

TMS6050 Series Modular High Voltage Power Supply

3kV, 0.9 W, Compact High Performance Module, Variable Voltage Programming



Teslaman TMS6050 Series is a compact high voltage power supply module that can be mounted on a printed circuit board (PCB), ranging from 1kV to 3kV, with positive or negative output polarity. Variable voltage programming through 0-10V signal is equal to 0-100% rated output voltage. Provide a 0-10V voltage monitoring signal. In addition, status signal and enable signal control are provided. All power supplies have built-in fault protection. The TMS6050 series is suitable for applications where compact high performance PCB mountable power supplies are required, such as driving electron multipliers in mass spectrometers. Aluminum housing helps shield this unit and reduce radiated noise.

- Compact High Performance Module
- Variable Voltage Programming
- Output Power 0.9 W
- Voltage Detection
- Arc and Short Circuit Protection

Typical Application:

Photomultiplier tube; Electron multiplier; Mass spectrometry analysis; Electrostatic lens; Nuclear instruments.

Specifications:

Input Voltage: + 24VDC, ± 2 VDC.

Input Current: The maximum input current is 150mA.

Output Polarity: Positive polarity or negative polarity can be specified.

Output Power: Max. 0.9 W.

Output Voltage Accuracy: $\pm 1\%$.

Voltage Regulation:

Input: 21.6 VDC to 26.4 VDC, $\pm 0.02\%$.

Load: 0-100% rated load, 0.02%.

Stability: 0.05% per hour after warm-up for 1 hour.

Temperature Coefficient: 10ppm/ $^{\circ}$ C.

Stabilization Time: ≤ 100 ms after startup or activation, and within ≤ 2 seconds when power is cut off or high voltage is turned off, it will decay to less than 60V.

Protection: Arc and short circuit protection, not long-term arc.

Environmental:

Temperature range:

Operational: 0 $^{\circ}$ C to 60 $^{\circ}$ C.

Storage: -20 $^{\circ}$ C to 70 $^{\circ}$ C.

Humidity: 95% relative humidity, no condensation.

Cooling: Natural cooling.

Size: 56.2 mm wide, 69.4 mm high and 30.7 mm deep.

Weight: About 200g.

TMS6050 Series High Voltage Power Supply Model Selection Table (Customizable):

Output Rating		Type of Power Supply	
kV	mA	Positive Polarity	Negative Polarity
1	0.9	TMS6050P1-0.9	TMS6050N1-0.9
2	0.45	TMS6050P2-0.9	TMS6050N2-0.9
3	0.3	TMS6050P3-0.9	TMS6050N3-0.9

High Voltage Connector Details:

Pin	Signal	Description
8	High Voltage Output	0-100% rated output. !! Danger: High pressure! !

Low voltage signal pin (for power input and control):

Pin	Signal	Rank	Description
1	Open	TTL	On = Low (1.2 V). Disabled = high (2.4 V), when the open pin is not connected, pull up to + 5V \pm 10% at 10 k Ω
2	Status	0V/5V	OK = 11k Ω pull up to +5.1 V \pm 10%. Fault = \leq 0.1 V, Zout = 1k Ω
3	Power Programming	0-10V	0 to + 10VDC = 0 to 100% rated output voltage, accuracy = \pm 1%. Zin = 10k Ω
4	Voltage Monitoring	0-10V	0 to + 10VDC = 0 to 100% rated output voltage, accuracy = \pm 2%, Zout = 20 k Ω
5	Input Voltage	24VDC	Power input
6	Signal Ground	0V	Ground reference is used to control and detect signals
7	Power Source Ground	0V	Power return

Overall Dimensions: mm

