TMPD6068 Series

Modular high Voltage Power Supply | 2.5 kV-20kV, 10W, high stability, low stability coefficient

- Digital or differential analog voltage programming
- Standard RS-232/RS-485 control
- 10W output power
- Power supply and current monitoring
- High stability
- Ultra-low ripple and noise
- Compact design

Product Introduction:

Teslaman TMPD6068 Series is a 10W high voltage module with output voltage range from 2.5 kV to 20kV. The TMPD6068 series offers low noise, high efficiency, compact package, ultra-low ripple and high stability. Provides a full-featured remote user interface via a 15-pin D-connector and an RS-232/RS-485 serial interface. Full analog or full digital control is defined by interface connector links. Teslaman TMPD6068 Series is a compact and lightweight modular power supply with positive and negative output polarity, suitable for OEM.

Typical Applications:

Photomultiplier tube; Electrostatic printing; Electron beam and ion beam; Electron multiplier tube detector; Mass spectrometry analysis; Microchannel plate detector; Electrostatic lens; Atomic energy instrument.

Specification Description:

Input voltage	+ 24VDC, ± 2VDC.
Input current	Max. 1A.
Output voltage	from 2.5 kV to 20kV, optional in 5 models.
Output polarity	positive polarity or negative polarity.
Power	Maximum 10W.
Voltage regulation	Load: ≤ 10ppm (no load to rated load). Input: ≤ 10ppm (when the input voltage changes to 1V).
Current limit	110% of rated output current.
Ripple	less than 5mVP-P.
Stability	After 1 hour operation, 10ppm per hour, 25ppm every 8 hours, 100ppm every 1000, every 1000 hours.
Temperature coefficient	10ppm per degree Celsius.
Protection	Arc and short circuit protection. Can't withstand continuous arc.
Environment	Temperature range: Operation: 0 ° C to 50 ° C.Storage:-35 ° C to 85 ° C.
Humidity	20% to 85% relative humidity, no condensation.
Cooling	Convective cooling.
Dimensions	2.5-10kV: 70mm wide, 30mm high and 130mm deep. 15-20kV: 70mm wide, 30mm high and 165mm deep.
Weight	2.5/5/10 kV: about 450 grams. 15/20 kV: about 650 grams.
Interface connector	5 pin male D connector. Output connector:Provide a fixed 1m long high voltage cable.

Description of Model Code

The model code represents the performance and parameters of the power supply, which are:

Maximum output voltage in kV;

Maximum output power in W;

Output polarity, P for positive output, N for negative output;

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Model	Polarity	Maximum Voltage	Maximum Power

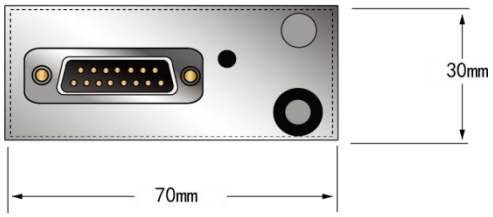
TMPD6068 Series High Voltage Power Supply Model Selection Table (Customizable):

Output rating		Type of power supply	
kV	mA	Positive polarity	Negative polarity
2.5	4	TMPD6068P2.5-10	TMPD6068N2.5-10
5	2	TMPD6068P5-10	TMPD6068N5-10
10	1	TMPD6068P10-10	TMPD6068N10-10
15	0.66	TMPD6068P15-10	TMPD6068N15-10
20	0.5	TMPD6068P20-10	TMPD6068N20-10

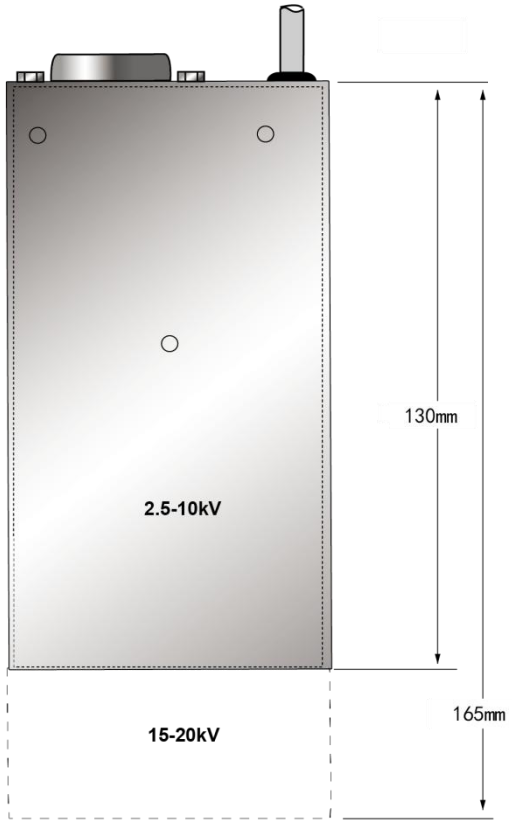
External interface-15 pin male D connector:

Stitch	Signal	Description
1	Power source ground	Ground
2	+ 24VDC input	+ 24VDC, max 1A
3	Voltage monitoring output	Voltage monitoring 0-10VDC corresponds to 0 to full-scale output ± 1% (on signal ground) Zout=10 k Ω
4	Voltage reference output	10VDC, max 1mA
5	Voltage programming input	0 to 10VDC = 0 to 100% rated output ± 1%, Zin=10 M Ω
6	Voltage Programmed Differential Amplifier Output	0 to 10VDC = 0 to 100% rated output, Zout=10 k Ω
7	Voltage Programmed Differential Amplifier Input-Positive	0 to 10VDC Difference between pins 7 and 9 = 0 to 100% of rated output, diode clamp grounding, Zin=38 k Ω
8	Current monitoring output	Voltage monitoring 0-10VDC corresponds to 0 to full-scale output ± 1% (on signal ground) Zout=10 k Ω
9	Voltage Programmed Differential Amplifier Input-Negative	0 to 10VDC Difference between pins 7 and 9 = 0 to 100% of rated output, diode clamp grounding, Zin=38 k Ω
10	Voltage programming digital output	0 to 10VDC = 0 to 100% rated output, Zout=10 k Ω
11	Analog signal ground	Analog signals are used for control and monitoring
12	Enable input	Low = enabled, TTL, CMOS, subject to open collector
13	Digital mode	RS-232 or RS-485 configuration low level = RS-485, open circuit = RS-232
14	RS-232TxD/RS-485 (-)	Send data (output) on pin 1 or RS-485 inverted
15	RS-232RxD/RS-485 (+)	Receive data (input) on pin 1 or RS-485 non-inverted

Dimensions: mm



Front View



Vertical View

Side View