

TRC2025 Series Rack Mount DC High Voltage Power Supply



1kV-100kV, 500W-1kW, Digital Voltage and Current Indicatio

Teslaman TRC2025 series is a high performance 19" standard rack-mounted high voltage power supply with optional positive/negative voltage and continuously adjustable output voltage and current. The output high voltage can achieve linear and stable rise. TRC2025 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 over-voltage and short circuit protection, arc protection, safety interlock and so on.

- Output Voltage 1kV-100kV
- Output Power 500W-1kW
- Over-Voltage, Over-Current, Short Circuit and Arc Protection
- Voltage and Current Regulation Function
- Voltage and Current Can Be Adjusted Remotely
- Digital Communication(optional)
- Security Interlock Function
- OEM Customization Available

Typical Application:

Ion implantation; Hi-POT test; Electrostatic electret; Withstand voltage test; Electric explosion; Electrostatic spinning; High voltage power taking; High voltage capacitor charging; Scientific research, etc.

Specifications:

Input: AC220V \pm 10%, 50Hz.

Output:

The maximum output voltage could be designed from 1kV to 100kV, and the maximum output power is 1kW. 0 to the highest voltage is continuously adjustable, and the output is positive or negative single polarity.

Voltage control:

Local control: 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 highest output voltage.

Current control:

Local control: The multi-turn potentiometer provided by the power supply can set the current from 0 to the highest current.

External remote control: The external 0 to 10V control signal can set the current from 0 to the highest current.

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 rate:

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

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

Ripple voltage:

Ripple voltage RMS value of 0.5% of the maximum output voltage (0.1% V_{p-p} optional) under the condition of output rated voltage.

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:

0 to + 10V, with an accuracy of 1% under rated output conditions.

Overall dimensions:

1kV to 50kV: 482mm wide, 133.5 mm high and 320mm deep.

51kV to 100kV: 482mm wide, 133.5 mm high and 500mm deep.

Connectors:

High Voltage Output Connector: Recessed epoxy insulated conduit and probed high voltage cable are connected by a 16mm diameter metal connector. The total length of standard high voltage cable is 2 meters.

Input and output connector: 25-pin terminal, including control and display signals.

Remote control of output voltage and current:

External potentiometer can be used to control output voltage and current remotely by using 10V reference voltage inside the power supply.

Remote voltage and current indication: 25-pin terminal contains 0 to 10V voltage and current indication signals, which can be externally connected with various digital or pointer meters.

TRC2025 Series High Voltage Power Supply Model Selection Table (Customizable):

Output Rating		Type of Power Supply	
kV	mA	Positive Polarity	Negative Polarity
5.00	200	TRC2025P5-1000	TRC2025N5-1000
10.00	100	TRC2025P10-1000	TRC2025N10-1000
20.00	50	TRC2025P20-1000	TRC2025N20-1000
30.00	33.33	TRC2025P30-1000	TRC2025N30-1000
40.00	25	TRC2025P40-1000	TRC2025N40-1000
50.00	20	TRC2025P50-1000	TRC2025N50-1000
60.00	16.67	TRC2025P60-1000	TRC2025N60-1000
80.00	12.5	TRC2025P80-1000	TRC2025N80-1000
100.0	10	TRC2025P100-1000	TRC2025N100-1000

Power input terminal J1:

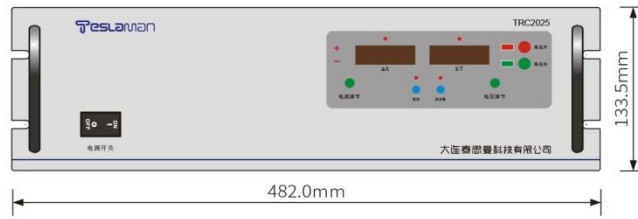
Pin Position	Signal	Description
1	L	Ground Wire
2	N	Live Wire
3	G	Live Wire

TRC2025 Power Supply DB25 Connector Signal Definition J3:

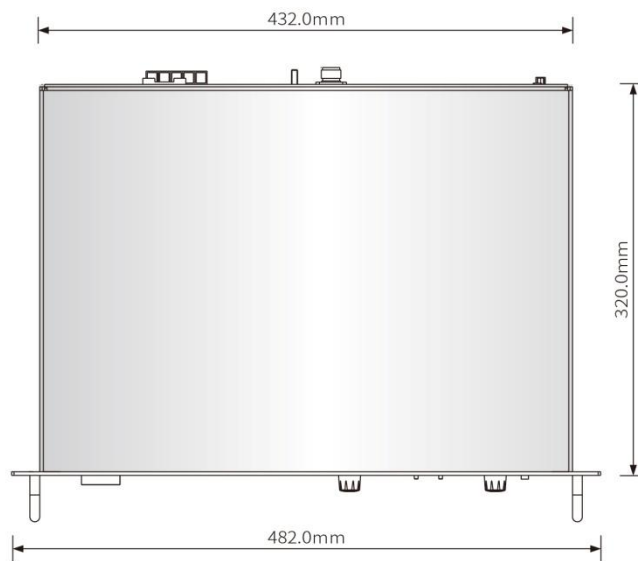
Pin	Signal	Description
1	Remote Indication	Open collector and conduct is remote control
2	Constant Voltage Indication	Open collector, conduction means constant voltage output
3	High Voltage Off Indication	Open the collector and turn it on, that is, turn off the high voltage output
4	High Voltage On Signal	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 the collector and turn it on, that is, the power supply is faulty
15	Constant Current Indication	Open collector, conduction means constant current output
16	High Pressure On Indication	Open collector, conduction, that is, 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

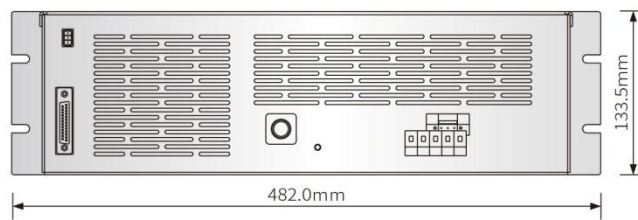
1 kV to 50kV:



Front View



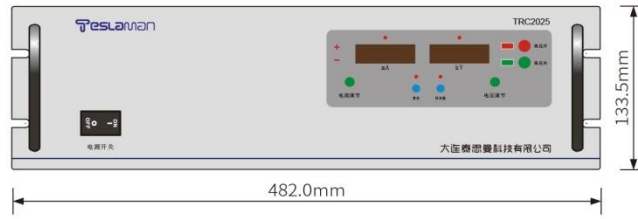
Top View



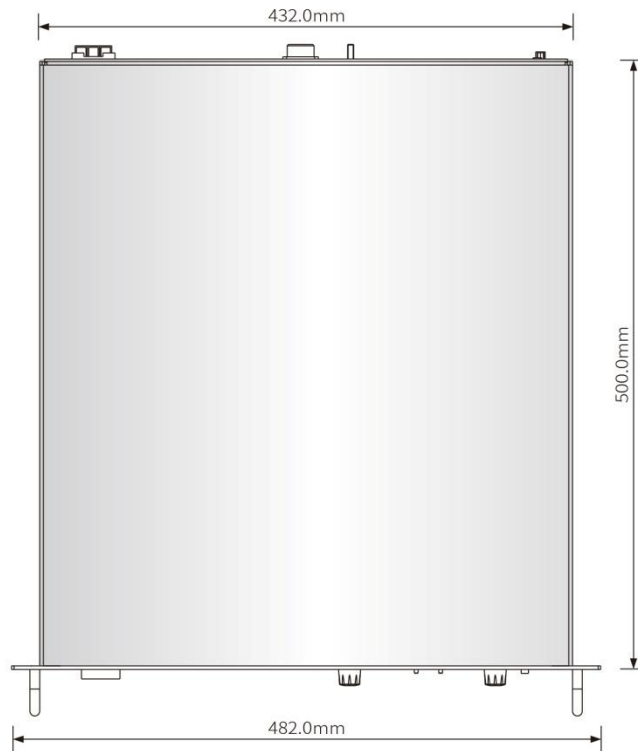
Rear View

Overall Dimensions: mm

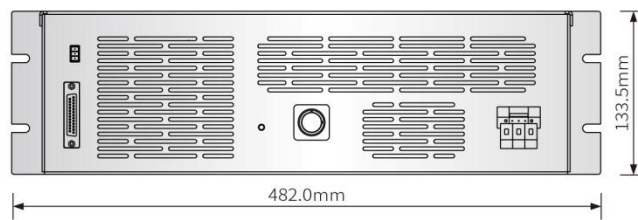
51 kV to 100kV:



Front View



Top View



Rear View