TUM6060 Series
Modular High Voltage Power Supply

Maximum output voltage 100kV. Maximum Output Power 600W.

Teslaman TUM6060 series printed circuit boards can be mounted with high-voltage modules, which integrate shape, mounting and function, and can replace the power supply currently used in the market, at the same time, they have more functions and have more competitive advantages in price. Better performance, higher reliability, more convenient integration with the system and lower price.

- Soft Switching
- Maximum output voltage 100kV
- Maximum Output Power: 600W
- Digitally Programmable
- Nanosecond Protection Response
- Over-Voltage, Over-Current, Short Circuit And Arc Protection
- RS-485 Isolated Digital Communication
- Secure Interlocking Function
- Low Ripple 0.1% P-P (Optional)

Specifications:

Input Voltage: 4W input voltage is 12VDC, 20W and 30W input voltage is 24VDC.

Nominal Voltage Range: 4W voltage range 11VDC to 30VDC, 20W and 30W voltage range 23VDC to 30VDC.

Input Current: (Typical)

Disabled: 30mA.

No load: 90mA.

Full load:

4W power supply: 0.5 A.

20W power supply: 1.0 A.

30W power supply: 1.5 A.

Efficiency: Typical 80-85%.

Voltage Regulation:

Input: < 0.01%.

Load: < 0.01%.

Current Regulation:

Input: < 0.01%.

Load: < 0.01%.

Stability:

After 0.5 hours of startup, 0.01% every 8 hours and 0.02% every day.

Accuracy:

Except for the current sensor at 10%, all programming and monitoring at 2%.

Temperature Coefficient: (typical)

Standard: 100ppm/℃.

Optional: 25ppm/℃ (optional).

Environment:

Temperature range:

Operating temperature: 0 ° C to 65 ° C shell temperature.

Storage temperature:-55 ° C to 85 ° C, non-operating.

Humidity: 10% to 90%, no condensation.

Cooling: Convective cooling, typical. When the 30W power supply works at full power, external cooling may be needed to keep the housing temperature below 65 ℃. Methods include: forced air cooling, using radiator or metal shell, etc. The user is responsible for keeping the shell temperature below 65 ℃.

Size: 38.1 mm wide, 20.6 mm high and 75.2 mm deep.

Weight: About 120g.

TUM6060 Series High Voltage Power Supply Model Selection Table (Customizable):

Output Rating		Type of Power Supply	
kV	mA	Positive Polarity	Negative Polarity
1	30	TUM6060P1-30	TUM6060N1-30
2	15	TUM6060P2-30	TUM6060N2-30
3	10	TUM6060P3-30	TUM6060N3-30
6	5	TUM6060P6-30	TUM6060N6-30

Standard interface:

Pin	Signal	Description
1	Ground Return of Power Supply	+ 12VDC or + 24VDC Power Return/High Voltage Return
1A	Characteristic Resistance	Unique identification resistor connected to ground
2	+ Power Input	+ 12VDC or + 24VDC power input
2A	N/C	
3	Current Sensor	See Current Sensor Description and Table
3A	Current Monitoring	0 to 4.64 VDC = 0 to 100% rated output. Zout < 10k Ω
4	Startup Input	Low (< 0.7 V, Isink, 1mA) = high voltage off, high (open or > 2V) = high voltage on
4A	Voltage Monitoring	0 to 4.64 VDC = 0 to 100% rated output. Zout < 10k Ω
5	Signal Ground	Signal ground
5A	Current Programming	0 to 4.64 VDC=0 to 100% rated output. Zin > 47 k Ω remains open for preset current limit, 103% of rated output current
6	Remote Adjustment	Positive power supply: 0 to +4.64 VDC = 0 to 100% rated voltage, Zin > 1M Ω + 5VDC to 0.36 V=0 to 100% rated voltage, negative power supply: Zin > 100 k Ω If programmed using pin 6A (voltage programming), this pin remains open
6A	Voltage Programming	0 to 4.64 VDC = 0 to 100% voltage rating. Zin > 100 k Ω If programmed using Pin 6 (remote adjustment), this pin remains open
7	+ 5V Reference Output	+ 5VDC ± 0.5%, 50ppm/°C. Zout = 475 Ω
8	Return at High Pressure	Return at high pressure
9	E Output Monitoring	Models with a ratio of 10: 1 below 1kV and models with a ratio of 100: 1 above 1kV. The polarity of the voltage monitoring signal is consistent with that of the power supply. The accuracy is 2%, 100ppm/°C. Calibration of voltmeters using 10 M Ω input impedance
10	High Voltage Output	High voltage output
11	High Voltage Output	High voltage output

Legacy interface (L option):

Pin	Signal	Description
1	Ground Return of Power Supply	+ 12VDC or + 24VDC Power Return/High Voltage Return
2	+ Power Input	+ 12VDC or + 24VDC power input
3	Current Sensor	Please refer to the current sensor description and table for details
4	Enable Input	Low (< 0.7 V, Isink, 1mA) = high-voltage turn-off, high (open > 2V) = high-voltage turn-on
5	Signal Ground	Signal ground
6	Remote Adjustment	Positive power supply: 0 to +4.64 VDC = 0 to 100% rated voltage, Zin > 1 M Ω Negative power supply: + 5VDC to 0.36 V= 0 to 100% rated voltage, Zin > 100 k Ω
7	+ 5V Reference Output	+ 5VDC ± 0.5%, 50ppm/℃. Zout = 475 Ω
8	Return at High Pressure	Return at high pressure
9	E Output Monitoring	Models with a ratio of 10: 1 below 1kV and models with a ratio of 100: 1 above 1kV. The polarity of the voltage monitoring signal is consistent with that of the power supply. The accuracy is 2%, 100ppm/℃. Calibration of voltmeters using 10 M Ω input impedance
10	High Voltage Output	High voltage output
11	High Voltage Output	High voltage output

Overall Dimensions: mm