

TESC7080 Series High-voltage Power Supply for Electrostatic Chuck



±5kV, 20W, 1s Positive And Negative Switching Response

Teslaman TESC7080 series electrostatic chuck power supply is suitable for electrostatic chuck semiconductor processing applications. It can provide the required accurate voltage within 10ms and switch polarity within 1s. These customized designs provide protection during the semiconducting process. It can provide ground reference reversible output polarity, as well as floating ground bipolar output with related floating interface. Integrated troubleshooting circuits monitor power functions and transfer state data to the user interface. It adopts a compact and lightweight package and can be OEM.

- Ground Reference, Reversible Output
- Central point monitoring
- Analog quantity control
- 485 control
- Ethernet control

Typical Application:

E-Cuck, Electrostatic chuck, electrostatic suction cup, electrostatic adsorption system.

Specifications:

Input Voltage: +24VDC±5%,5A.

Switch controlled on front panel and fuse protected.

Output Polarity: Floating ground, bipolar output, polarity switchable.

Maximum Output Voltage: 0 to ±5kV.

Maximum Output Current: 2mA.

Maximum Output Power: 20W.

Voltage Regulation: Load: ≤0.001% (no load to rated load).

Conversion Rate: Typical 1s.

Maximum cycle frequency: 0.5Hz.

Overshoot: <10% of the set value

Ripples:3Vpp.

Line: <0.1% for 10% input voltage change under any load conditions

Load: <1.3% for zero to full load

Voltage Display: Resolution = 100V

Accuracy = ±1% of actual output (±10 volt offset)

Current Display: Resolution = 100μA.

Accuracy = ±2% of the actual output ±100μA offset.

Typical Load Capacitance: <20nF (for other load capacitors, please contact TeslaMan).

Protection: Arc and short circuit protection. Equipped with input and output current limits. The output current limit can be set in the range of 0.1mA to 2mA.

Continuous arc protection needs to be customized.

Communication: Through DB9 analog control, RS-485 serial interface, USB or Ethernet can also be selected for control. Note: When Ethernet is connected to LAN port/485, serial communication will be disabled

Front panel control: With front panel buttons for local control.

Switch: Manually change the output polarity.

Output On/Off: The soft switch mode controls the high-voltage output.

Rotation Control/Input: Used for navigation and input value changes.

Stability: After preheating for 1 hour, <0.3%/hour, <0.3%/8 hours under constant operating conditions.

Temperature Coefficient: <0.3%.

Ambient Temperature:

Operational: 0°C to 45°C;

Storage:-20°C to 70°C;

Humidity: 0 to 85% RH, non-condensation.

Cooling: convection cooled.