osi1901 Series

Rated voltage 50 kV; rated power 100 W / 250 W



Product Introduction

The OSIMAI osi1901 series high-voltage supply uses fully digital PID control for fast response to voltage and current changes. Functions include output inhibition when the supply is not reliably grounded, a real-time-clock payment-reminder function, dust and foreign-object protection, and intelligent automatic adjustment for abnormal loads.

Product Features

- Adjustable maximum output voltage 50 kV
- Dust and foreign-object protection
- Intelligent automatic adjustment for abnormal loads
- Adaptive uninterrupted operation under abnormal conditions
- RS-485 digital communication interface
- Real-time-clock payment-reminder function

Specifications

Parameter	Description
Input	220 VAC ±10%, 50/60 Hz.
Output	Maximum voltage 50 kV; maximum output current 5 mA; maximum power 250 W.
Front-panel functions	Power ON/OFF; auto-start setting; memory setting; voltage preset; high-voltage output/shutdown; user-interface settings and output-voltage adjustment.
Front-panel status indication	Polarity, constant-voltage mode, auto-start, memory, preset and output status; abnormal-condition code display.
Voltage control	Integral rotary encoder sets zero to maximum voltage. External 0–10 V analog signal sets zero to maximum output voltage. RS-485 interface using standard Modbus protocol sets zero to maximum voltage.
Coarse/fine adjustment	Automatically selected by knob rotation speed: fast rotation produces large output steps; slow rotation produces small steps.
Voltage regulation	Load: better than 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Current regulation	Load: better than 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Ripple	Better than 2% 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	Better than 0.1% per 8 hours after 0.5-hour warm-up.
Humidity	10–90%, non-condensing.
Voltage/current display	Three-digit display; voltage accuracy ±(0.5%+1), current accuracy ±(4%+3).
Dimensions	W 199 × H 120 × D 230 mm.
Weight	Approximately 4.8 kg.
High-voltage cable	Integral shielded high-voltage cable, standard length 2 m, outside diameter 5.5 mm. Other lengths available.

Power Input Terminals

Pin	Signal	Description
1	L	Line
2	N	Neutral
3	G	Earth

CAN / RS-485 Communication Interface

Pin	Signal
1	NC
2	CAN bus ground
3	NC
4	RS485 ground
5	NC
6	CANH
7	CANL
8	RS485-A
9	RS485-B
/	/

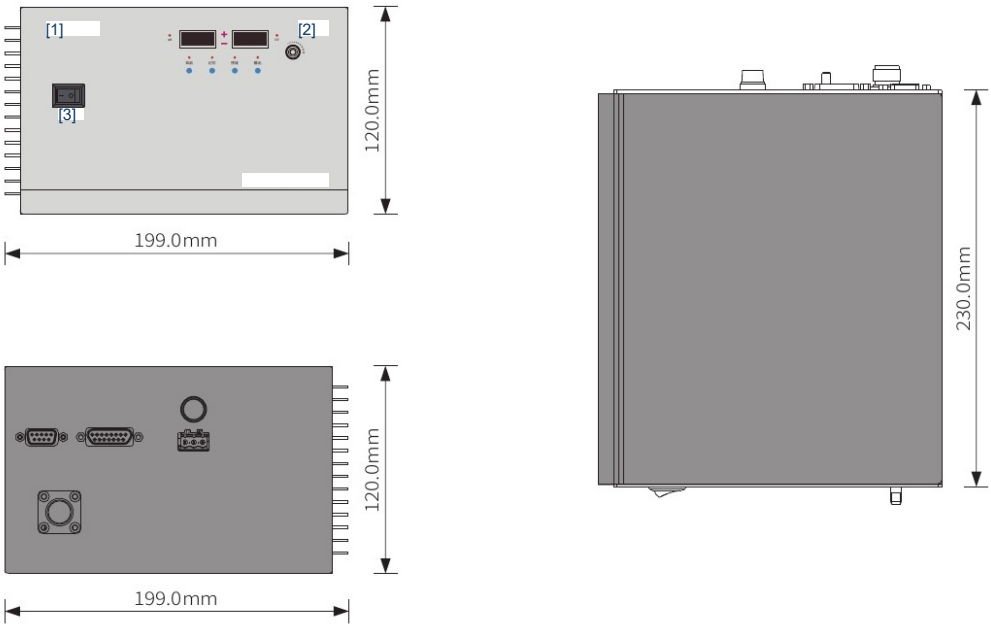
DB15 Connector Signal Definitions

Pin	Signal	Description
1	Voltage monitor	0–10 V = 0–100% rated output
2	Voltage setting	0–10 V = 0–100% rated output
3	+10 V	+10 V
4	+15 V	+15 V; 100 mA maximum
5	High-voltage ON signal	High = ON; pin 4 supplies +15 V
6	Remote enable	High (+15 V) = active
7	High-voltage OFF indication	Open collector; conducting = high-voltage output OFF
8	Remote indication	Open collector; conducting = remote control
9	Current monitor	0–10 V = 0–100% rated output
10	Current setting	0–10 V = 0–100% rated output
11	Ground	Signal ground
12	Ground	Signal ground
13	High-voltage OFF signal	Falling edge = high voltage OFF
14	High-voltage ON indication	Open collector; conducting = high-voltage output ON
15	Fault indication	Open collector; conducting = power-supply fault

Typical Applications

Electrostatic sorting; electrostatic filament separation; static elimination; electrospinning; electrostatic printing and related electrostatic applications.

Dimensions



[1] OSIMAI

[2] osi1901

[3] POWER