osi1902 Series

1–40 kV; dual output; rated power 4.6 kW intelligent high-voltage laser supply



Product Introduction

The OSIMAI osi1902 series is a high-performance modular high-voltage supply for CO2 lasers. Digital control meets varied customer control needs, nanosecond arc response ensures fault-free operation, and full-load efficiency exceeds 90%. The series is fully featured, has a wide output range, and can accept custom software functions.

Product Features

- Output voltage 1–40 kV
- Dual synchronized outputs
- Rated power per channel 2.3 kW
- Digitally programmable
- Solid-state insulation
- Forced-air cooling
- Complete overvoltage, overcurrent and overtemperature protection
- 500 ms enhanced-pulse output at three times rated current
- 10–2000 Hz PWM output control
- CNC and Ethernet communication
- Centralized control of synchronized outputs from multiple supplies
- Customization available

Specifications

Parameter	Description
Input	380 VAC ±10%, 50/60 Hz; rated input current 10 A.
Output	Selectable DC voltage 1–40 kV and current 20–120 mA. Each model offers positive or negative output polarity. Higher voltage ratings can be customized.
Current control	DB15 remote interface: external 0–10 V analog signal sets DC output from zero to rated current. External PWM signal sets pulsed output at 10 Hz–2 kHz, 10–99% duty cycle. External control also sets enhanced pulsed output at 1 Hz, 50% duty cycle, three times rated current. Digital control through Ethernet can set the same output states as DB15 remote control.
Current regulation	Load: better than 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Ripple voltage	Better than 5% rms at rated output.
Ambient temperature	Operating: 0 to +40°C. Storage: −20 to +80°C. For indoor use in low-condensation areas only.
Operating humidity	10–90%, non-condensing.
Altitude	Maximum operating altitude 2000 m.
Pollution degree	2.
Temperature coefficient	Voltage and current: better than 100 ppm/°C.
Stability	Better than 0.05% per 8 hours after 0.5-hour warm-up.
Current indication	Four-digit LED display; error at rated output: 1% ±1 digit.
Protection	Overtemperature, overvoltage, overcurrent, short-circuit and arc protection. Other protection functions can be customized.
High-voltage cable	Recessed plastic insulating conduit and inserted high-voltage cable connect through a 16 mm / 28 mm diameter metal connector. Standard cable total length 2 m.

Typical Applications

High-energy CO2 lasers.