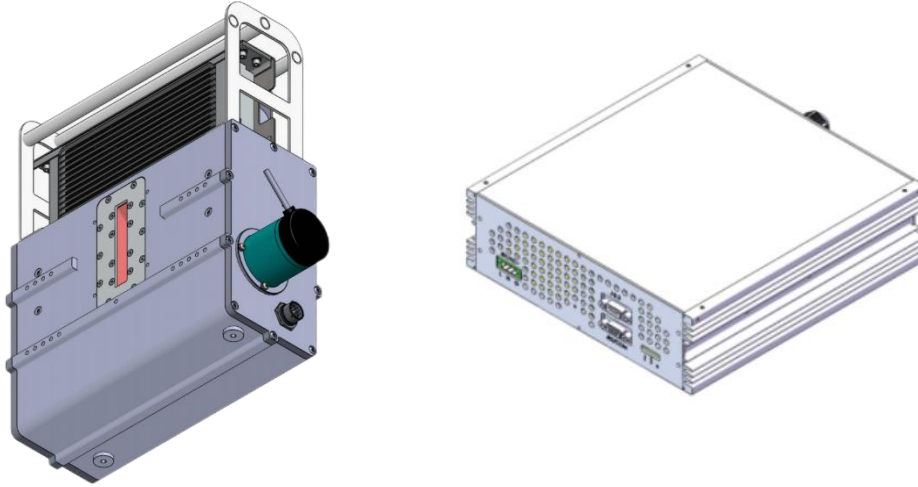


## 9.HVC1205B0 X-Ray Source



### Introduction:

The HVC1205B0 is a compact, safe, low-leakage, and electrically stable integrated X-ray source. It supports continuous operation at 500W within the specified temperature range, with a maximum output voltage of 120kV/500W. The system comprises a control box and a high-voltage oil tank, and it is managed via RS232 interface for control, monitoring, and firmware updates.

### 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. Can be installed in any orientation
5. Standard digital interface for easy application

### Application:

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

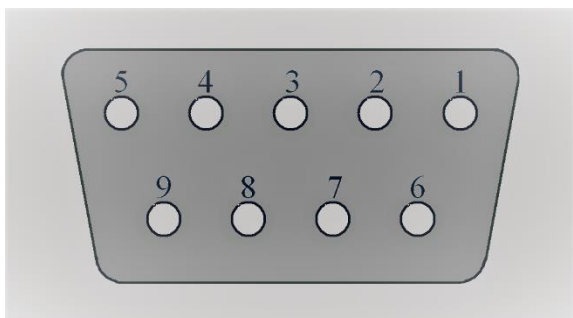
### Specification:

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 ( $< 40\text{kV}$ )
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: $80^\circ \times 16^\circ$ fan beam
	target angle: $25^\circ$
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	$16^\circ \times 80^\circ$
X-ray leakage	Less than 0.5mR/hr at 5cm from the surface of the HVC1205B0.

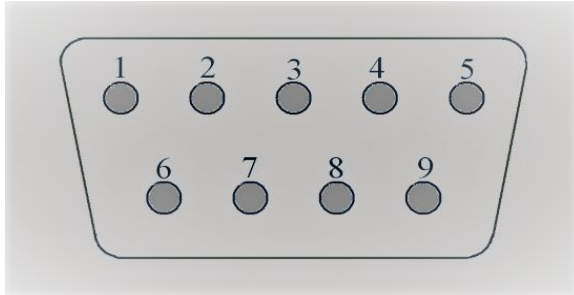
**JB1/AC~, (AC Input Power Connector)**


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

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


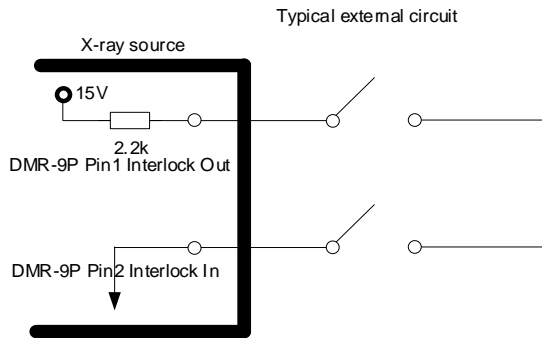
Pin	Signal	Parameter
1.4.6.7.8.9	N/C	No connect
2	TXD	Data transmit
3	RXD	Data receive

5	GND	Signal gnd
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**JB3/Interlock, (DMR-9P interface definitions)**


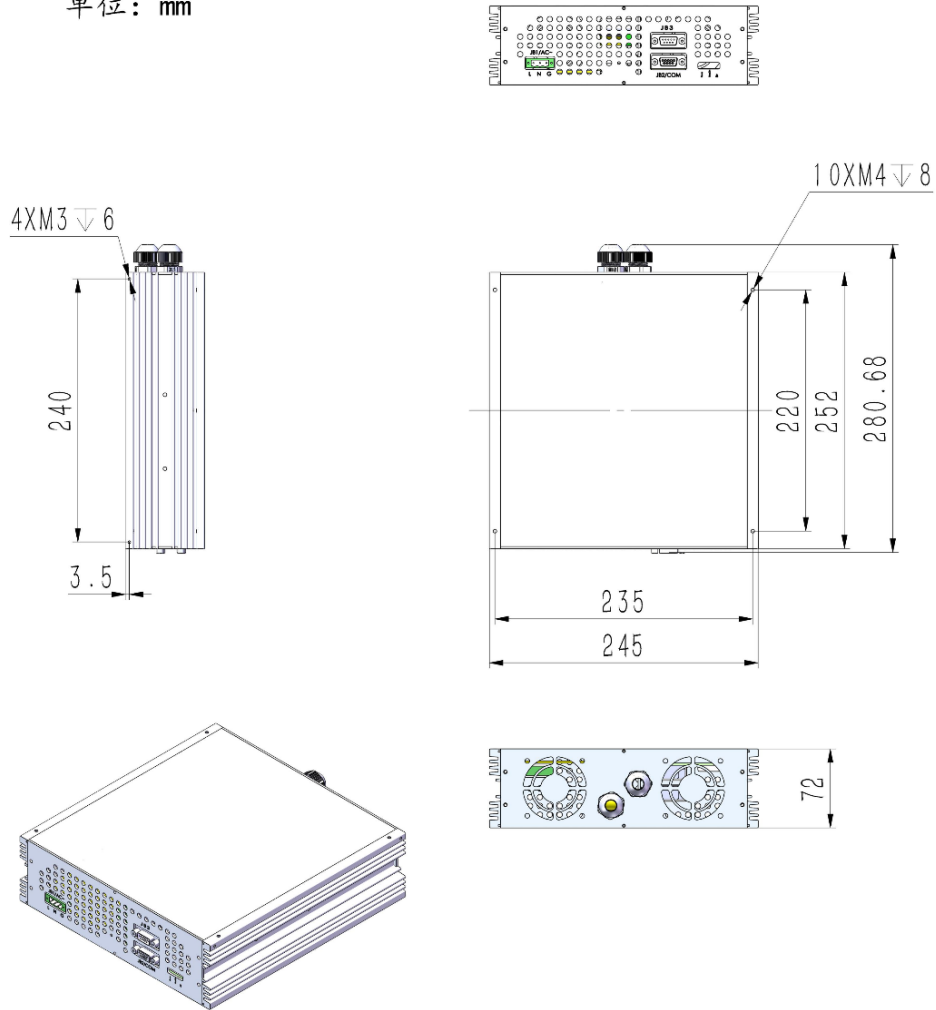
Pin	Signal	Parameter
3/4/5/6/7 /8/9	N/C	No connect
1	Interlock Out	
2	Interlock In	

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



Tank size

控制盒尺寸图：  
单位：mm



HVC1205B0  
Unit: mm

