TXR1110 Series

High-voltage power supply for X-ray machine | 80KV,100W, high precision, integrated filament power supply

- Max Output voltage 80kV
- Integrated adjustable filament power supply
- Overvoltage and output short circuit protection
- Voltage and current regulation function
- Remote control can adjust the emission current
- Safe interlock function
- It can be customized according to user requirements

Product Introduction:

Teslaman TXR1110 series high-voltage power supply is a special power supply for X-ray machines, which integrates a filament power supply with an adjustable DC voltage of 5.5V and a current of 0.3A to 3.5A. High voltage and filament current can achieve linear and steady rise. In addition, a biased power supply can make the X-ray focus better and make the imaging clearer. TXR1110 series power supply can also be connected to an external potentiometer to achieve remote control of output voltage and current, and has external voltage and current display, high-voltage output overvoltage and short-circuit protection, safety interlocking and other functions.

Typical Applications:

Liquid level detection; film thickness measurement; PCB board detection; Kevex, Oxford, RTW, Superior, Varian, Trufocus, Keyuwei and other brands of cathodic grounded X-ray tubes.

Optional Functions

AC AC filament power supply
CPC Constant power output

Specification Description:

Input	DC24V±10%.
Send out	A variety of maximum output voltages such as 1kV to 80kV are optional, and 0 to maximum voltages are continuously adjustable.
Voltage control	Inside the power supply: The multi-turn potentiometer that comes with the power supply can set the output voltage between 0V and the highest voltage. External remote control: The external 0 to 10V control signal can adjust the output fror 0V to the maximum output voltage.
Emission current control	Inside the power supply: The multi-turn potentiometer that comes with the power supply can set the electron beam current to a maximum of 0A. Electric current. External remote control: the external 0 to 10V control signal can set the electron beam current to 0A to the maximum High current.
DC filament power supply	The output current is 3.5A adjustable and the voltage is 5.5V.
Voltage adjustment rate	Relative load: 0.01% (no load to rated load). Relative input: ±0.01% (input voltage change is ±10%).
Current adjustment rate	Relative load: 0.01% (no load to rated load). Relative input:±0.01% (input voltage change±10%).
Ripple voltage	Under the condition of output rated voltage, the peak of ripple voltage is 0.1% of the maximum output voltage.

Ripple voltage	Ambient temperature: at work:0 to +50 at work℃,Storage time-20℃To +80℃.
Temperature coefficient	0.01% per Celsius.
Stability	less than 0.05% every 8 hours after starting up for half an hour.
Voltage and current indication	0 to +10V, the accuracy is 1% under rated output conditions.
External dimensions	100mm wide, 160mm high and 254mm wide.
High-voltage electricityCable	High-voltage output connector: concave epoxy insulating catheter and probe The incoming high-voltage cable is connected by a metal connector with a diameter of 16mm. High-voltage cable The total length is 1 meter.
Input and output connectors	DB9 contains control signals.
Remote control of output voltage and current	The external potentiometer can remotely use the 10V reference voltage inside the power supply to remotely output voltage and current.Control.
Remote voltage indication	J4 contains voltage and current indicators from 0V to 10V, which can be connected to various digital or pointer meters.
Annotate[1]	The voltage output of the bias power supply from 0 to minus 150V will make the X-ray focus smaller and the imaging clearer in special field applications.

Optional

Optional code	Description of the code
AC	AC filament power supply
NX	Non-standard slow start
NSS	No slow start
BIAS	Bicentric power supply
CP	Constant power output
ATS	Variable measurement ratio
ELOC	Extended high-voltage output cable (unit: meters)

Table 1.1 Options

All of the options are listed in Table 1.1.See Chapter 4 for details on the action and setup steps. With a few exceptions, these options can be changed quickly within the factory. Please contact Teslaman's sales department for price and more details.

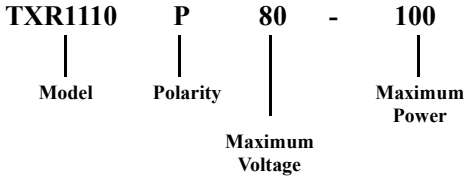
Description of Model Code

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;



TXR1110 series high-voltage power supply model selection table:

Output rating		Power supply model
kV	mA	Positive polarity
10	10	TXR1110 P10-100
30	3.33	TXR1110 P30-100
50	2	TXR1110 P50-100
80	1.25	TXR1110 P80-100

Voltage and current control DB9 connector JP5:

PIN	Signal	PIN	Signal
1	10V reference voltage	6	Current control signal input
2	Ground	7	Current control signal output
3	Voltage control signal input	8	Keep back
4	Voltage control signal output	9	Ground
5	Ground		

Voltage and current indicator connector JP4：

PIN	Signal	PIN	Signal
1	Ground	3	Current indicator signal
2	Voltage indicator signal	4	Interlock control

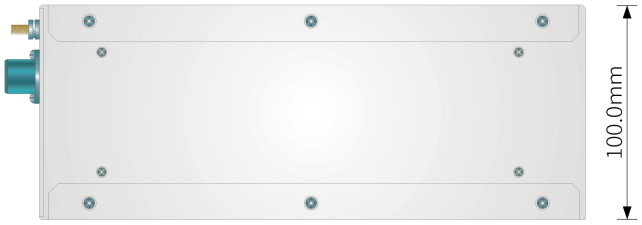
Filament connector JP3：

PIN	Signal	PIN	Signal	PIN	Signal
1	Voltage indicator signal	2	Filament power circuit	3	Backup or biased power supply [1]

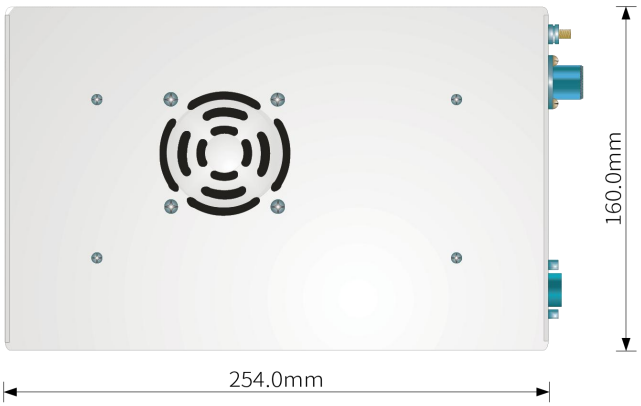
24V power connector JP2：

PIN	Signal	PIN	Signal
1	+24V	3	Ground

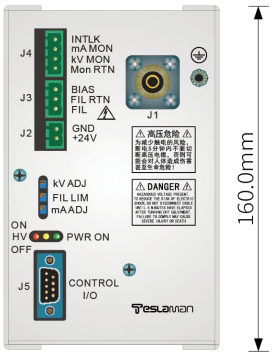
Dimensions: mm



Top View



Side View



Front View