osi1626 Series

50 kV output voltage; 1.7 mA current



Product Introduction

The OSIMAI osi1626 series high-voltage power supply has a compact design and efficient regulation, providing low-ripple high voltage. Advanced offline resonant converter technology substantially reduces size compared with conventional high-voltage modules. A unique resonant control scheme maintains high efficiency at constant frequency. Zero-current switching (ZCS) resonant control is used; operating frequency is typically 60 kHz. Voltage and current are adjustable over the entire operating range, with simple, flexible monitoring and control signals. The input range is 85–265 VAC, 50/60 Hz single phase, with active power factor correction.

Product Features

- 50 kV output voltage
- Power factor: better than 0.99
- Overvoltage, overcurrent, short-circuit, arc and overtemperature protection
- Customization available
- 85 W output power
- Digitally programmable
- Safety interlock

Specifications

Parameter	Description
Input	85–265 VAC, 50/60 Hz, single phase.
Output	50 kV; positive or negative polarity available.
Power factor	Full load: 0.99. No load: 0.98.
Voltage control	External analog: 0–10 V controls output from zero to maximum voltage. Optional digital: RS-485 interface using standard Modbus protocol controls zero to maximum voltage.
Current control	External analog: 0–10 V controls output from zero to maximum current. Optional digital: RS-485 interface using standard Modbus protocol controls zero to maximum current.
Voltage regulation	Load: 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Current regulation	Load: 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Ripple	Better than 0.1% rms at rated output.
Ambient temperature	Operating: 0 to +50°C. Storage: −20 to +80°C.
Temperature coefficient	Voltage and current: better than 100 ppm/°C.
Stability	Less than 0.1% per 8 hours after 0.5-hour warm-up.
Dimensions	W 126 × H 102.5 × D 228 mm.
High-voltage cable	Standard 2 m shielded, detachable cable.
Weight	3 kg.

DB25 Connector Signal Definitions

Pin	Signal	Description
1	Ground	Signal ground
2	High-voltage enable	Active low
3	Power supply error	Power-error indication; low = supply error
4	Voltage monitor	0–10 V = 0–100% rated output
5	Ground	Signal ground
6	Remote voltage setting	0–10 V = 0–100% rated output
7	NC	/
8	Ground	Signal ground
9	Interlock	Active low; voltage can only be enabled after interlock is active
10	Current monitor	0–10 V = 0–100% rated output
11	NC	/
12	10 V	10 V; 1 mA maximum
13	Remote current setting	0–10 V = 0–100% rated output
14	RS485-A	485 communication A
15	RS485-B	485 communication B
16	GND-RS485	485 communication GND
17	Reset	Low = reset
18	Ground	Signal ground
19	Ground	Chassis earth
20	Ground	Signal ground
21	NC	/
22	NC	/
23	10 V	10 V
24	10 V	10 V
25	10 V	10 V
Shield	Ground	Signal ground

Typical Applications

PCB inspection; electrostatic fields; insulation withstand-voltage testing; detectors; electrophoresis; cable testing.

Dimensions

