

# TPS7071 series

## High-precision DC high-voltage power supply

5kV, 2kW, ripple <10ppm, stability <10ppm



Teslaman TPS7071 series is a 19" standard rack-mounted high-type high-voltage power supply with low ripple, high stability and high precision. After 8 hours of long-term testing, the ripple is less than 10ppm (measured 25mV) and the stability is better than 10ppm. At low power ( $\leq 200W$ ), the ripple is less than 1ppm. Higher parameter indicators are required to be customized.

- Output voltage 5kV
- Output power 2kW
- Ripple is less than 10ppm
- Stability is better than 10ppm
- Overvoltage, overcurrent, short circuit, arc and overtemperature protection
- Higher indicators require customization

### Typical applications:

Semiconductor testing;  
Material analysis;  
Electrostatic applications;  
Electron microscope;  
Scientific research.

### Specifications:

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

**Output:** Output voltage 5kV, output power 2kW. 0 to the highest voltage is continuously adjustable, and the output negative polarity.

#### Front panel status instructions:

High voltage on, high voltage off, voltage and current display, constant voltage and constant current mode display.

#### Voltage control:

The power supply comes with a rotary encoder that 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 maximum output voltage.

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

#### Current control:

The power supply comes with a rotary encoder that can 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.

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

#### Voltage adjustment rate:

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

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

#### Current adjustment rate:

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

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

#### Ripple voltage:

Under rated output conditions, it is better than 10ppm (p-p).

#### Ambient temperature:

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

**Stability:** 0.5 hours after booting, less than 0.1% every 8 hours.

**Temperature coefficient:** Voltage and current are better than 100ppm/°C.

**Humidity:** 10-90% without condensation.

#### Voltage and current indication:

Four-bit LED digital tube with  $\pm 1\%$  accuracy under rated output conditions.

#### External dimensions:

482mm wide, 178mm high and 660mm deep.

**High-voltage output line:** Power supply comes with shielded coaxial cable, wire length 2 meters, non-detachable

**Weight:** 10 to 20kg.

### Power input terminal J1:

Foot position	Signal	Explain
1	L	Live
2	N	Neutral
3	G	Ground

### External dimensions: mm

