

# TCM6006 Series High Voltage DC Power Supply

**Rated Voltage 50kV, Rated Power 50W**



Teslaman TCM6006 series high voltage power supply, using full digital PID control mode, over-voltage and over-current short circuit protection, fast voltage and current transient response capability, up to 0.01% stable output.

- Maximum Output Voltage 50kV, Adjustable
- Maximum Output Current 1mA
- Maximum Output Power 50W
- Abnormal Full Protection
- RS-485 Digital Communication Interface

#### Typical Application:

Electrostatic electret; Electrostatic wire separation; Electrostatic separation; Electrostatic elimination; Electrostatic spinning; Electrostatic printing and other electrostatic applications.

#### Specifications:

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

**Output:** The maximum voltage is 50kV, the maximum output current is 1mA, and the maximum power is 50W.

**Front Panel Functions:** power on/off, whether self-start, whether memory, voltage/current preset, high voltage output/turn-off, user interface settings and voltage output adjustment.

**Front Panel Status Indication:** polarity indication, constant voltage/constant current mode, self-starting status, memory status, preset status, output status and abnormal code display.

**Voltage Control:** The rotary encoder of the power supply can set the output voltage between 0 and the highest voltage.

**Current Control:** Current regulation can be realized through preset functions.

**Coarse/Fine Adjustment Function:** The power supply automatically identifies coarse/fine adjustment according to the rotation rate of the knob. Large step output when rotating quickly and small step output when rotating slowly.

**Remote Control:** RS-485 digital communication interface can be optional, and can communicate with the host computer or other digital equipment. Our company provides upper computer software for testing only. The equipment adopts Modbus communication protocol, and refer to Appendix "Communication Protocol Part" for relevant information.

#### Voltage Regulation Rate:

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

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

#### Current Regulation Rate:

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

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

#### Ripple Voltage:

It is less than 1% Vrms at rated voltage (0.1% Vp-p is optional).

#### Environmental:

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

**Temperature Coefficient:** Usually 100ppm per °C.

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

Humidity: 10-90% without condensation.

#### Voltage and Current Display:

Three-digit nixie tube, voltage accuracy  $\pm$  (0.5% +1), current accuracy  $\pm$  (4% +3).

#### Overall Dimensions:

The width is 214mm, the height is 67mm and the depth is 285mm.

**Weight:** About 4.8 kg.

#### High Voltage Output Line:

The power supply has its own shielded high-voltage cable. The standard high voltage cable is 2 meters long and 5.5 mm outside diameter. Other lengths are optional