osi1601 Series

3 kV, 0.9 W, compact high-performance module, variable voltage programming



Product introduction

The osi1601 series is a compact PCB-mount high-voltage power module. The voltage range from 1 kV to 3 kV is continuously adjustable. A 0–10 V control signal adjusts output from 0 V to maximum voltage. Status signaling and enable control are provided, together with multiple protection functions. The series suits compact, high-performance PCB circuits, such as driving electron multipliers in mass spectrometers. An aluminum enclosure provides interference shielding and reduces radiated noise.

Product features

- Compact high-performance module
- Variable voltage programming
- 0.9 W output power
- Voltage monitoring
- Arc and short-circuit protection

Specifications

Parameter	Specification
Input voltage	+24 VDC ±2 VDC.
Input current	Maximum 150 mA.
Output polarity	Positive or negative polarity can be specified.
Output power	Maximum 0.9 W.
Output voltage accuracy	±1%.
Voltage regulation	Line: ±0.02% for input 21.6–26.4 VDC. Load: ±0.02% from 0–100% rated load.
Stability	Less than 0.05% per hour after a 1-hour warm-up.
Temperature coefficient	Voltage and current: better than 10 ppm/°C.
Settling time	≤100 ms after power-on or enable; decays below 60 V within ≤2 s after power-off or HV OFF.
Protection	Arc and short-circuit protection; continuous arcing is not permitted.
Ambient temperature	Operating: 0°C to 60°C. Storage: −20°C to 70°C.
Humidity	95% relative humidity, non-condensing.
Cooling	Natural convection.
Dimensions	56.2 mm wide, 69.4 mm high, 30.7 mm deep.
Weight	Approximately 0.2 kg.

Model selection (customizable)

Output (kV)	Output (mA)	Positive polarity	Negative polarity
1	0.9	osi1601P1-0.9	osi1601N1-0.9
2	0.45	osi1601P2-0.9	osi1601N2-0.9
3	0.3	osi1601P3-0.9	osi1601N3-0.9

Power supply pin definitions

Pin	Signal	Description
1	Enable	TTL
2	Status	0 V / 5 V
3	Power programming	0–10 V
4	Voltage monitor	0–10 V
5	Input voltage	24 VDC
6	Signal ground	0 V
7	Power ground	0 V

High-voltage connector details

Pin	Signal	Description
8	High-voltage output	0–100% rated output. DANGER: HIGH VOLTAGE!

Typical applications

Photomultiplier tubes; electron multipliers; mass spectrometry; electrostatic lenses; nuclear instrumentation.

Outline dimensions

Dimensions in mm.

