3.HVP10012A2 X-Ray Source

Introduction:

The HVP10012A2 is a compact, portable, and reliable high-voltage X-ray generator designed for dental imaging equipment. It can continuously operate at up to 1000W for 25 seconds within the specified temperature range, relying on self-cooling without the need for additional cooling. This X-ray source can output 100kV/1000W in continuous mode (1200W 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 HVP10012A2 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 RS-232 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:

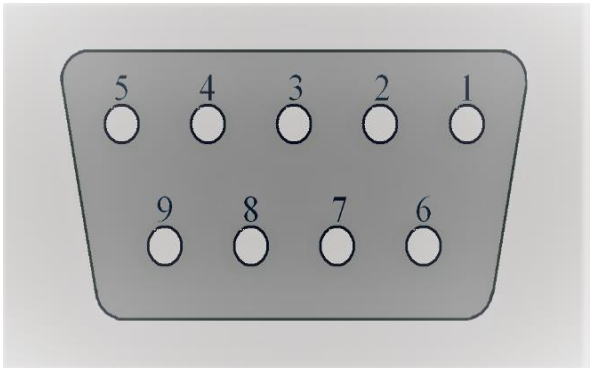
Item	Specification
Input voltage	230VAC±10%, 50/60Hz,Single Phase, 6.2Amps, PF>0.98.
Output power of X ray tube	Maximum continuous output power 1000W up to 25s (100kV, 10mA)
	Maximum pulse output power 1200W up to 40s (100kV, 12mA)
Output voltage	The high voltage is programmed with the range of 50 to 100KV

	Output voltage ripple：±0.5%（peak to peak）
	Output voltage accuracy：±1% of voltage setting value
	line regulation：±0.1%
	load regulation：±0.1%
Tube current	2mA to 10mA at 1000W MAX, continuous
	2mA to 12mA at 1200W MAX, pulse
	Tube current accuracy：±0.1mA of current setting value
	mA Regulation:<±0.1mA for Line Input changes of ±10%; <±0.1mA for the output voltage change over the specified range
Filament power supply:	input voltage：24VDC
	filament voltage：2.5 to 6.8VAC
	filament：3.2 to 3.8A
	preheating time：3sec
Tube feature	Tube type：fixed anode、glass envelope、tungsten target
	focus：0.5mm
	inherent filtration： 1.8mm Al
	radiation angle： 20°, 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 40s 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℃---40℃
Storing temperature	-20℃---60℃
System temperature protection	60±3℃ of oil temperature
Humidness	10%-95%，Non-condensation
Weight	Oil tank：8.4kg
	Control Unit：3.6kg
Installation direction	Installation in any direction
Radiation angle	cone angle of ray tapered beam 20°
X-ray leakage	Less than 100mR/hr at 1meter from the surface of the HVP10012A2 Integrated X-Ray Source.

JB1/AC~ (AC Input Power Connector)

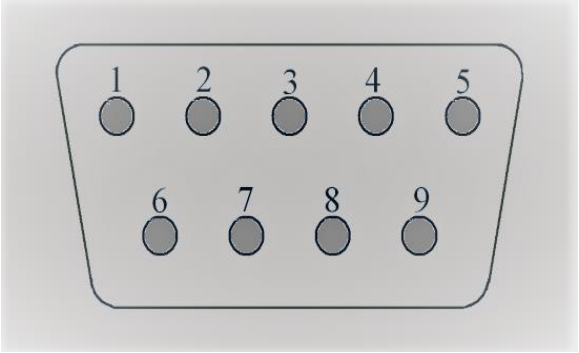
Pin	Signal	Parameter
1	L	live wire
2	N	Neutral line
3	G	PE

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



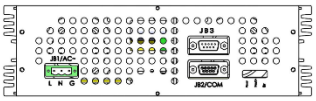
Pin	Signal	Parameter
1.4.6.7.8.9	N/C	Undefined
2	TXD	Data transmit
3	RXD	Data receive
5	GND	Reference ground

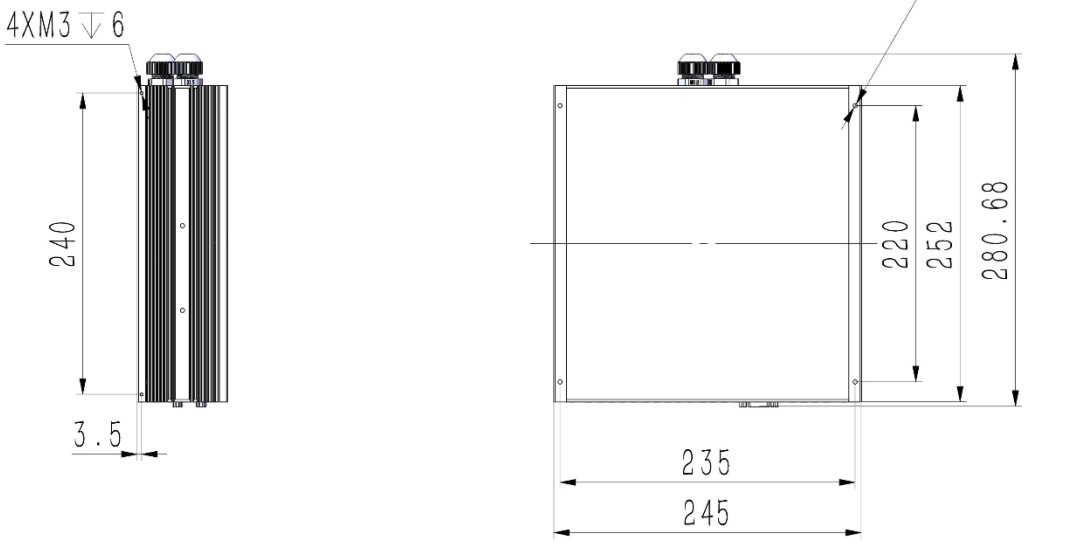
JB3 (Signal Interface, DMR-9P(male))

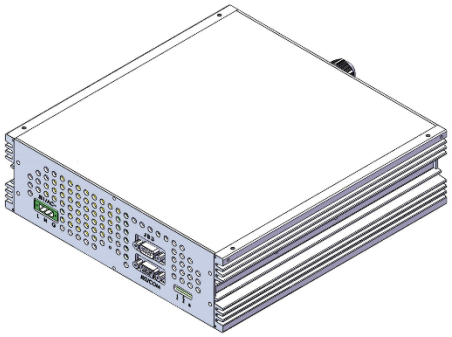


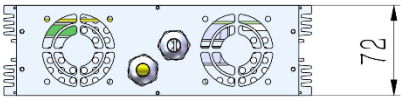
pin	signal	parameter
1	Interlock Out	(nonsupport)
2	Interlock In	(Nonsupport)
3	Syn_ Out	synchronizing signal output
4	Syn_ In	synchronizing signal input
5	GND	Reference gnd
6	Syn_Out	synchronizing signal output
7	GND	Reference ground
8	N/C	Undefined
9	Xray_ON	X-ray switch signal pin.

HVP10012A2
Unit: mm









HVP10012A2
Unit: mm