

TD2211 Series Rack Mount DC High Voltage Power Supply



1kV-100kV, 1200W, Nanosecond Protection

Teslaman TD2211 series is a high performance 19" standard rack-mounted high voltage power supply. Adopting digital control mode, it can meet the needs of customers for various control functions. Nanosecond arc response capability ensures trouble-free operation of power supply, and full load efficiency reaches over 90%. This series of products have complete functions and wide output range, and can also add custom functions through software.

- Output Voltage 1kV-100kV
- Output Power 1200W
- Digitally Programmable
- Nanosecond Protection Response
- Over-Voltage, Over-Current, Short Circuit, Arc And Over-Temperature Protection
- RS-485 Isolated Digital Communication
- Secure Interlocking Function
- OEM customization Available

Typical Application:

Ion implantation; Electrostatic spraying; Electrostatic electret; Withstand voltage test; Particle acceleration; Electrostatic field; Ion beam power supply; Electron beam power supply; Accelerator power supply; Insulation test; Shore base of deep-sea observation network; High voltage capacitor charging; High voltage power taking; Scientific research, etc.

Specifications:

Input: AC220V \pm 10%, 50/60 Hz, 16A.

Output: Maximum output voltages could be designed from 1kV to 100kV, and the maximum output power is 2kW. 0 to the highest voltage is continuously adjustable, and the output is positive and negative single polarity.

Front Panel Status Indication:

High voltage on/off, voltage and current display, over-voltage, over-current, short circuit, arc and over-temperature protection, the power supply also has error code display function.

Voltage Control:

Local control: The power supply comes with a rotary encoder to set the output voltage between 0 and the highest voltage.

External analog control: The external 0 to 10V control signal can adjust the output from 0 to the highest output voltage.

Digital communication control: Through RS-485 communication interface, the output can be adjusted from 0 to the highest voltage according to the standard Modbus communication protocol.

Current Control:

Local control: The power supply comes with a rotary encoder to set the output current between 0 and the highest current.

External analog control: The external 0 to 10V control signal can adjust the output from 0 to the maximum current.

Digital communication control: Through RS-485 communication interface, the output can be adjusted from 0 to the maximum current according to the standard Modbus communication protocol.

Voltage Regulation:

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

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

Current Regulation:

Load: 0.01% of output current from 0 to rated voltage.

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

Ripple Voltage: Under rated output conditions, the peak-to-peak ripple voltage is 1% of the maximum output voltage (0.1% Vp-p is optional).

Environmental:

Operational: 0 °C to + 50 °C. Storage: -20 °C to + 80 °C.

Temperature Coefficient: 0.01% per °C.

Stability: less than 0.1% every 8 hours after 1/2 hour warm up.

Voltage and Current Indication:

Four-bit LED nixie tube, with an accuracy of 1% under rated output conditions.

Overall Dimensions: 482mm wide, 133.5 mm high and 320mm deep.

Connector: Recessed plastic insulated conduit and probed high voltage cable are connected by metal connector with diameter of 16mm/28mm. The standard high voltage cable is 2 meters long.

Weight: 10 to 20kg.

TD2211 Series High Voltage Power Supply Model Selection Table (Customizable):

Output Rating		Type of Power Supply	
kV	mA	Positive Polarity	Negative Polarity
1.000	1200	TD2211P1-1200	TD2211N1-1200
5.000	240.0	TD2211P5-1200	TD2211N5-1200
10.00	120.0	TD2211P10-1200	TD2211N10-1200
15.00	80.0	TD2211P15-1200	TD2211N15-1200
20.00	60.0	TD2211P20-1200	TD2211N20-1200
30.00	40.0	TD2211P30-1200	TD2211N30-1200
40.00	30.0	TD2211P40-1200	TD2211N40-1200
50.00	24.0	TD2211P50-1200	TD2211N50-1200
60.00	20.0	TD2211P60-1200	TD2211N60-1200
80.00	15.0	TD2211P80-1200	TD2211N80-1200
100.0	12	TD2211P100-1200	TD2211N100-1200

Power Input Terminal J1:

Foot position	Signal	Description
1	L	Live Wire
2	N	Null line
3	G	Ground wire

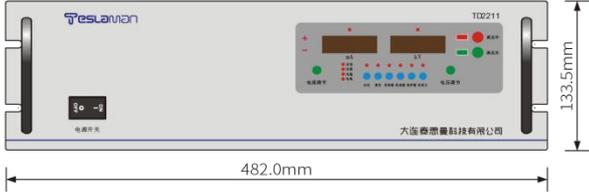
RS-485 Communication Interface J2:

Foot position	Signal	Description
1	A	RS485 +
2	G	Ground wire
3	B	RS485-

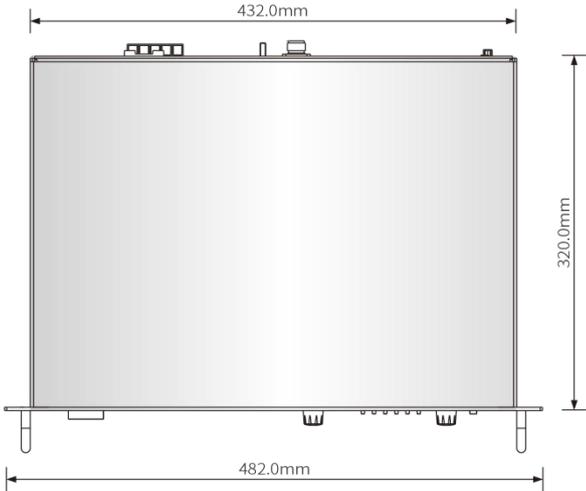
TD2211 Power DB25 Connector Signal Definition J3:

Pin	Signal	Description
1	Remote indication	Open collector, conduction for remote control
2	Constant voltage indication	Open collector, conduction for constant voltage output
3	High voltage off indication	Open collector, conduction for high voltage output off
4	High voltage on signal	The rising edge opens immediately (+ 15V for 17 feet)
5	Remote Enable	High (+ 15V) is effective
6	Security lock enabled	High (+ 15V) is effective
7	+ 15V	+ 15V, 100mA (max)
8	Current setting	0 to 10V = 0 to 100% rated output
9	Voltage setting	0 to 10V = 0 to 100% rated output
10	+ 15V	+ 15V, 100mA (max)
11	+ 10V	+ 10V, 1mA (max)
12	Voltage display	0 to 10V = 0 to 100% rated output
13	Current display	0 to 10V = 0 to 100% rated output
14	Fault indication	Open collector, conduction for power supply malfunction
15	Constant current indication	Open collector, conduction for constant current output
16	High pressure on indication	Open collector, conduction for high voltage output is turned on
17	High voltage off signal	Falling edge is high pressure off
18	Fault reset	High (+ 15V) is reset
19	Ground	Signal ground wire
20	Ground	Signal ground wire
21	Ground	Signal ground wire
22	Ground	Signal ground wire
23	Ground	Signal ground wire
24	Ground	Signal ground wire
25	Ground	Signal ground wire
Shielding	Ground	Signal ground wire

Overall Dimensions: mm



Front View



Top View



Rear View