



TMPS6067 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

Teslaman TMPS6067 Series is a 10W high voltage module with output voltage range from 2.5 kV to 20kV. The TMPS6067 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 TMPS6067 Series is a compact and lightweight modular power supply with positive and negative output polarity, suitable for OEM.

Typical application:

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

Specifications:

Input voltage: + 24VDC, ± 2 VDC.

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: ≤ 10 ppm (no load to rated load).

Input: ≤ 10 ppm (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: 15 pin male D connector.

Output connector:

Provide a fixed 1m long high voltage cable.



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TMPS6067 Series High Voltage Power Supply Model Selection Table (Customizable):

Output rating		Type of power supply	
kV	mA	Positive polarity	Negative polarity
2.5	4	TMPS6067P2.5-10	TMPS6067N2.5-10
5	2	TMPS6067P5-10	TMPS6067N5-10
10	1	TMPS6067P10-10	TMPS6067N10-10
15	0.66	TMPS6067P15-10	TMPS6067N15-10
20	0.5	TMPS6067P20-10	TMPS6067N20-10

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 $\pm 1\%$ (on signal ground) $Z_{out}=10\text{ k}\Omega$
4	Voltage reference output	10VDC, max 1mA
5	Voltage programming input	0 to 10VDC = 0 to 100% rated output $\pm 1\%$, $Z_{in}=10\text{ M}\Omega$
6	Voltage Programmed Differential Amplifier Output	0 to 10VDC = 0 to 100% rated output, $Z_{out}=10\text{ k}\Omega$
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, $Z_{in}=38\text{ k}\Omega$
8	Current monitoring output	Voltage monitoring 0-10VDC corresponds to 0 to full-scale output $\pm 1\%$ (on signal ground) $Z_{out}=10\text{ k}\Omega$
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, $Z_{in}=38\text{ k}\Omega$
10	Voltage programming digital output	0 to 10VDC = 0 to 100% rated output, $Z_{out}=10\text{ k}\Omega$
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

Overall dimensions: mm

