

TP3090 Series High Voltage Pulse Power Supply



20kV, 100A, 10kHz, 300ns-Dc, Nanosecond Rising Time, Square Wave

Teslaman TP3090 series is a high performance 19" standard rack-mounted high voltage square wave pulse power supply, which adopts digital program control, can meet the functional requirements of customers' various control settings, and the output voltage, frequency and pulse width can be continuously adjusted. This power supply also has over-voltage and over-current protection function, and nanosecond transient response capability ensures fault-free operation of the power supply. This series of products have complete functions and can be added with customer-defined functions through software.

- The output voltage is continuously adjustable from 0 to 20kV
- The output frequency is continuously adjustable from 1 to 10kHz
- Output pulse width 300ns-DC continuously adjustable
- The rise time is less than 50ns and the fall time is less than 50ns
- Overshoot less than 4%
- Repetition accuracy is less than 0.1%
- With over-voltage and over-current protection and other functions
- Support external TTL signal triggering
- There is RS-485 communication interface
- Flat top voltage drop is less than 3%; Zero crossing
- OEM customization available

Typical Application:

plasma injection; Withstand voltage test; Electrostatic spinning; Electrostatic spray; Cell processing; DBD dielectric barrier discharge, etc.

Specifications:

Input: AC220V \pm 10%, 50/60 Hz

Output: 0-20kV, continuously adjustable from 0 to the highest voltage.

Maximum Output Current (optional in the following cases):

100A output: frequency <500Hz, pulse width <10 μ s;

100mA output: frequency <10kHz, pulse width up to DC.

Output Frequency: 1-10kHz continuously adjustable.

Output Pulse Width: 300ns-DC.

Maximum Output Power (optional in the following cases):

100kW output: frequency <1-500Hz,

pulse width < than 10 μ s;

1kW output: frequency is 10kHz,

pulse width up to DC.

Output Adjustment And Display: Pulse voltage, frequency, pulse width and other information can be adjusted through the front panel knob, and all values can be displayed.

Voltage Control: The front panel knob of the power supply can set the output voltage between 0 and the highest voltage.

Frequency Control: The knob on the front panel of the power supply can set the output frequency between 1 and the highest frequency.

Pulse Width Control: The front panel knob of the power supply can set the output pulse width between 300ns and the highest pulse width.

Malfunction indication: overvoltage, overcurrent and arc.

Voltage Regulation:

Load: 0.01% of output voltage no-load to full load.

Line: \pm 0.01% for \pm 10% change in input voltage.

Stability: less than 0.1% every 8 hours after 1/2 hour warm up (higher stability is optional).

Temperature Coefficient: 0.01% per $^{\circ}$ C.

Voltage Indication: Accuracy is 0.1% under rated output conditions.

Environmental:

Operational: -10 $^{\circ}$ C to + 50 $^{\circ}$ C.

Storage: -20 $^{\circ}$ C to + 80 $^{\circ}$ C.

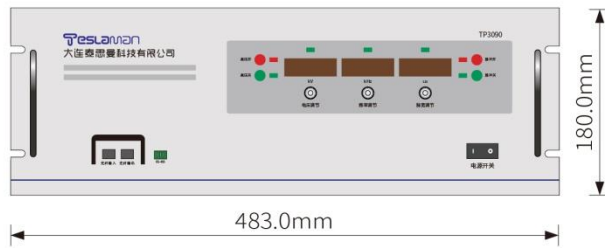
Overall Dimensions: 483mm wide, 180mm high and 550mm deep.

Pulse Output Connector: aviation plug.

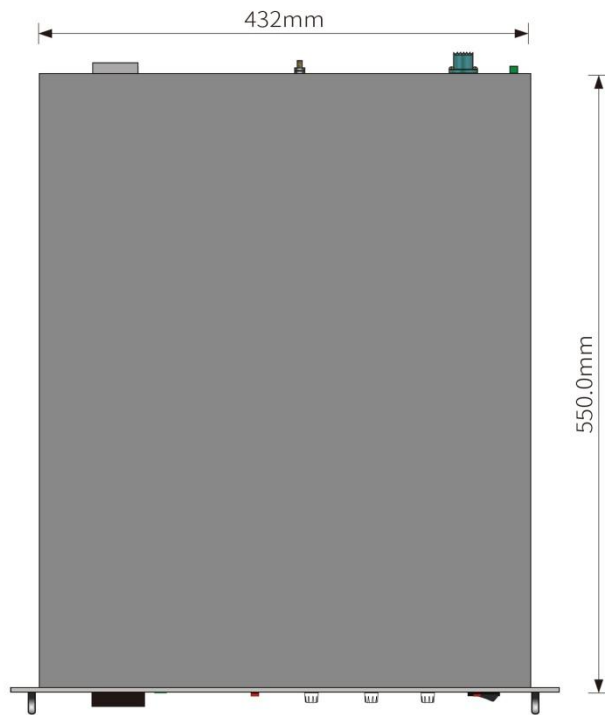
High Voltage Cable: High Voltage Power Supply provides a standard 1m long high voltage cable (optional cable length) to connect the high voltage power supply and the load.

Optical Fiber Interface: Pulse on and pulse off can be triggered by external optical signals.

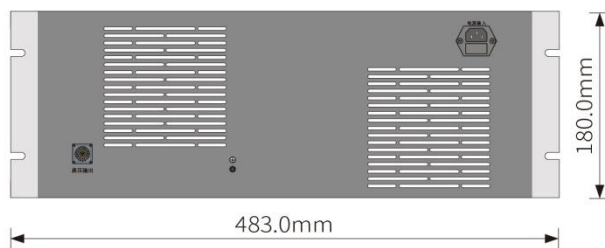
Overall Dimensions: mm



Front View



Top View



Rear View