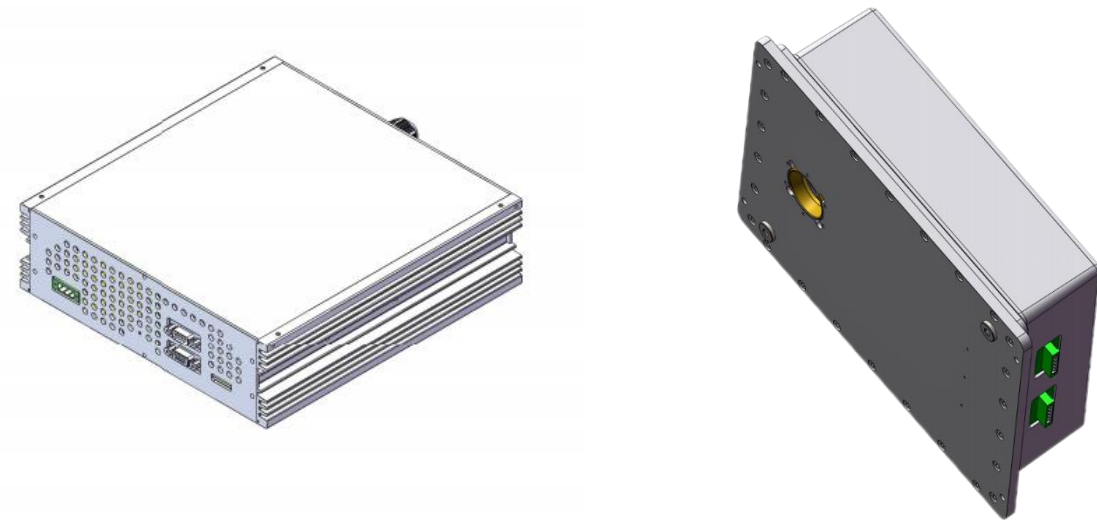


4.HVP1102001 X-Ray Source



Introduction:

The HVP1102001 is a compact, portable, and reliable high-voltage X-ray generator designed for head imaging equipment. It can continuously operate at up to 1200W for 25 seconds within the specified temperature range, relying on self-cooling without the need for additional cooling. This X-ray source can output 110kV/1200W in continuous mode (1700W in pulse mode) and features high frequency, self-cooling, self-protection, and independent control. It consists of an X-ray high-voltage oil tank and a control box, with control, status monitoring, and programming managed through a DB9 interface. Additionally, the HVP1102001 supports both continuous and pulse operation modes.

Features:

1. Compact and convenient design with highly integrated electrical modules
2. Excellent electromagnetic compatibility
3. Compatible with continuous, pulse, and dual-energy operating modes
4. Can be installed in any orientation
5. Standard digital interface for easy application and stable, reliable data exchange

Application:

Dental X-ray imaging equipment (CT and panoramic), head scan and mobile imaging equipment

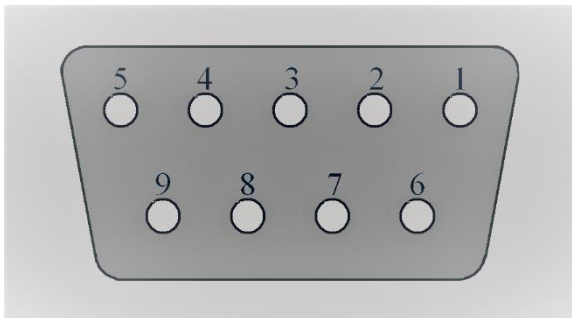
Specification:

Item	Specification
Input voltage	230VAC \pm 10%, 50/60Hz, 9.2A, PF>0.98.
Output power of X ray tube	Maximum continuous output power 1200W up to 25s (100kV, 12mA)

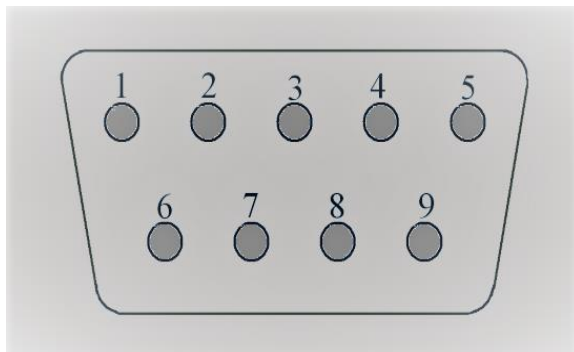
	Maximum pulse output power 1700W up to 50s (100kV, 17mA)
Output voltage	Rated output voltage: Continuously adjustable voltage range 50kV---110kV
	Output voltage ripple: $\pm 0.5\%$ (peak to peak)
	Output voltage accuracy: $\pm 1\%$ of voltage setting value
	line regulation: $\pm 0.1\%$
	load regulation: $\pm 0.1\%$
Tube current	Rated tube current: Continuous mode: adjustable from 2 to 15mA (Max power 1200W); Pulse mode: adjustable from 2 to 20mA (maximum power 1700W).
	Tube current accuracy: $\pm 0.1\text{mA}$ of current setting value
	line regulation: $\pm 0.1\text{mA}$
	load regulation: $\pm 0.1\text{mA}$
Filament power supply:	input voltage: 24VDC
	filament voltage: 4.0 to 8.0Vac
	filament: 2.2 to 4.0 Amps RMS
	preheating time: 3sec
Tube feature	Tube type: fixed anode、glass envelope、tungsten target
	focus: 0.5mm
	inherent filtration: 1.5mm Al
	radiation angle: 30°, cone beam
	target angle: 5°
Operation mode	continuous mode, pulse mode
Pulse frequency	20-50Hz
Pulse time	Single pulse exposure time: 5.0 ~ 50ms
Dual energy setting	Arbitrary setting of two different energy voltage levels of tube voltage within the rated range
Max exposure time	Maximum continuous exposure time 25s at continuous mode
	Maximum continuous exposure time 50s at pulse mode
Kv Rise Time at maximum power:	Continuous mode: To 100kV and 10mA in less than 15ms
	Pulse mode: rise time of single pulse kV less than 1ms
Cooling	transformer oil, aluminum shell natural heat dissipation
Working temperatures	-10°C---40°C
Storing temperature	-20°C---60°C
System temperature protection	60 \pm 3°C of oil temperature
Humidness	10%-95%, Non-condensation
Weight	X-ray tank: 15.0kg
	Control box: 3.6kg
Installation direction	Installation in any direction
Radiation angle	cone angle of ray tapered beam 30°
X-ray leakage	Less than 100mR/hr @1meter from the surface of the HVP1102001 Integrated X-Ray Source.

JB1/AC~ (AC Input Power Connector)


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

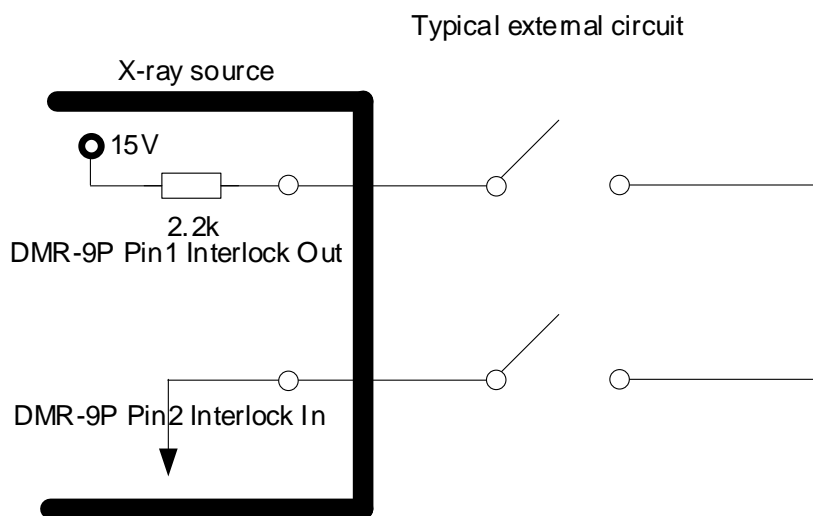
JB2/COM(Communication Interface, DMR-9S(female))


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 (Signal Interface, DMR-9P(male))


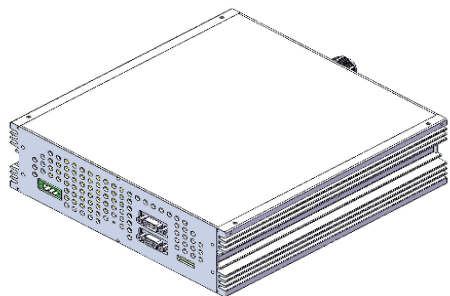
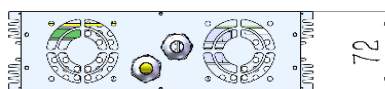
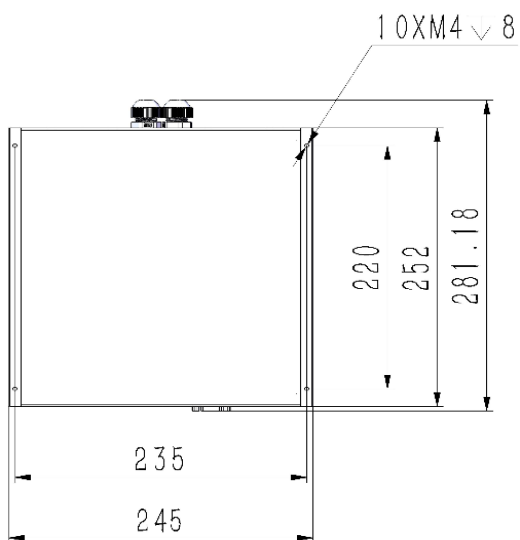
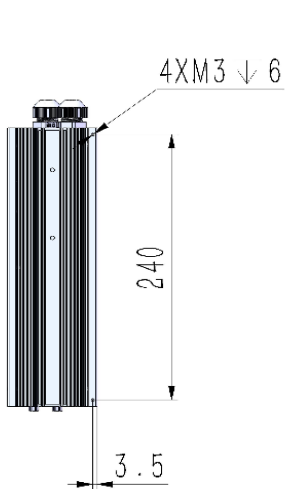
pin	signal	parameter
1	Interlock Out	(nonsupport)
2	Interlock In	(Nonsupport)
3	Syn_ Out	synchronizing signal output
4	Syn_ In	synchronizing signal input
5	GND	Reference gnd
6	Syn_ Out	synchronizing signal output
7	GND	Reference ground
8	N/C	Undefined
9	Xray_ON	X-ray switch signal pin.

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



HVP1102001

Unit: mm



HVP1102001

Unit: mm

