3.HVC806A0 X-Ray Source

Introduction:

The HVC806A0 is a compact, safe, and electrically stable integrated X-ray source with low leakage. It operates continuously at 240W within the allowable temperature range. The system includes a high-voltage power supply, filament power supply, X-ray tube, high-voltage oil tank, and radiator. This high-frequency, self-cooling, and self-protecting X-ray generator delivers up to a maximum voltage of up to 80kV and a maximum power of 240W. It mainly consists of a control box and high-voltage oil tank, with RS232 communication for control, monitoring, and firmware upgrades.

Features:

1. Integrated design with high electrical integration and a compact appearance
2. Capable of continuous, long-term operation
3. High stability
4. Versatile installation options
5. Standard digital interface for easy use

Application:

Food testing, industrial non-destructive testing, dangerous goods testing and other fields, mostly used for simple X-ray machines or mobile X-ray testing equipment

Specification:

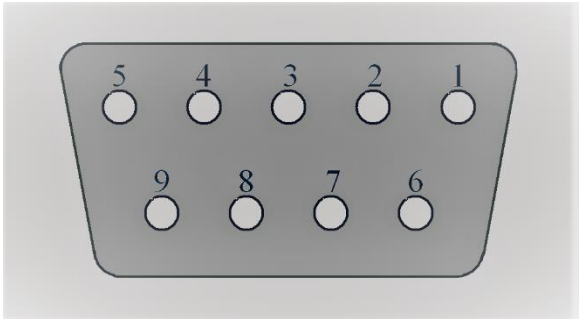
Item	Specification
Input voltage	230VAC±10%, 50/60Hz, 3Amps
Output power of X ray	Max continuous output power 240W （80kV/3mA,40kv/6mA）

tube	
Output voltage	Rated output voltage： Continuously adjustable voltage range 30kV---80kV
	Output voltage ripple： ±0.5% （peak to peak）
	Output voltage accuracy： ±2% of voltage setting value
	line regulation： ±0.1%
	load regulation： ±0.1%
Tube current	Rated tube current： Continuously adjustable current range 1mA-6mA
	Tube current accuracy： ±0.2mA of current setting value
	line regulation： ±0.1%
	load regulation： ±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： 2.0 to 5.3V
	filament： 3.0 to 3.8Amps RMS
	preheating time： 3sec
Tube feature	Tube type： fixed anode、glass envelope、tungsten target
	focus： 0.8mm
	inherent filtration： 0.8mm Be， 1.5mm AI
	radiation angle： 80^{o} *16^{o} fan beam
	target angle： 25°
Cooling	transformer oil， external circulation， external forced air cooling
Working temperatures	-10℃---40℃
Storing temperature	-20℃---60℃
System temperature protection	60℃±3℃ of oil temperature
Humidness	98%， Non- condensation
Weight	31.1kg
Installation direction	Installation in any direction
Radiation angle	16°×80°
X-ray leakage	Less than 0.5mR/hr at 5cm from the surface of the HVC806A0.

JB1/AC~, (AC Input Power Connector)

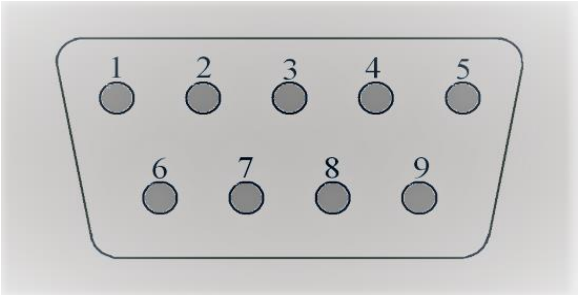
Pin	Signal	Parameter
1	L	live wire
2	N	Neutral line
3	G	PE

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



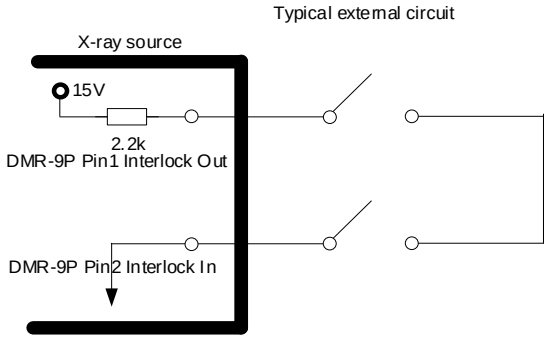
Pin	Signal	Parameter
1.4.6.7.8.9	N/C	No connect
2	TXD	Data transmit
3	RXD	Data receive
5	GND	Signal gnd

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：



Led indicator

ID	Color	Meaning
XrayOn	Yellow	indicate X ray on
ARC	Red	Arcing in oil tank
OT	Red	Over temperature
EP_Err	Red	Tube voltage error
IP_Err	Red	Tube current error
Power	Green	Power on

Tank size

HVC806A0:
Unit: mm