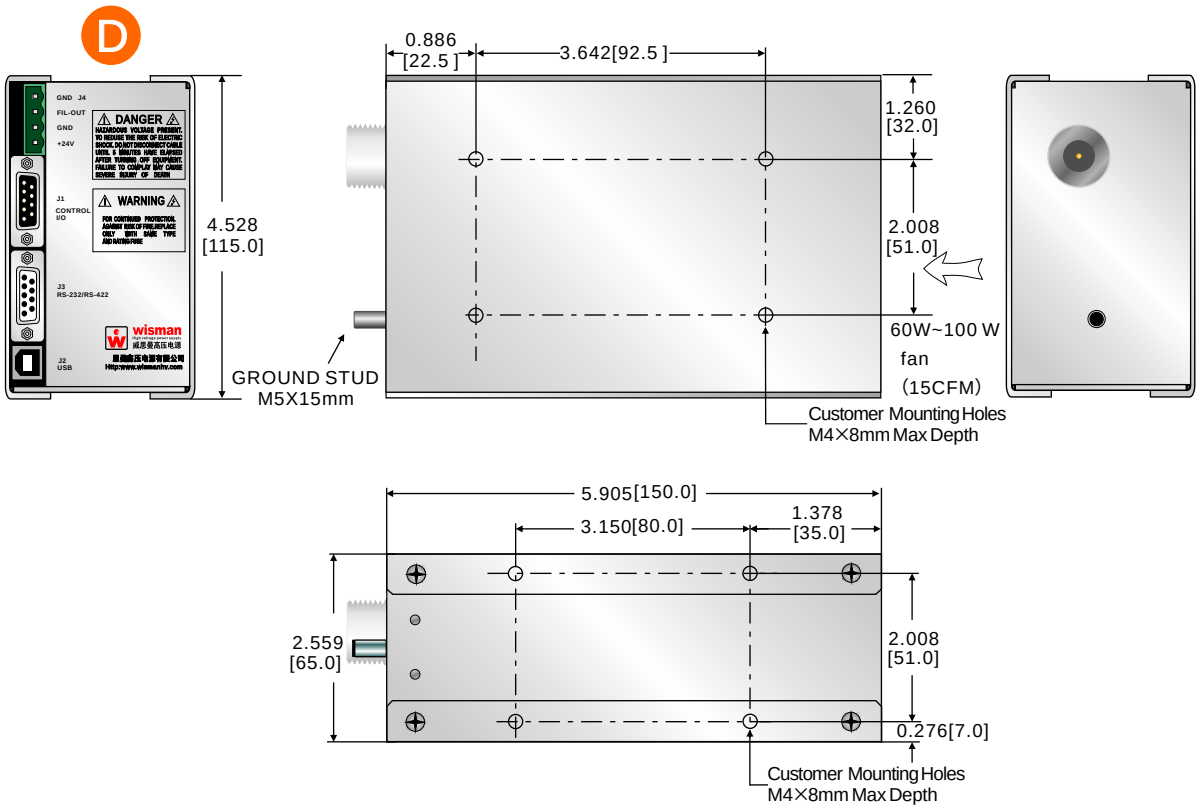

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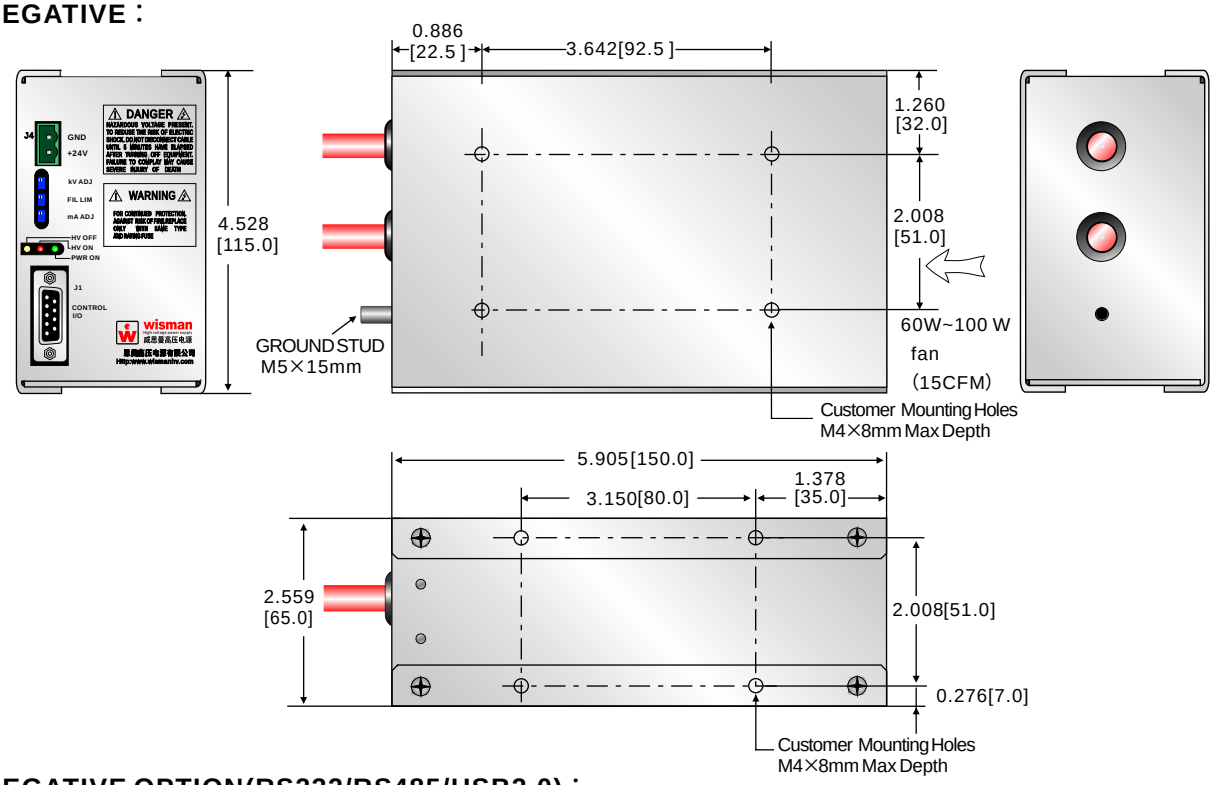
NEGATIVE：



NEGATIVE OPTION(RS232/RS485/USB2.0)：