TPTV6090 Series
Modular high voltage Power Supply

70kV, 200W/350W, high stability, low ripple and low noise

Teslaman TPTV6090 Series Modular High Voltage Power Supply provides a maximum output power of 350W. Built-in resonant inverter, the efficiency can reach 80%, and the dynamic response is fast.

- Output voltage from 1kV to 70kV
- Over-voltage and short circuit protection
- EMI/RFI input filtering
- Test points for output current and voltage
- Internal 10V reference
- Disable control through TTL signal output
- Provide OEM customization

Typical Application:
X-ray system; Electron beam system; Capacitor charging system.

Specifications:

Enter:
200W: 115VAC ± 10%, 2.5 A, 50/60 Hz.
350W: 115VAC ± 10%, 4.3 A, 50/60 Hz.
200W: 220VAC ± 10%, 1.3 A, 50/60 Hz.
350W: 220VAC ± 10%, 2.2 A, 50/60 Hz.

Optional:
200W: 110VAC ± 10%, 2.8 A, 50/60 Hz.
350W: 110VAC ± 10%, 4.9 A, 50/60 Hz.
Specify the input voltage when ordering.

Output: Models range from 1kV to 70kV, 200W or 350W. Positive or negative polarity output is available for each model.

Voltage regulation:
Load: 0.01% of the output voltage when changing from no load to full load.
Input: ± 10% input voltage change, ± 0.01%.

Current regulation:
Load: Variation from 0 to rated voltage, 0.01% of output current.
Input: 0.01% of rated current in the specified input range.

Efficiency: Typical 80%.

Ripple:
200W: 0.1% p-p of the output voltage.
350W: 0.2% p-p of the output voltage.

Switching frequency: 45-65kHz.

Temperature:
Working temperature: 0 °C to + 40 °C.
Storage temperature:-40 °C to + 85 °C.
Voltage temperature coefficient: 0.01%/°C.

Stability (voltage and current): 0. 01%/hour after 0.5 hours of startup. 0.02% every 8 hours.

Cooling:
200W: Natural cooling.
350W: Fan cooling, rear air intake.

Dimensions:
1-40kV: 273mm wide, 81mm high and 254mm deep.
50-70kV: 276mm wide, 106.5 mm high and 351mm deep.

High voltage output: Non-pluggable high voltage cable when ≤ 40kV. When > 40kV, the cable can be plugged and unplugged, with a length of 1.5 meters.

TPTV6090 Series High Voltage Power Supply Model Selection Table (Customizable):

Output rating		Type of power supply	
kV	mA	Positive polarity	Negative polarity
1	350	TPTV6090P1-350	TPTV6090N1-350
10	35	TPTV6090P10-350	TPTV6090N10-350
20	17.5	TPTV6090P20-350	TPTV6090N20-350
30	11.67	TPTV6090P30-350	TPTV6090N30-350
50	7	TPTV6090P50-350	TPTV6090N50-350
60	5.83	TPTV6090P60-350	TPTV6090N60-350
70	5	TPTV6090P70-350	TPTV6090N70-350

Interface connector 9 pins:

Stitch	Signal	Description
1	+ 10VDC Reference	+ 10VDC, max 1mA
2	Current programming	0 to 10VDC = 0 to 100% rated output, Zin = 10 M Ω.
3	Voltage monitoring	0 to 10VDC = 0 to 100% output rating, Zout = 10 k Ω.
4	Voltage programming	0 to 10VDC = 0 to 100% rated output, Zin = 10 M Ω.
5	Commons	Power source ground
6	Current monitoring	0 to 10VDC = 0 to 100% output rating, Zout = 10 k Ω.
7	Enable/Disable	Ground = disabled, open = high voltage open.
8	OVP indicator	The collector is connected to + 5VDC through a 1 k Ω resistor, and the transistor is on = OVP
9	Signal return	Signal return

Overall dimensions: mm