

# TC4080 Series Bipolar Rack Mount DC High Voltage Power Supply

## 1kV-50kV, 300W, Bipolar Output



Teslaman TC4080 series high voltage power supply can be installed in 19" standard cabinet. One high voltage output interface can output positive/negative high voltage, and the positive/negative high voltage can be switched by buttons on the panel, and the output high voltage can rise linearly and smoothly. The output voltage and current values are displayed through the LED display screen on the panel. TC4080 series power supply can also be connected with external potentiometer to realize remote control of output voltage and current, and can be connected with external voltage and current display. High voltage output has the functions of overvoltage and short circuit protection, safety interlock and so on.

- Output Positive/Negative Voltage 1kV-50kV
- Digital Voltage and Current Display
- Overvoltage and short Circuit Protection
- Voltage and Current Regulation Function
- OEM Customization Available

### Typical Application:

Electrostatic separation; Electrostatic spraying; Capillary electrophoresis; Electrostatic flocking; Scientific experiments, etc.

### Specifications:

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

**Output:** A variety of maximum output voltages from 1kV to 50kV can be selected, and the maximum output power is 300W. 0 to the highest voltage can be continuously adjusted, and the positive and negative polarity of output voltage can be switched.

#### Polarity Switching:

Internal power supply: The contact switch provided by the power supply can switch the positive and negative polarity of the output.

External remote control: The external signal can switch the positive and negative polarity of the output.

#### 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 voltage from 0 to the highest output voltage.

#### Current Control:

Internal power supply: 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 maximum output current.

#### Voltage Regulation Rate:

Relative load: 0.01% (no load to rated load).

Relative input: 0.01% (input voltage change is 10%).

#### Current Adjustment Rate:

Relative load: 0.01% (no load to rated load).

Relative input:  $\pm$  0.01% (input voltage change  $\pm$  10%).

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

#### Ambient Temperature:

Working time: 0 °C to + 45 °C. Storage: -20 °C to + 80 °C.

**Temperature Coefficient:** 0.01% per degree Celsius.

**Stability:** less than 0.1% every 8 hours after starting up for 0.5 hours (higher stability is optional).

#### Voltage and Current Indication:

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

**Overall Dimensions:** 482.6 mm wide, 87.5 mm high and 443.6 mm deep.

#### Connectors:

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

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 the output voltage and current remotely by using 10V reference voltage inside the power supply.

#### Remote Voltage and Current Indication:

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

TC4080 Series Model Selection Table (300W)

Output Rating		Type of Power Supply
kV	mA	Polarity Switchable
10	30	TC4080PN10-300
15	20	TC4080PN15-300
20	15	TC4080PN20-300
30	10	TC4080PN30-300
40	7.5	TC4080PN40-300
50	6	TC4080PN50-300

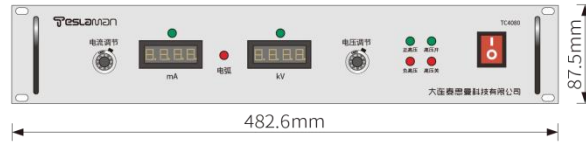
Input Terminal

JP2	Signal	JP2	Signal
1	Firewire	3	Zero Line
2	Ground Wire		

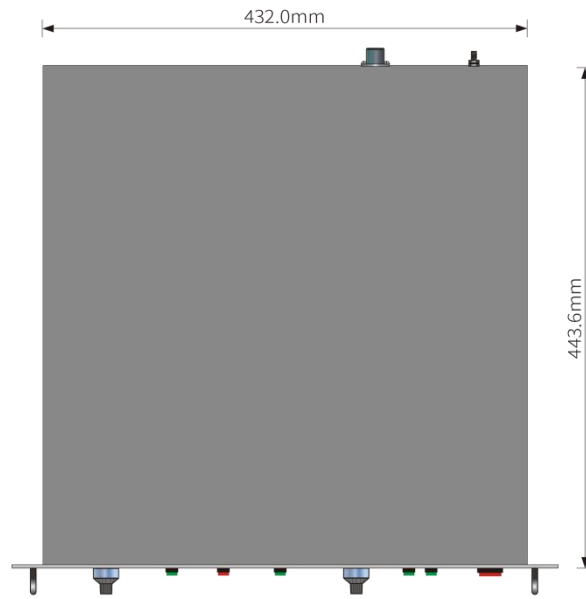
DB25 Connector

Serial number	Signal	Serial number	Signal
1	+ 5V External Voltmeter Power Supply	14	Negative high pressure indication
2	Ground Of External Voltmeter Power Supply	15	High voltage on signal
3	+ 5V External Ammeter Power Supply	16	Ground
4	External Ammeter Power Supply Ground	17	High pressure on indication
5	Current Indication Signal	18	High voltage off signal +
6	Voltage Indication Signal	19	High voltage off signal-
7	Current Control Signal Input	20	High voltage off indication
8	Current Control Signal Output	21	Ground
9	Positive High Voltage Switching Signal	22	+ 10V reference voltage
10	Ground	23	Ground
11	Positive High Pressure Indication	24	Voltage control signal output
12	Negative High Voltage Switching Signal +	25	Voltage control signal input
13	Negative High Voltage Switching Signal-		

# Overall Dimensions:



Front View



Top View



Rear View