

TM6010 Series Modular DC High Voltage Power Supply

1kV-100kV, 1kW, High Power Density



Teslaman TM6010 series is a modular high voltage power supply. It has two control modes: panel control and remote control, which can meet the needs of customers for multiple functions. Nanosecond arc protection response capability ensures trouble-free operation of power supply, and the efficiency can reach more than 90%.

- Output Voltage 1kV-100kV
- Output Power 1kW
- Nanosecond Protection Response
- Over-Voltage, Over-Current, Short Circuit, Arc and Over-Heat Protection
- OEM Customization Available

Typical Application:

Electrostatic dust removal; Oil fume purification; Capacitor charging; Electrostatic spraying; Electron beam power supply; Accelerator power supply; Ion beam power supply; High energy particle injection, etc.

Specifications:

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

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

Voltage Control:

Local control: The power supply comes with a multi-turn potentiometer, which can 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 voltage.

Current Control:

Local control: The power supply comes with a multi-turn potentiometer to set the output current between 0 and the maximum current.

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

Voltage Regulation:

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

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

Current Regulation:

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 is 1% of the maximum output voltage (0.1% Vp-p optional) under rated output conditions.

Environmental:

Operational: 0 °C to + 50 °C.

Storage: -20 °C to + 80 °C.

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

Overall Dimensions:

1kV to 50kV: 135mm wide, 145mm high and 360mm deep.

51kV to 100kV: 185mm wide, 194mm high and 390mm deep.

Weight:

1kV to 50kV: 8.5 kg;;

51kV to 100kV: 12kg.

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

Output Voltage and Output Current Remote Control: The external potentiometer can use the internal 10V reference voltage of the power supply for remote control of output voltage and current.

Remote Voltage and Current Indication: 15-pin terminals contain voltage and current indication signals from 0 to 10V, and can be externally connected with various digital or pointer meters.

TM6010 Series High Voltage Power Supply Model Selection Table (1kW):

Output Rating		Type of Power Supply	
kV	mA	Positive Polarity	Negative Polarity
10	100	TM6010P10-1000	TM6010N10-1000
50	20	TM6010P50-1000	TM6010N50-1000
100	10	TM6010P100-1000	TM6010N100-1000

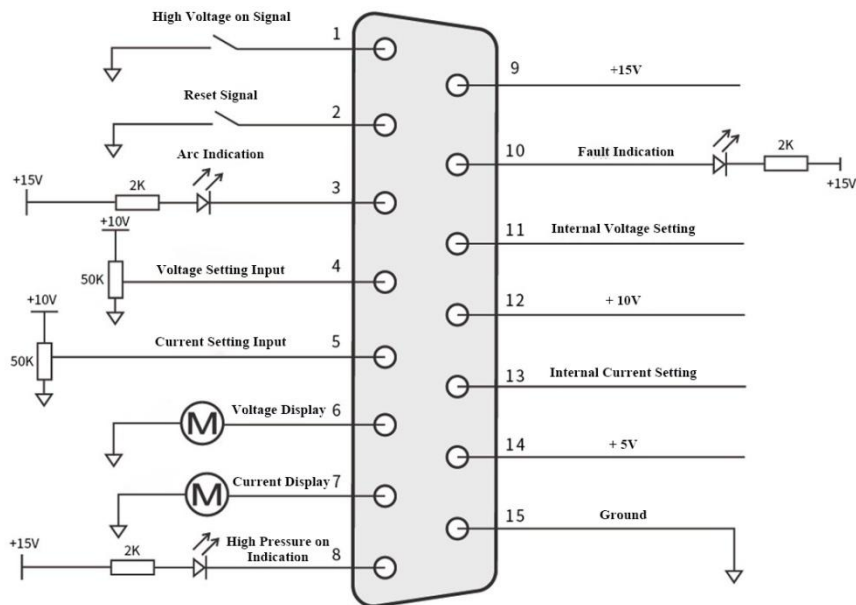
Power input terminal:

Identification	Signal	Identification	Signal	Identification	Signal
L	FireWire	N	Null Line	G	Ground Wire

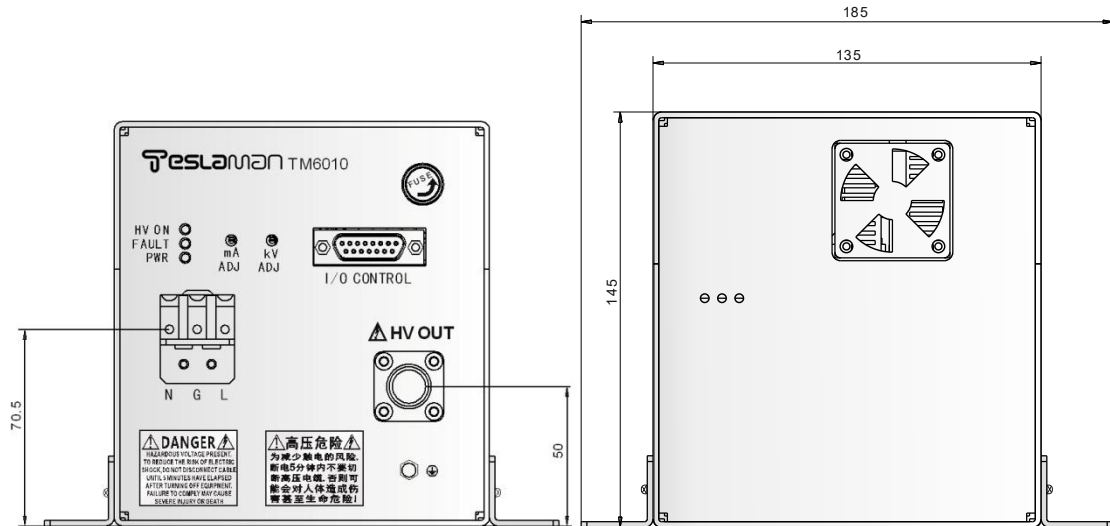
TM6010 Power Supply DB15 Connector Signal Definition:

Pin	Signal	Description
1	High Voltage on Signal	Effective when round
2	Reset Signal	Effective when ground
3	Arc Indication	Collector open, max 15V
4	Voltage Setting Input	0 ~ 10V corresponds to 0 ~ 100% rated output
5	Current Setting Input	0 ~ 10V corresponds to 0 ~ 100% rated output
6	Voltage Display	0 ~ 10V corresponds to 0 ~ 100% rated output
7	Current Display	0 to 10V corresponds to 0 ~ 100% rated output
8	High Pressure on Indication	Collector open, max 15V
9	+ 15V	+ 15V, 100mA max
10	Fault Indication	0V fault, + 15V normal
11	Internal Voltage Setting	Effective with 4-pin short connection
12	+ 10V	+ 10VDC, 1mA (max)
13	Internal Current Setting	Effective with 5-pin short connection
14	+ 5V	+ 5V, 300mA max
15	Ground	Signal ground

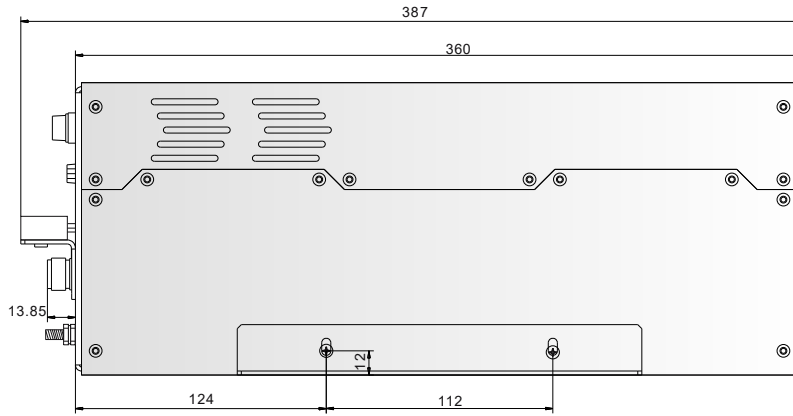
DB15 wiring diagram:



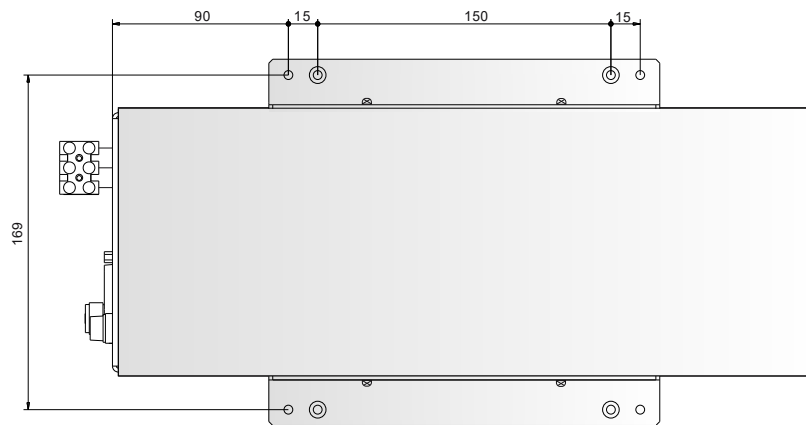
Overall Dimensions: 1kV to 50kV (mm)



Front View & Rear View

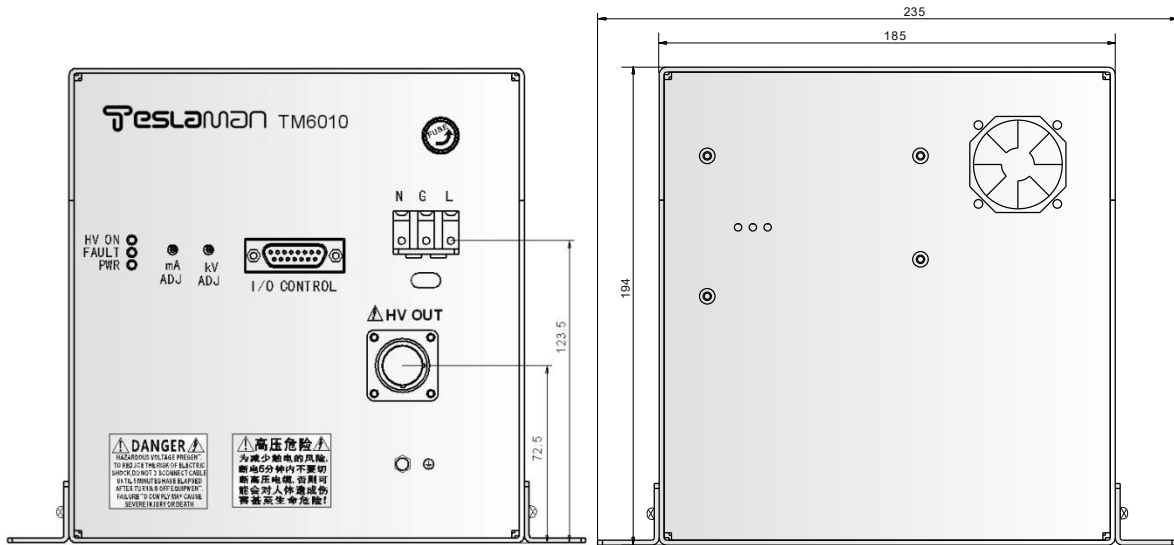


Side View

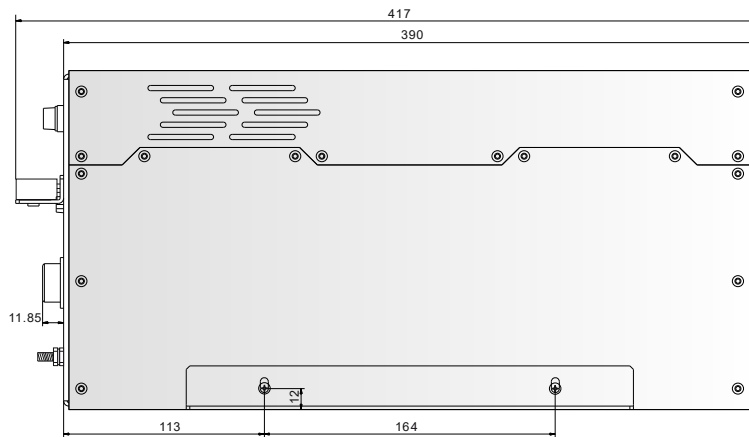


Top View

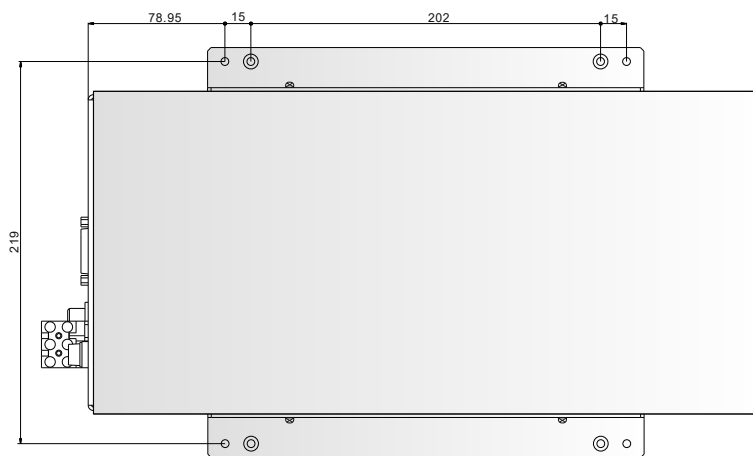
Overall Dimensions: 51kV to 100kV (mm)



Front View & Rear View



Side View



Top View