osi1204 Series

1–50 kV; 300 W; switchable positive/negative polarity



Product introduction

The OSIMAI osi1204 series fits a standard 19-inch rack. A single HV output connector provides positive or negative HV, switchable through front-panel buttons. Voltage rises linearly and smoothly. Front-panel LED meters display output voltage and current. External potentiometers enable remote output voltage/current control; external monitoring, HV output overvoltage/short-circuit protection and a safety interlock are provided.

Product features

- Positive/negative output 1–50 kV
- Digital voltage/current display
- Overvoltage and short-circuit protection
- Voltage/current adjustment
- Customization to user requirements

Specifications

Parameter	Specification
Input	220 VAC ±10%, 50/60 Hz.
Output	Maximum voltages from 1 to 50 kV selectable; maximum output power 300 W. Continuously adjustable from zero to maximum; output polarity is switchable.
Polarity switching	Local: built-in touch switch changes output polarity. Remote: an external signal switches positive/negative polarity.
Voltage control	Local: a built-in multi-turn potentiometer sets output voltage from zero to maximum. Remote: an external 0–10 V signal adjusts output voltage from zero to maximum.
Current control	Local: a built-in multi-turn potentiometer sets output current from zero to maximum. Remote: an external 0–10 V signal adjusts output current from zero to maximum.
Voltage regulation	Load: better than 0.01% from no load to rated load. Line: ±0.01% for ±10% input-voltage variation.
Current regulation	Load: better than 0.01% from no load to rated load. Line: ±0.01% for ±10% input-voltage variation.
Ripple	Better than 1% rms at rated output; 0.1% rms optional.
Ambient temperature	Operating: 0°C to +45°C. Storage: −20°C to +80°C.
Temperature coefficient	Voltage and current: better than 100 ppm/°C.
Stability	Less than 0.1% per 8 hours after a 0.5-hour warm-up; higher stability optional.
Voltage/current monitoring	0 to +10 V; accuracy ±1% at rated output.
Dimensions	Width 482.5 mm, height 87.5 mm, depth 440.7 mm.
High-voltage cable	Recessed epoxy-resin insulating conduit and inserted high-voltage cable connected through a 16 mm diameter metal connector. Standard cable length 2 m.
Input/output connector	25-pin terminal connector containing control and monitoring signals.
Remote voltage/current control	External potentiometers can use the internal 10 V reference to remotely control output voltage and current.
Remote voltage/current monitoring	The 25-pin terminal connector includes 0–10 V voltage/current monitoring signals for external digital or analog meters.

Model selection — 300 W (customizable)

Rated output (kV)	Rated output (mA)	Polarity-switchable model
10	30	osi1204PN10-300
15	20	osi1204PN15-300
20	15	osi1204PN20-300
30	10	osi1204PN30-300
40	7.5	osi1204PN40-300
50	6	osi1204PN50-300

DB25 connector signal definitions

Pin	Signal
1	+5 V external voltmeter supply
2	External voltmeter ground
3	+5 V external ammeter supply
4	External ammeter ground
5	Current indication signal
6	Voltage indication signal
7	Current-control signal input
8	Current-control signal output
9	Positive-HV switching signal
10	Ground
11	Positive-HV indication
12	Negative-HV switching signal+
13	Negative-HV switching signal−
14	Negative-HV indication
15	HV ON signal
16	Ground
17	HV ON indication
18	HV OFF signal+
19	HV OFF signal−
20	HV OFF indication
21	Ground
22	+10 V reference voltage
23	Ground
24	Voltage-control signal output
25	Voltage-control signal input

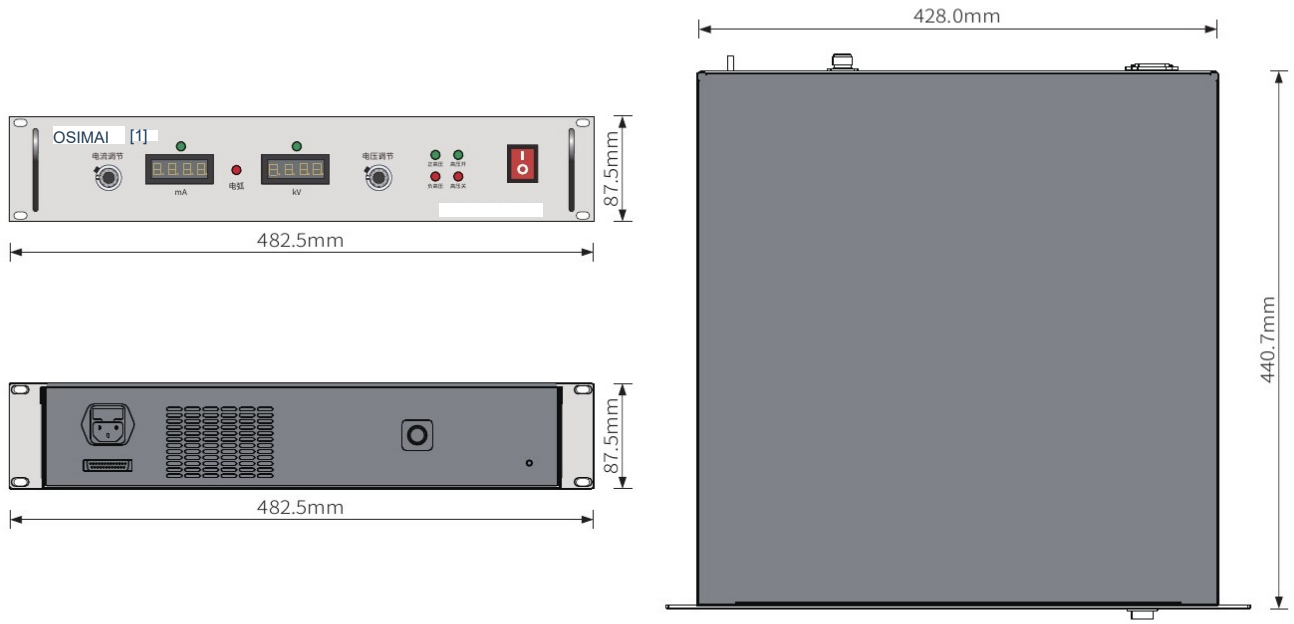
Input terminals

Marking	Signal
1	Live
2	Ground
3	Neutral

Typical applications

Electrophoresis; electrostatic spraying; capillary electrophoresis; electrostatic flocking; scientific experiments and other applications.

Outline dimensions



[1] osi1204