

TXR1012 Series

X-Ray High Voltage Power Supply | 50kV/65kV,50W/65W,2mA, CECompliant



- Maximum output voltage 50kV/65kV
- Adjustable integrated filament power supply
- Overvoltage and short circuit protection
- Voltage and current regulation
- Local and remote emission control
- Security interlock function
- DB15, Rs-232 Or Rs-485 Communication Policy Available
- CECompliant

Product Introduction:

Teslaman TXR1012 series high voltage power supply is a special power supply for small volume X-ray machine featuring a 0 to 50kV/65kV high voltage output @ 2mA limited to 50 or 65 watts. It integrates a filament power supply with an output DC of 5V and an adjustable current of 0.3 A to 3.5 A. High voltage and filament current can rise steadily.

TXR1012 series power supply can also be connected with external potentiometer to realize remote control of output voltage and current, and has the functions of external voltage and current display, high voltage output overvoltage and short circuit protection, safety interlock and so on. It can provide Ethernet, RS-485 or RS-232 interface.

Typical Applications:

Liquid level detection; Thickness measurement; AI Visual Recognition; PCB board inspection; Kevex, Oxford, RTW, Superior, Varian, Trufocus, Cathode-grounded X-ray tube.

Optional features:

2mA Enhance Current
Digital Interface
Oxford tube adaptor
No filament power supply

Specification Description:

Input	DC24V \pm 10%.
Output	50kV or 65kV rated value, 2mA enhance current, maximum power of 65 watts. 0 to rated voltage continuously adjustable
Voltage control	Inside the power supply: The multi-turn potentiometer of the power supply can set the output voltage between 0 and the highest voltage. External remote control: The external 0 to 10V control signal can adjust the output from 0 to the maximum output voltage.
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 to 10V control signal can set the electron beam current from 0 to the highest current.
DC filament power supply	The output current is 3.5A adjustable and the voltage is 5V adjustable.
Voltage regulation	Load: 0.01% of output voltage no load to full load. line: \pm 0.01% for \pm 10% change in input voltage.
Current adjustment	load: 0.01% of output current from 0 to rated voltage. line: \pm 0.01% for \pm 10% change in input voltage.
Ripple voltage	Under rated output conditions, the peak-to-peak value of ripple voltage is 0.1% of the maximum output voltage.
Environmental	Operational: 0 °C to + 50 °C. Storage:-40 °C to + 85 °C.

Temperature coefficient	below 100ppm/°C.
Stability	less than 0.05% every 8 hours after 1/2 hour warm-up.
Voltage and current monitors	0 to + 10Vdc proportional 0 to rated output. Accuracy $\pm 1\%$.
Dimensions	50kV: 73.5 mm wide, 127mm high and 203.5 mm deep. 50kV(I options): 73.5 mm wide, 145mm high and 203.5 mm deep. 65kV: 73.5 mm wide, 127mm high and 228 mm deep. 65kV(I options): 73.5 mm wide, 145mm high and 228 mm deep.
High Voltage Connector	The power supply comes standard with a recessed epoxy insulated duct and a probed high voltage cable connected by a 16mm diameter metal connector. Standard high voltage cable is 1 meter long, and other specifications of cables or joints can be customized.
Compliant	CE

Optional

Optional code	Description of code
ENC	2mA enhance current
EXT	Oxford tube adaptor
i	Digital communication interface
F0	No filament power supply

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 (kV);

Maximum output power in W (watt);

Output polarity, P for positive output;

TXR1012 - P 65 - 50

Model	Polarity	Maximum voltage	Maximum power
TXR1012	P	65	50

TXR1012 Series High Voltage Power Supply Model Selection Table:

Output rating		Type of power supply
kV	mA	
25	2.0	TXR1012P25-50
50	1.0	TXR1012P50-50
50	2.0	TXR1012P50-50
65	1.0	TXR1012P65-65
65	2.0	TXR1012P65-65

Analog control interface J1: DB15

I/O	Signal	I/O	Signal
1	Ground	9	Filament limit Setpoint
2	Voltage monitor	10	Current program input
3	Current monitor	11	Local current program
4	High voltage enable	12	NC
5	+ 10V reference	13	NC
6	Filament monitor	14	Filament preheat setpoint
7	Voltage program input	15	Interlock return(ground)
8	Local voltage program		

Power Input/Filament Output Interface J2

Port	Signal	Port	Signal
+ 24V	+ 24V input	FIL OUT	Filament output
GND	+ 24V ground	FIL RET	Filament ground

SIC Option Digital Communication Interface J3: RS-232/RS-485

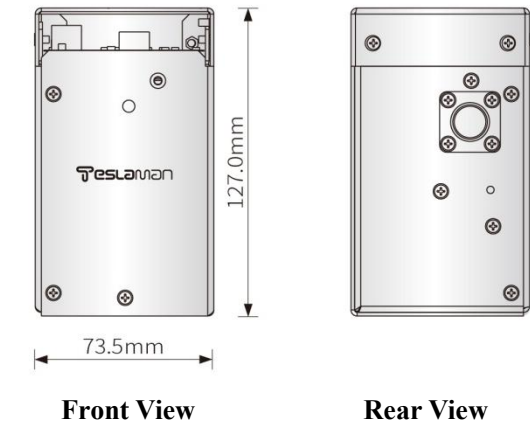
I/O	Signal	I/O	Signal
1	NC	6	RB
2	TXD/Send Data	7	RA
3	RXD/Accept Data	8	NC
4	NC	9	NC
5	Ground		

Ethernet Control Interface J4:

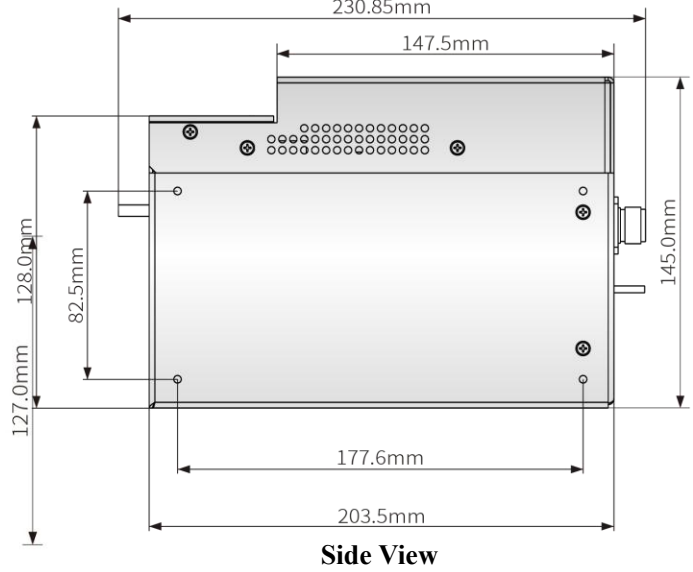
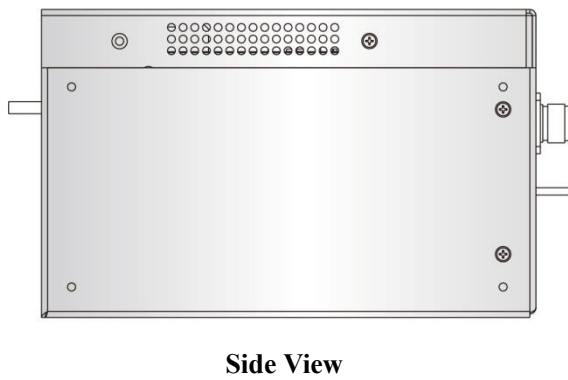
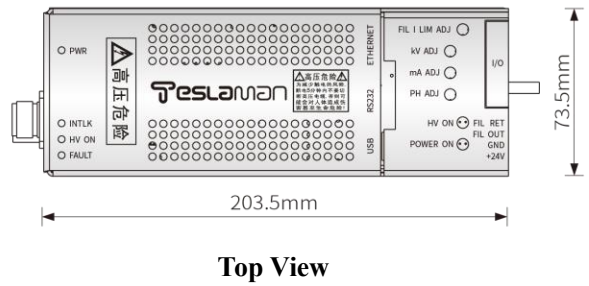
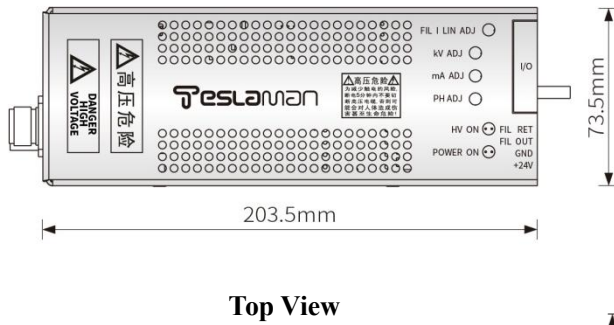
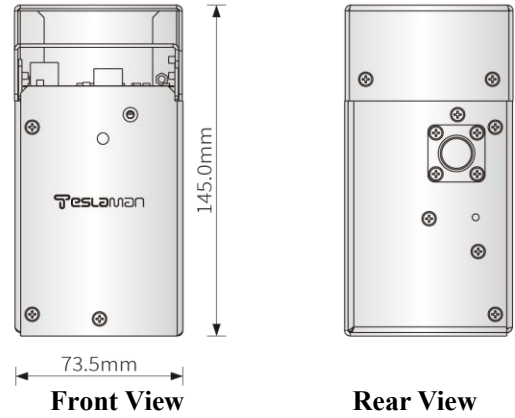
I/O	Signal	I/O	Signal
1	TX+	5	
2	TX-	6	RX-
3	RX+	7	
4		8	

Dimensions: mm

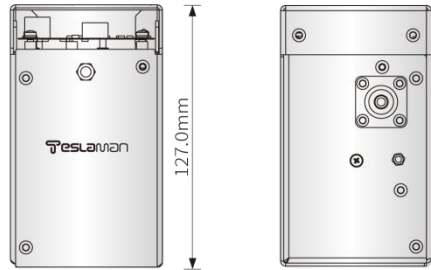
50kV:



50kV (option i):

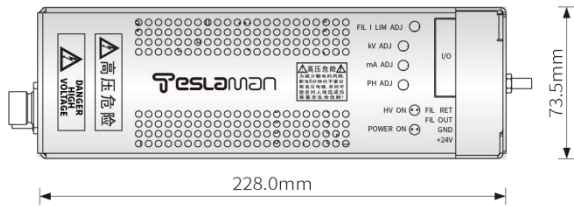


60kV:

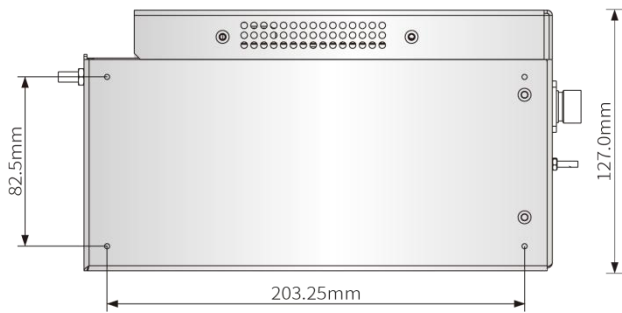


Front View

Rear View

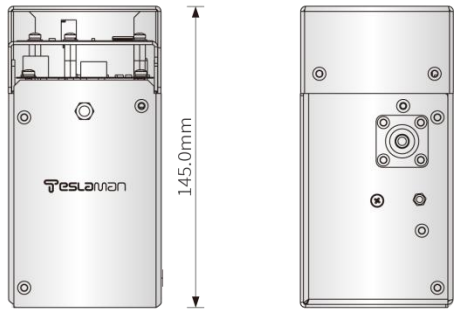


Top View



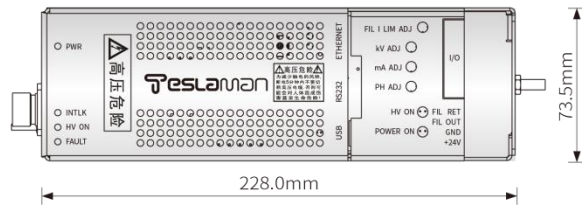
Side View

60kV (option i):

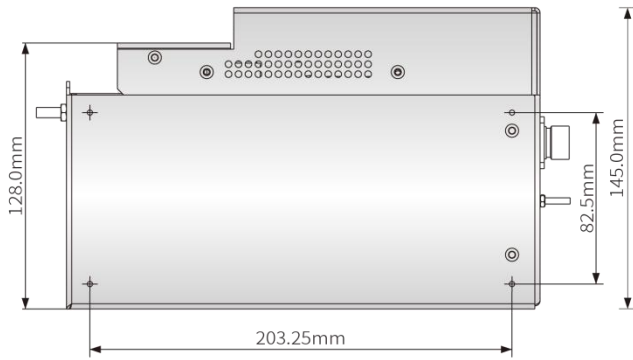


Front View

Rear View



Top View



Side View