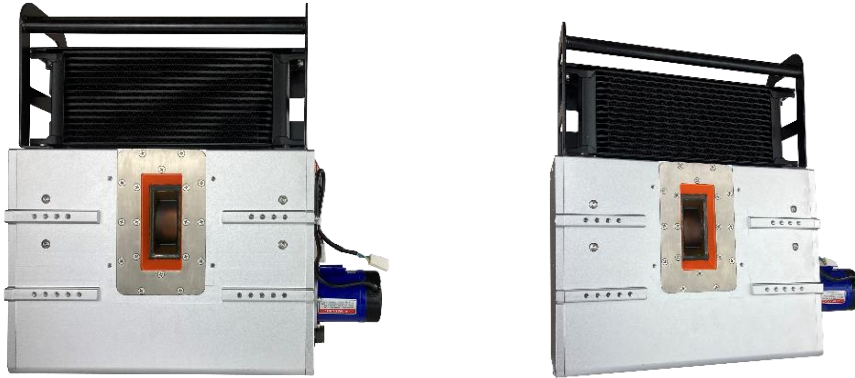


8.HVC1205A0 X-Ray Source



Introduction:

The HVC1205A0 is a compact, safe, low-leakage, and electrically stable integrated X-ray source. It can operate continuously at 500W within the allowable temperature range. The maximum output voltage can reach 120kV/500W. The integrated X-ray source mainly consists of a control box and high-voltage oil tank. The system uses RS232 interface for control, monitoring, and firmware upgrades.

Features:

1. Compact design, easy installation
2. System integrates high-voltage power supply, filament power supply, and control unit
3. Self-circulating cooling system
4. Versatile installation options
5. Standard digital interface for simple application

Application:

Food testing, industrial non-destructive, security application and other fields.

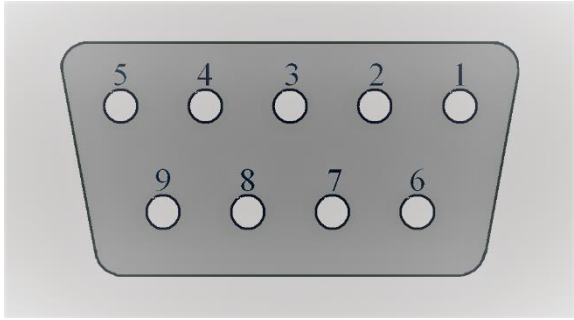
Specification:

Item	Specification
Input voltage	230VAC \pm 10%, 50/60Hz, 4.2Amps
Output power of X ray tube	Max continuous output power 500W (100kV/5mA or 120kV/4.1mA)
Output voltage	Rated output voltage: Continuously adjustable voltage range 30kV---120kV
	Output voltage ripple: \pm 0.5% (peak to peak)
	Output voltage accuracy: \pm 2% of voltage setting value
	line regulation: \pm 0.1%

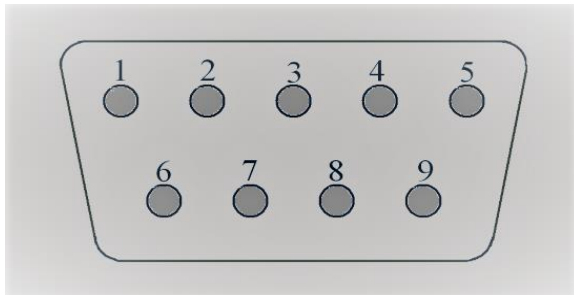
	load regulation: $\pm 0.1\%$
Tube current	Rated tube current: Continuously adjustable current range 0.2mA-5.0mA
	Tube current accuracy: $\pm 0.2\text{mA}$ of current setting value
	line regulation: $\pm 0.1\%$
	load regulation: $\pm 0.1\%$
Rise time of output voltage	The kV rise time is <0.6 Sec at maximum power
	The kV rise time is <0.1 Sec at low voltage (< 40kV)
Filament power supply:	input voltage: 24VDC
	filament voltage: 3.7Vac
	filament: 3.0 to 3.5 Amps RMS
	preheating time: 3sec
Tube feature	Tube type: fixed anode、glass envelope、tungsten target
	focus: 0.8mm
	inherent filtration: 0.8mm Be, 0.7mm Al
	radiation angle: $80^{\circ} \times 36^{\circ}$ fan beam
	target angle: 25°
Cooling	transformer oil, external circulation, external forced air cooling
Working temperatures	$-10^{\circ}\text{C} \sim -40^{\circ}\text{C}$
Storing temperature	$-20^{\circ}\text{C} \sim -60^{\circ}\text{C}$
System temperature protection	$60 \pm 3^{\circ}\text{C}$ of oil temperature
Humidness	98%, Non-condensation
Weight	Oil tank: 28.5kg
	Control Unit: 3.8kg
Installation direction	Installation in any direction
Radiation angle	$36^{\circ} \times 80^{\circ}$
X-ray leakage	Less than 0.5mR/hr @5cm from the surface of the HVC1205A0.

JB1/AC~, (AC Input Power Connector)


Pin	Signal	Parameter
1	L	live wire
2	N	Neutral line
3	G	PE

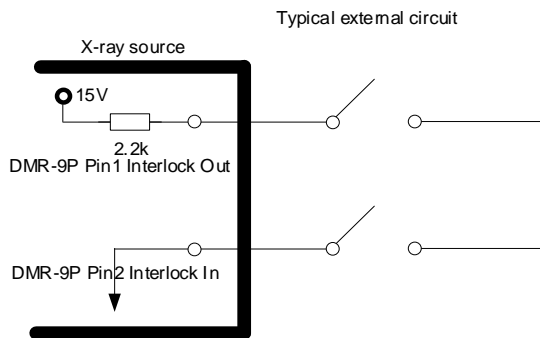
JB2/COM, (DMR-9S interface definitions)


Pin	Signal	Parameter
1.4.6.7.8.9	N/C	No connect
2	TXD	Data transmit
3	RXD	Data receive
5	GND	Signal gnd

JB3/Interlock, (DMR-9P interface definitions)


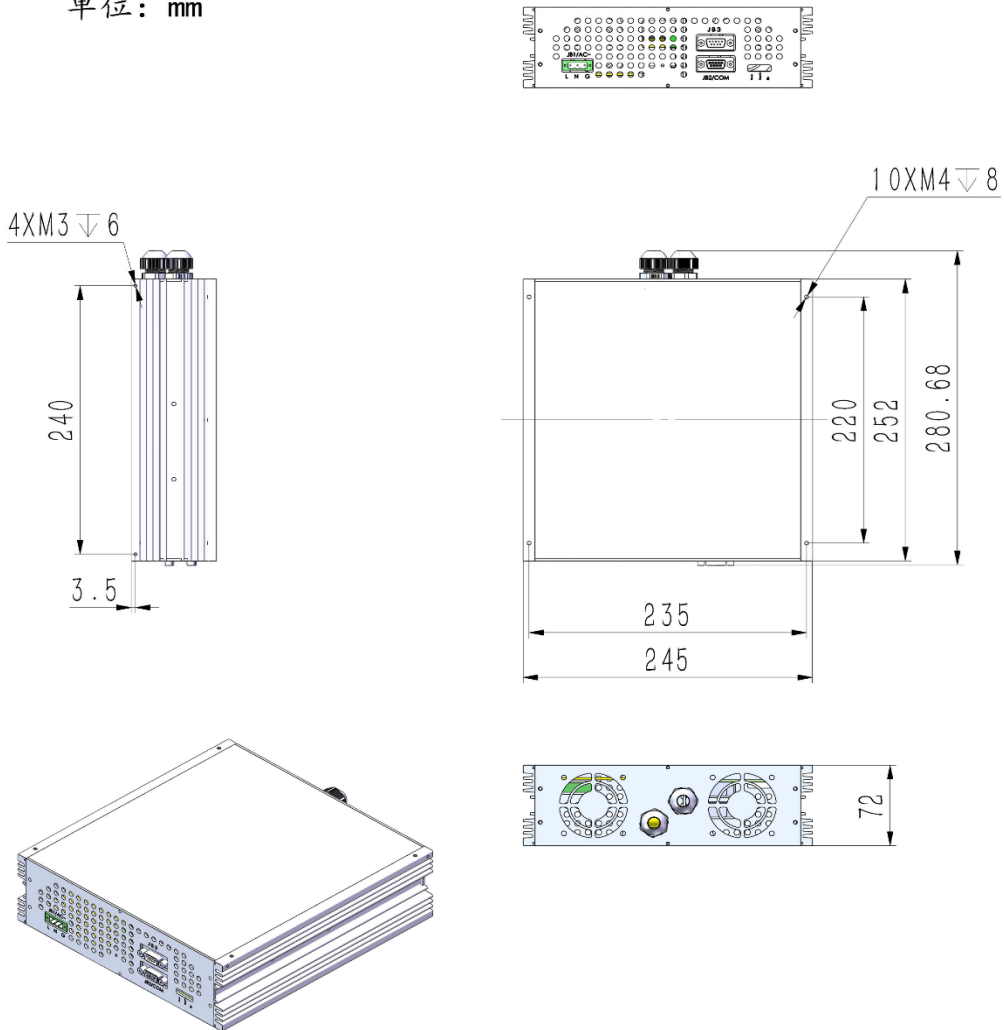
Pin	Signal	Parameter
3/4/5/6/7 /8/9	N/C	No connect
1	Interlock Out	
2	Interlock In	

Short connect pin1 and pin2 make X ray source normal operation. Typical connection :



Tank size

控制盒尺寸图：
单位：mm



HVC1205A0
Unit: mm

