osi1205 Series

1–100 kV; 300 W



Product introduction

The OSIMAI osi1205 series includes digital voltage/current indication and fits a standard 19-inch rack. High-voltage output rises linearly and smoothly. External potentiometers provide remote voltage/current control, with external voltage/current monitoring and HV overvoltage, overcurrent, short-circuit and arc protection. Stable performance meets user requirements.

Product features

- Output voltage 1–100 kV
- Maximum output power 300 W
- Digital voltage/current display
- Overvoltage, overcurrent, short-circuit and arc protection
- Remote voltage/current adjustment
- Voltage/current adjustment
- Customization to user requirements

Specifications

Parameter	Specification
Input	220 VAC ±10%, 50/60 Hz.
Output	Selectable maximum output voltages from 1 to 100 kV; maximum power 300 W. Continuously adjustable from zero to maximum voltage; single negative output 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 voltage	Better than 1% p-p at rated output; 0.1% p-p optional.
Ambient temperature	Operating: 0°C to +50°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.
Voltage/current monitoring	0 to +10 V; accuracy ±1% at rated output.
Dimensions	1–50 kV: width 482.6 mm, height 87.6 mm, depth 364.5 mm. 51–100 kV: width 482.6 mm, height 87.6 mm, depth 444.5 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)	Positive model	Negative model
10	30	osi1205P10-300	osi1205N10-300
20	15	osi1205P20-300	osi1205N20-300
30	10	osi1205P30-300	osi1205N30-300
50	6	osi1205P50-300	osi1205N50-300
60	5	osi1205P60-300	osi1205N60-300
80	3.75	osi1205P80-300	osi1205N80-300
100	3	osi1205P100-300	osi1205N100-300

DB25 connector signal definitions

Pin	Signal
1	NC
2	NC
3	Fault signal
4	Ground
5	Ground
6	+12 V
7	Ground
8	HV common terminal
9	Voltage monitor
10	Current monitor
11	Voltage command input
12	Current command output
13	+10 V
14	NC
15	NC
16	+12 V
17	NC
18	HV OFF indication
19	HV ON indication
20	Ground
21	HV ON
22	Ground
23	Voltage command output
24	+10 V
25	Current command input

Input terminals

Marking	Signal
L	Live
N	Neutral
G	Ground

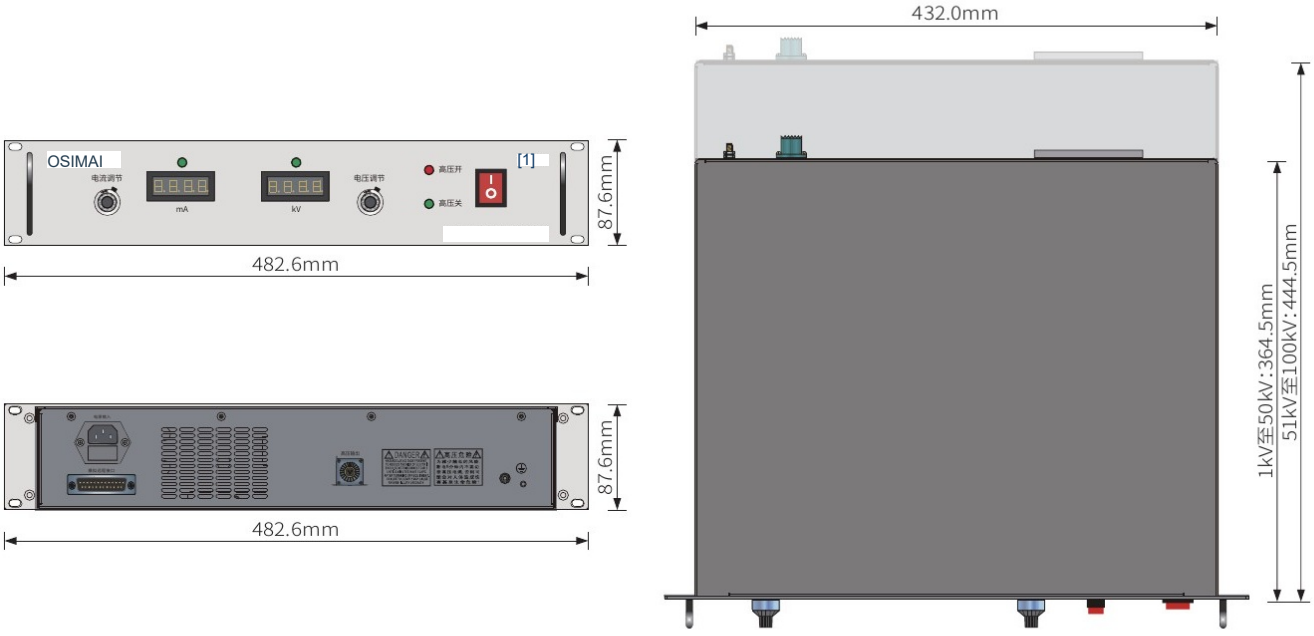
Typical applications

Electrostatic spraying; capillary electrophoresis; electrostatic flocking; scientific experiments; plastic sorting; ion-beam sources; electron-beam sources; accelerator power supplies and other applications.

Optional features

Option	Description
DO	Dual high-voltage power cable outputs

Outline dimensions



[1] osi1205