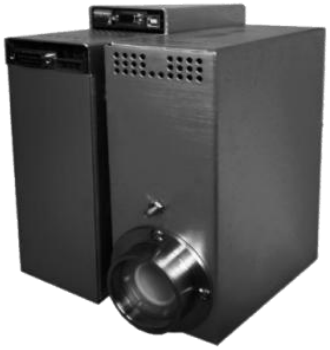
TXF1200 Series

X-Ray High Voltage Power Supply | 1kV~70kV, 100W, Integrated floated filament power supply



- Optional RS232, RS485, network port control
- 70kV, 2mA, up to 100W
- Integrated suspended filament power supply
- Overvoltage and output short circuit protection, arc protection
- Voltage and current regulation function
- Local or remote control
- Security interlock function
- It can be customized according to user requirements.

Product Introduction:

TXF1200 series is specially designed for X-ray tubes with negative high-voltage anode grounding float filament. Input +24VDC, output high voltage of 1kV~70kV, up to 2mA emission current, maximum power 100W. TXF1200's emission current is controlled by a closed loop to ensure the high stability of the emission current. Floating filament power supply works at 0.3A to ~5A. TXF1200 has the characteristics of adjustment accuracy, high stability, low ripple, small size, etc., and provides users with local and remote analog control voltage, emission current and filament current limit settings. USB2.0, RS232, RS485, network port digital interface is available.

Typical Applications:

Global brands of X-ray tubes, thickness gauges, X-ray fluorescence meters, X-ray diffraction meters, X-ray imaging, sulfur meters, non-destructive detection, portable X-ray machines, online element analysis, X-ray perspective, particle size detection, density measurement, paper composition detection, ROHS detectors, precious metal detectors, plastic sorting, Crystal detection, electroplating measurement, mineral analysis, wavelength dispersion spectrometer, life science, medical chemical industry, scientific experiments, industrial applications.

Specification Description:

Input	+24VDC±10%, the maximum current at 70W output is 5A, and the maximum current at 100W output is 8A.
Output	A variety of maximum voltage outputs from 0 to 70kV are available.
Stability	After warm-up for half hour, it is less than 0.02% every 8 hours.
Temperature coefficient:	Voltage and current are better than 25ppm/℃.
Ripple	Under rated output conditions, it is better than 0.1% p-p.
Voltage and current display	0~+10VDCMatch0~100%Rated output,Zout=10kΩ, accuracy:±1%.
Internal control of output voltage	The internal potentiometer sets the voltage to 0~100% rated output.
External control of output voltage	Outside0~+10VDCThe control signal can set the voltage in0~100%Rated output,Zin=10MΩ.
Internal control of output current	The internal potentiometer sets the current to 0~100% rated output.
External control of output current	Outside0~+10VDCThe control signal can set the current at0~100%Rated output,Zin=10MΩ.
Voltage relative load adjustment rate	0.01% (no load to rated load).
Voltage relative input adjustment rate	±0.01% (input voltage change ±10%).
Current relative load adjustment rate	0.01% (no load to rated load).

Current relative input adjustment rate	±0.01% (input voltage change ±10%).
Filament power supply	Constant current output, the output current adjustment range is0.3A to 5A, output voltage limit is 5V.
Ambient temperature	When working: 0℃~+50℃. Storage: -40℃~+85℃.
Humidity	20%~85%. Relative humidity, no condensation.
External dimensions	10 to 50kV: 75mm wide, 185mm high and 205mm deep. 51 to 70kV: 75mm wide, 185mm high and 228mm deep.
Weight	About 5kg.

Description of Model Code

The model code represents the performance and parameters of the power supply, which are:
Maximum output voltage in kV;
Maximum output power in W;
Output polarity, P for positive output, N for negative output;

TXF1200 N 70 - 100

Model	Polarity	Maximum voltage	Maximum power

TXF1200 series High-voltage power supply model selection table (customizable):

Output rating		Power supply model
kV	mA	Negative polarity
10	10	TXF1200N10-100
20	5	TXF1200N20-100
30	3.33	TXF1200N30-100
50	2	TXF1200N50-100
70	1.43	TXF1200N70-100

Power input J4：

PIN	Port information	
1	+24VDC input	+24VDC, 5A input
2	+24VDC	Power supply

RS232/RS485 digital port：

Port information		Port information	
1	Spare	6	Spare
2	TXD/send data	7	RS485B
3	RXD/Receive Data	8	Spare
4	Spare	9	RS485A
5	Ground		

USB digital port：

PIN	Port information		PIN	Port information	
1	VBUS	+5VDC	3	D+	Data+
2	D-	Data-	4	Ground	USB Ground

Analog interface：

PIN	Port information	
1	Earth	Signally
2	Voltage display	0~+10VDC full range, Zout=10kW
3	Current display	0~+10VDC full range, Zout=10kW
4	External interlock	Closed with 1-pin short-circuit interlock
5	+10VDC reference	Maximum current 1mA, voltage +10VDC
6	Filament current display	1V=1A, Zout=10kW
7	Voltage remote control input	0~+10VDC full range, Zin=10MW
8	Voltage local control output	0~+10VDC, potentiometer adjustment
9	Filament limit setting display	1V=1A, potentiometer adjustment
10	Current remote control input	0~+10VDC full range, Zin=10MW
11	Current local control output	0~+10VDC, potentiometer adjustment
12	Idle (for interlock output) interlock output +24VDC	/
13	Idle (interlocking coil)	Interlocking and closing with 12-pin short-connect
14	Filament preheating setting display	1V=1A, potentiometer adjustment
15	Earth	Earth