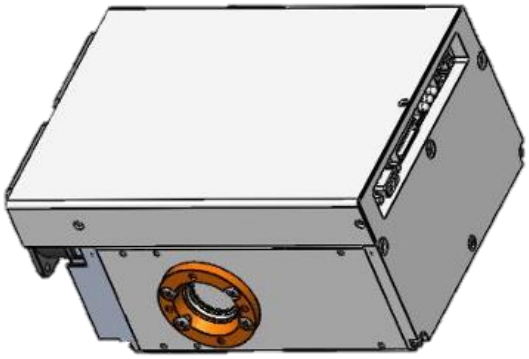
INDUSTRIAL X-RAY SOURCE

1.HVC501C0 X-Ray Source



Introduction:

The HVC501C0 is an integrated X-ray source with built-in self-protection features, characterized by its compact structure, easy installation, and reliable operation. It delivers up to 50kV/50W output and supports continuous operation at rated power within the allowable operating temperature range. With a standard RS232 digital interface, it enables remote control, status monitoring, and firmware upgrades.

Features:

1. Integrated design with high electrical integration and a compact appearance
2. Capable of continuous, uninterrupted operation for extended periods
3. High stability
4. Can be installed in any orientation
5. Standard digital interface, easy to use

Application:

Food testing, industrial non-destructive testing, dangerous goods testing and other fields.

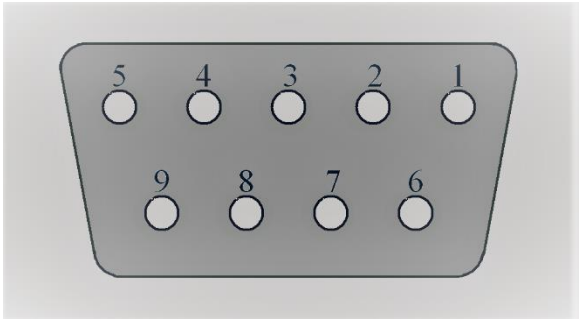
Specification:

Item	Specification
Input voltage	24VDC±2V%，4.2Amps
Output power of X ray tube	Max continuous output power 50W(50kV/1mA)
Output voltage	Rated output voltage：Continuously adjustable voltage range 20kV---50kV

	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 0.2mA-1mA
	Tube current accuracy：±2% mA of current setting value
	line regulation：±0.1%
	load regulation：±0.1%
kV Rise Time at maximum power:	The voltage rise time is less than 0.6 seconds at maximum power, and less than 0.1 seconds when the output voltage is below 40kV.
Filament power supply:	input voltage：24VDC
	filament voltage：3.5VAC
	Filament current：3Amps RMS
	Preheating time：3sec
Tube feature	Tube type： fixed anode, glass envelope, tungsten target
	focus：0.8mm
	inherent filtration： 0.7mm Al
	radiation angle：30°cone beam
	target angle：15°
Cooling	transformer oil, anode heatsink with fan cooling
Working temperatures	-10℃---35℃
Storing temperature	-20℃---60℃
System temperature protection	60°C ± 3°C of Oil temperature:
Humidness	98%， Non-condensation
Weight	4.65kg
Installation direction	Installation in any direction
Radiation angle	30°cone beam
X-ray leakage	Less than 0.5mR/hr at 5cm from the surface of the HVC501C0.

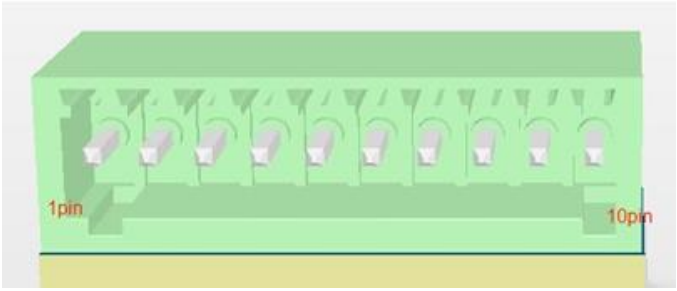
JB1/AC~(AC Input Power Connector)

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

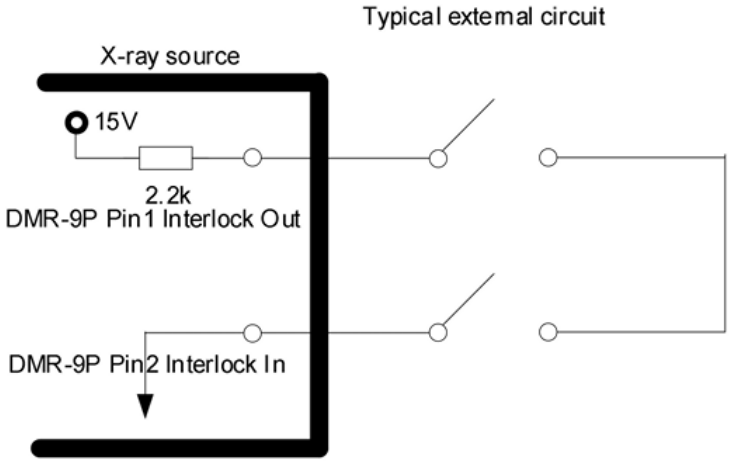
J3 / External Port



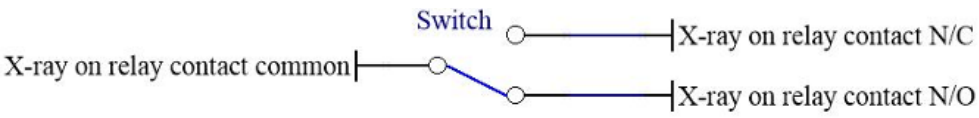
Note: Pin No.— J3 is numbered from left to right as 1pin to 10pin.

Pin No.	Name	Description
1	Interlock In	Safety interlock switch input
2	Interlock Out	Safety interlock switch output
3	X-ray on relay contact common	Common terminal of X-ray switch indicator relay
4	X-ray on relay contact N/C	Pin 3 and Pin 4 are connected when X-ray is on; disconnected when X-ray is off
5	X-ray on relay contact N/O	Pin 3 and Pin 5 are disconnected when X-ray is on; connected when X-ray is off
6	IP	Current monitoring output, 0~5VDC
7	EP	Voltage monitoring output, 0~5VDC
8	SGND	Ground
9	NULL	Reserved
10	NULL	Reserved

Safety Interlock Switch Diagram



X-ray Switch Indicator Relay Interface Diagram



Product Size

HVC501C0

Unit:mm