- **X-Ray High Voltage Power**
- **50KV，75W**
- **Controllable Voltage & Current**
- **Controllable filament Current**
- **Filament current limiting Protection**
- **Overvoltage & Overcurrent Protection**

HVP50P75 is an ultra-compact X-Ray generator module with high voltage packaging and surface mount fabrication techniques and coupled with proprietary encapsulation technology producing. It uses a closed-loop filament control circuitry to provide a highly regulated beam current, offering tight regulation, high stability and low ripple, HVP50P75 can provides users local and remote analog control to set beam voltage, emission current and filament current limit, and also has intelligent surge suppression protection circuit, which can suppress the start current spike effectively.

Typical Applications

Powering grounded cathode X-ray tubes from Kevex, Oxford, RTW, Superior, Varex, Petrick, Trufocus and some other global brands.

Specifications

Input	24V±10%VDC ,MAX 5.0A
Output	0-50KV, 0-2mA , MAX 75 W
DC Supply	0-5VDC, 0-3.5A , adjustable limit
Efficiency	80%, typical
Voltage Control	0.01%（load)
Current Control	0.01%（load)
Stability	0.05% per 8 hours after 1/2 hour warm -up.
Ripple Voltage	0.1% p -p of maximum rated output voltage, 50kV units
Voltage& Current Monitors	0V-10VDC ~ 0-Vmax & 0-Imax. Zout=1K Ω, Accuracy ±1%
Temperature Coefficient	0.01%/ °C
Surge Current at Turn-on	3.5A Max≤5A @25°C （Typical)
Environmental	Operational: 0°C - 50°C , Storage: -40°C - 85°C
Weight	3.1kg
Size	222X76.4X124 （mm)

Power InputConnector (JB1 1-2)

1	24VDC	24 VDC @ 5A, Max
2	24VDC Return (GND)	GND

Filament Connector (JB1 3-4)

1	Filament Out (+)	5VDC @3.5A Max
2	Filament Out (-)	GND (Filament)

DB15 Input & Output Connector (JB4)

| 1	Monitor Return	Signal Ground
2	Voltage Monitor	0-10V = 0-Vmax, Zout=1KΩ
3	Current Monitor	0-10V = 0-Imax, Zout=1KΩ
4	Interlock Output	Connect 12V HVON bulb to pin 15 to enable
5	+10 Volt Reference	+10 Volts at 1mA, maximum
6	Filament Monitor	1V=1A, Zout=1KΩ
7	Voltage Program Input	0-10 volts = 0 to full scale, Zin=10MΩ
8	Local Voltage Program	0-10 volts, screwdriver adjust
9	Filament Limit Setpoint	1 volt = 1 A
10	Current Program Input	0-10 volts = 0 to full scale, Zin=10MΩ
11	Local Current Program	10 turn pot, screwdriver adjust
12	NC	Undefined
13	NC	Undefined
14	Filament Preheat Setpoint	1 volt = 1 A
15	Interlock Return	Interlock Ground

Operating Setup:
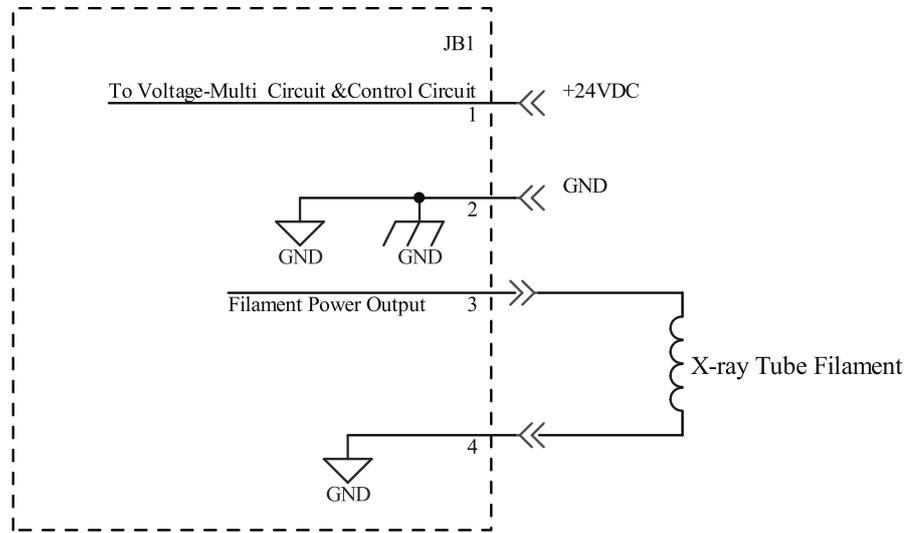
Safe interlock optional configurations 1
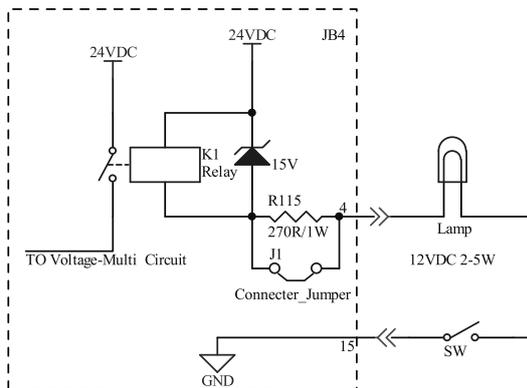
Safe interlock optional configurations 2
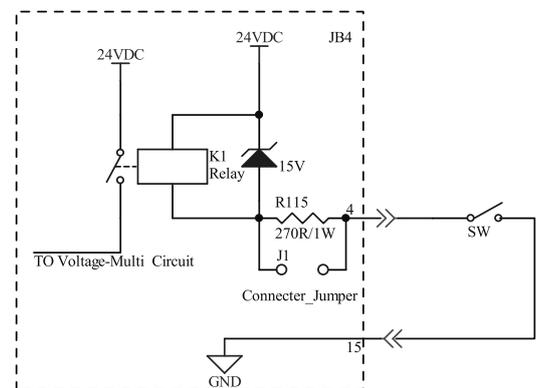
Note: 1 Factory default disconnect the internal jumper J1. When the Safe Lamp needs to be connected, it needs to connect the internal jumper J1.

2 Do not directly connect pin4(JB4-4) to GND(JB4-15) when the internal jumper J1 is connected, otherwise the Power will be damaged.

3 Factory default connect internal jumper J3, can be controlled by disconnected the external switch, or controlled by connect an external power supply (+ 12V) from pin13 to achieve interlock ground.

4 **In order to an ensure safety, the external interlock needs to be closed when using the digital interface to control the high-voltage power supply.**

Size【mm】：