



- ETHERNET, RS-232 STANDARD, RS-485 OPTION
- 10kV~30kV MAX OUTPUT VOLTAGE
- ADJUSTABLE INTEGRATED FILAMENT SUPPLY
- OVER VOLTAGE, ARC, SHORT CIRCUIT PROTECTION
- VOLTAGE & CURRENT PROGRAMMING
- LOCAL AND REMOTE CONTROL
- SAFETY INTERLOCK
- OEM CUSTOMIZATION AVAILABLE

D X-RAY GENERATOR

## INTRODUCTION

Wisman XAA series high voltage power supplies are small in size and used in X-ray tubes, with good regulation performance, low ripple, and high stability. The maximum output voltage of XAA series high voltage power supply is 30kV and the maximum power is 100W. Internally intergrated 0-5.5V, adjustable DC filament power supply between 0A and 3.5A. The high-voltage output terminal of XAA series power supply has functions such as over voltage, short circuit protection and safety interlock. Local or remote control, or digital control, provides optional USB2.0, RS-232 or RS-485 interface.

## TYPICAL APPLICATIONS

X-ray fluorescence analysis, Film thickness measurement, Aluminum strip thickness measurement, Aluminumplate thickness measurement, Paper thickness measurement, Aluminum foil thickness measurement, Online elemental analysis, X-ray fluoroscopy, Particle size detection, Density measurement, Paper composition detection, In-line process control, RoHS Compliance Statement, Thickness measurement, Inspection systems for printed circuit boards, Radiography, X-ray imaging, Multilayer PCB alignment, particle size inspection, density measurement, process control, X-ray spectroscopy, soldering tips, wire tips detection.

## XAA SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
10	1	10	XAA10*10	20	0.5	10	XAA20*10	25	0.4	10	XAA25*10
	1.5	15	XAA10*15		0.75	15	XAA20*15		0.6	15	XAA25*15
	2	20	XAA10*20		1	20	XAA20*20		0.8	20	XAA25*20
30	0.33	10	XAA30*10								
	0.5	15	XAA30*15								
	0.67	20	XAA30*20								

## XAA SELECTION EXAMPLE

XAA	30	*	100	VIP	10	VIM	10	TR	/	AX	LX
Series Number	MAX Output Voltage (kV)	Output Polarity N: Negative P: Positive	MAX Output Voltage (kV)	Option Voltage/Current Program	Option 10:0~+10Vdc =0 to full scale 5:0~+5Vdc= to full scale	Option Voltage/Current Monitor	Option 10:0~+10Vdc =0 to full scale 5:0~+5Vdc =0 to full scale	Option TR:RS-232 AB:RS-485 ET: Ethernet		Option X=0,1,2,3,5,8 Narc (0=no ARCN =ARC, does not shutdown)	Option LX=Unshield cable 1m (X option) LCX:shield cable 1m (X option) CA20N:WISMAN CA20N connector



**SPECIFICATIONS**

PARAMETER	DESCRIBE
Input Voltage	+24Vdc±10%, 1.5A maximum.
Output Voltage	10kV~30kV max output voltage option. 6W~20W output power option.
Stability	0.001%/1H, 0.002%/8H, 0.01%/1000H after 1/2 hour warm-up.
Temperature Coefficient	≤10ppm/°C.
Ripple	0.001% p-p of output voltage.
Voltage/Current Monitor	0~+10Vdc, Zout=1kΩ, Accuracy:±1%.
Local Voltage Programming	Internal multi-turn potentiometer to set voltage from 0 to full output voltage.
Remote Voltage Programming	0~+10Vdc proportional from 0 to full output voltage. Zin=10MΩ.
Local Current Programming	Internal potentiometer to set beam current between 0 to full output current.
Remote Current Programming	0~+10Vdc proportional from 0 to full output current. Zin=10MΩ.
Voltage Load Regulation	0.01% of output current from 0 to rated voltage.
Voltage Line Regulation	±0.01% for ±10% change in input voltage.
Current Load Regulation	0.01% of output current from 0 to rated voltage.
Current Line Regulation	±0.01% for ±10% change in input voltage.
DC Filament Supply	Current: 0.3~3.5A, adjustable, Voltage: 0~5.5V, Filament Preheat.
Operating Temperature	0 ~+50 °C.
Storage Temperature	-35 ~+85 °C.
Cooling	Free cooling.
Humidity	20%~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.

**XAA 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

**RS-232/RS-485 DIGITAL INTERFACE**

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		

**XAA ANALOG INTERFACE**

J1	SIGNAL	
1	+10Vdc Reference	+10Vdc Reference
2	Voltage Monitor	0~+10 Vdc=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

**XAA ET DIGITAL INTERFACE**

SIGNAL			SIGNAL		
1	RX+	Receive data+	5	N/C	N/C
2	RX-	Receive data-	6	TX-	Transmit data-
3	TX+	Transmit data+	7	N/C	N/C
4	N/C	N/C	8	N/C	N/C

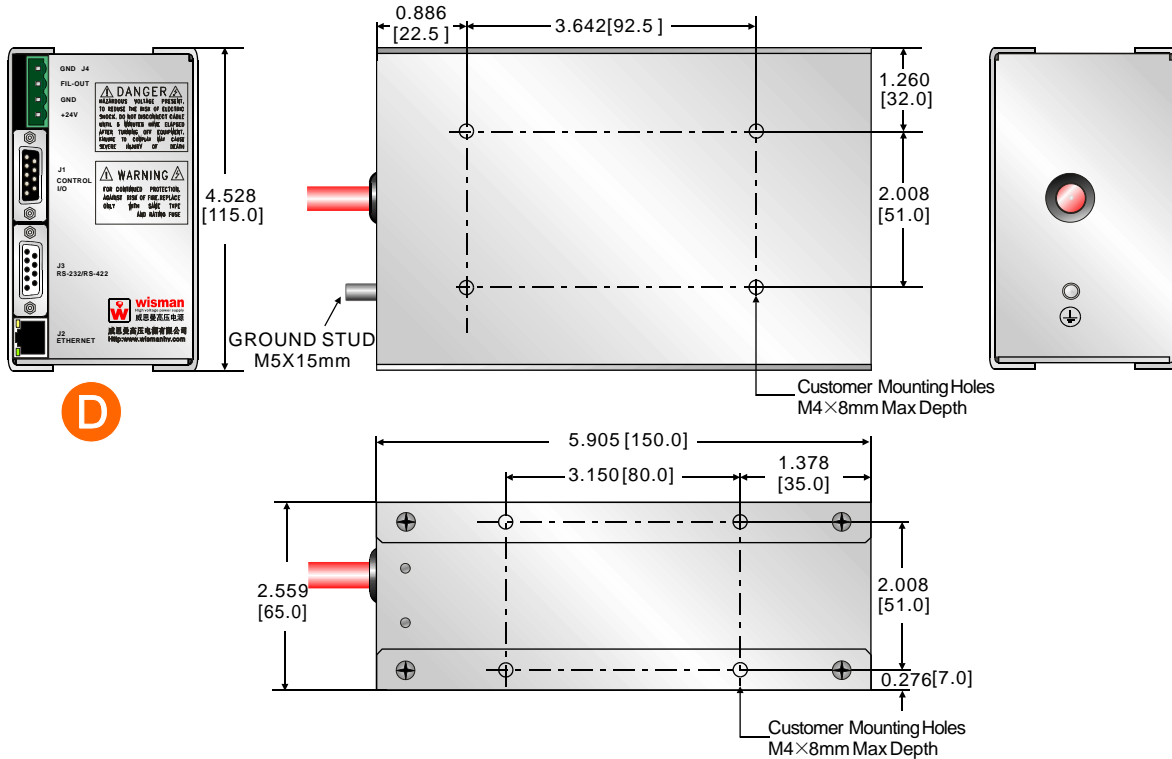
## XAA DIMENSIONS

D

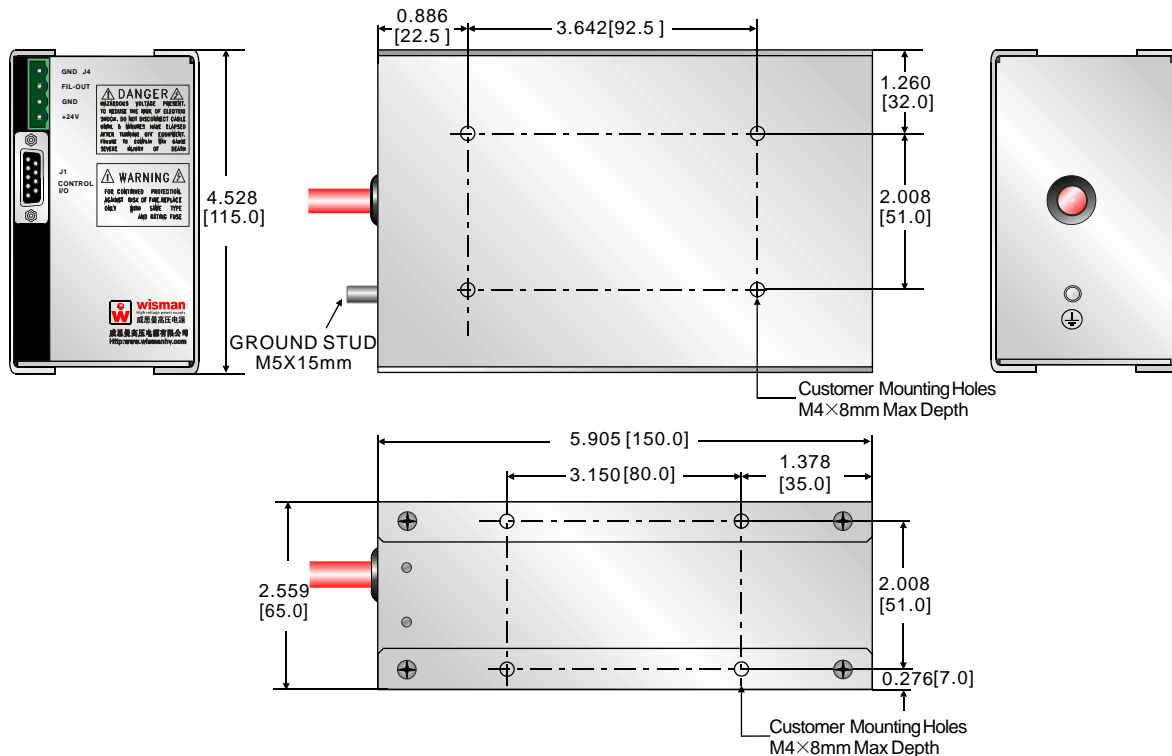
X-RAY GENERATOR

DIMENSIONS:in [mm]

### STANDARD((TR:RS-232 /AB:RS-485/ET:ETHERNET):



### Analog Control:



D7