TXR1017 Series

X-Ray High Voltage Power Supply | 20kV, 20W, Integrated Filament Power Supply, Stability < 0.02%, Compact Size, CE Compliant

- Maximum output voltage is 20kV.
- Stability <0.02% for 8hours
- Ripple < 0.01%p-p
- Integrated adjustable filament power supply
- Voltage and current regulation function
- The emission current can be adjusted remotely.
- Safety interlock function
- Can be customized according to user requirements.
- CECompliant

Product Introduction:

Teslaman TXR1017 series high voltage power supply is a special power supply for small volume X-ray machine. It integrates a filament power supply with an output of 5V DC and an adjustable current of 0.3A to 3.5A. High voltage and filament current can rise steadily. Suitable for thickness measurement of thin films, stability less than 0.02% over 8 hours, significantly enhancing the consistency of thin film thickness measurement equipment.

TXR1017 series power supply can also be connected with potentiometer to realize remote control of output voltage and current, and has the functions of external voltage and current display, safety interlock and so on. You can choose DB9 control or local control or remote digital communication interface to realize RS-232/RS-485 communication or Ethernet ports.

Typical Applications:

Thin film thickness measurement,PCB detection,Liquid level detection,Kevex,Oxford,RTW,Superior,Varian,Trufocus,Keyiwei and other brands of cathode grounded X-ray tubes.

Specification:

Input	24VDC ±10%.
Output	1kV to 20kV and other maximum output voltages are optional, and the maximum output power is 20W. 0 to the highest voltage can be adjusted continuously.
Voltage Control	Inside the power supply: The multi-turn potentiometer provided with the power supply can set the output voltage between 0 to the highest voltage. External remote control: The external control signal from 0 to 10V can adjust the output from 0 to the highest output voltage. Digital interface (1017i): Set voltage through upper computer software.
Emission Current Control	Inside the power supply: The multi-turn potentiometer of the power supply can set the electron beam current from 0 to the highest current. External remote control: The external 0-10V control signal can set the electron beam current from 0 to the highest current. Digital interface (1017i): Set current through upper computer software.
DC Filament Power Supply	Constant current output, the output current adjustment range is 0.3A to 3.5A, and the output voltage is limited to 5V.
Voltage Regulation Rate	Relative load: 0.01% (no load to rated load). Relative input: 0.01% (input voltage change is 1V).
Current Regulation Rate	Relative load: 0.01% (no load to rated load). Relative input: 0.01% (input voltage change is 1V). Ripple: under the rated output condition, it is better than 0.1%p-p.
Ambient	Working time: 0℃ to +50℃. Storage: -40℃ to +85℃.

Temperature	Temperature coefficient: voltage and current are better than 25ppm/℃. Stability: less than 0.02% every 8 hours after starting for 0.5 hours.
Voltage and Current Indication	0 to +10V, representing 0 to rated output, with an error of 1%.
Overall Dimensions	65mm wide, 115mm high and 150mm deep.
High Voltage Cable	The standard high-voltage cable is 1m in length outside the power supply, and cannot be plugged and unplugged. Other specifications of high-voltage cables can be customized.
Weight	about 1.82kg.
Compliant	CE

Description of model code

The model code represents the performance and parameters of the power supply. These parameters are:
Maximum output voltage, in kV;
Maximum output power in W (Watt);
Output polarity, p represents positive output;

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Model	Digital	Polar	Peak voltage	Maximum power

TXR1017 Series High-Voltage Power Supply Model Selection Table：

Rating Output		Power supply model
kV	mA	
5	4	TXR1017P5-20
10	1	TXR1017P10-10
20	1	TXR1017P20-20

Power Input/Filament Output Interface

Pin	Description	
1	+24VDC input	+24 VDC 10%, maximum current 5A.
2	+24VDC ground	Power supply ground
3	Filament voltage output	+5V 3A, max
4	Ground	Ground

RS-232/RS-485 Digital Communication Port

Pin	Description	Pin	Description
1	NC	6	NC
2	TXD/ send data	7	RS-485B
3	RXD/ received data	8	NC
4	NC	9	RS-485A
5	Ground		

USB Digital Port

Pin	Description	
1	VBUS	+5VDC
2	D-	Data-
3	D+	Data+
4	Ground	USB ground

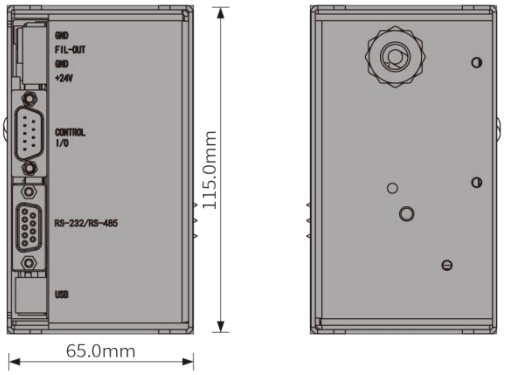
Analog Port DB9

Pin	Description	
1	+10VDCreference	+10VDC reference voltage
2	Voltage display	0 ~+10VDC = 0-100% rated output,Zout=10kΩ（+5VDC optional）
3	Voltage remote control input	0 ~+10VDC = 0-100% rated output,Zin=10MΩ.
4	Voltage local control output	0 ~+10 VDC, potentiometer adjustment
5	Current display	0 ~+10VDC = 0-100% rated output, Zout=10kΩ（+5VDC optional）
6	Current remote control input	0 ~+10VDC = 0-100% rated output, Zin=10MΩ.
7	Current local control output	0 ~+10 VDC, potentiometer adjustment
8	External interlock	Grounding = high voltage on
9	Interlocking return	Ground

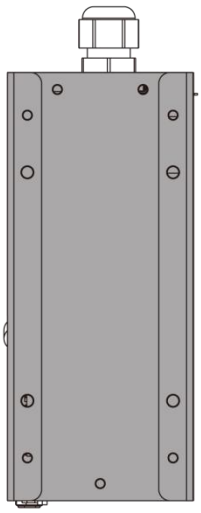
***C0001 standard DB9 port definition**

Overall Dimensions: mm

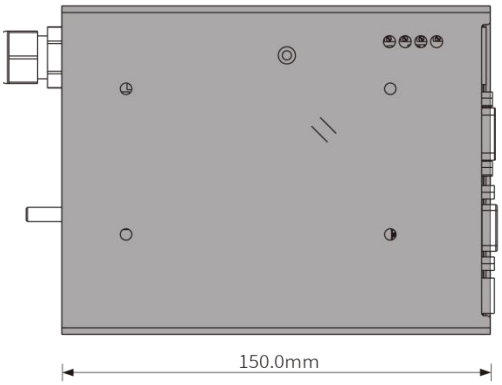
Digital Version



Front View **Rear View**

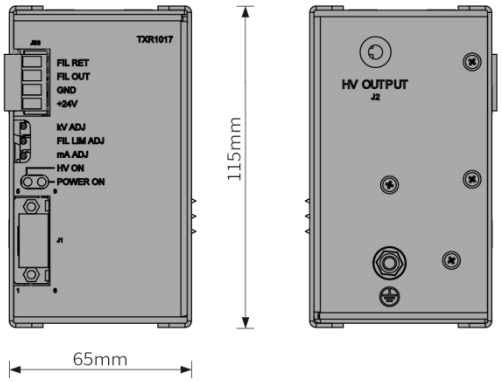


Top View

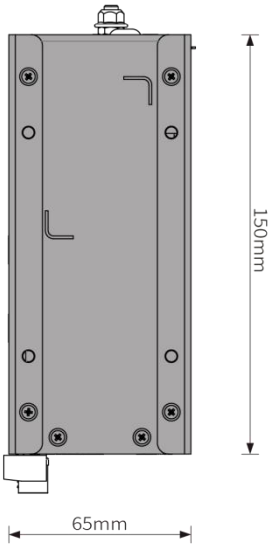


Side View

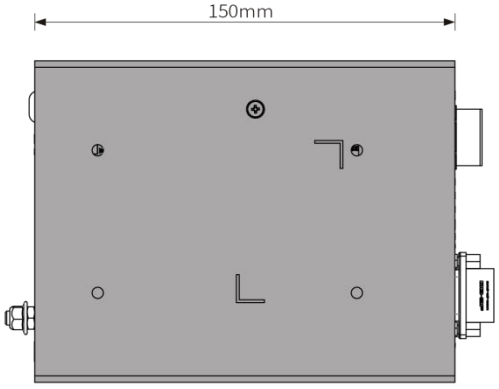
Simulated Version



Front View **Rear View**



Top View



Side View