osi1401 Series

5–40 kV peak-to-peak, 1 kW, 5–30 kHz, center frequency ±10%



Product introduction

The osi1401 series is an AC high-voltage power supply with AC output up to ±20 kV. AC output voltage and frequency are continuously adjustable; output AC voltage, frequency and current are displayed by digital front-panel meters. Overvoltage and overcurrent protection provide stable performance to meet user requirements.

Product features

- 5–40 kV peak-to-peak output voltage
- 1 kW output power
- Overvoltage, overcurrent and output short-circuit protection
- Voltage and current adjustment
- Safety interlock
- Customization available to user requirements
- Selectable center frequency 5–30 kHz, adjustable ±10% around center frequency

Specifications

Parameter	Specification
Input	220 VAC ±10%, 50 Hz.
Output	Selectable maximum output voltage 5–40 kV; maximum power 1 kW. Continuously adjustable from zero to maximum voltage.
Voltage control	Internal: built-in front-panel multi-turn potentiometer sets output from zero to maximum. Remote: external 0–10 V signal adjusts output from 0 V to maximum.
Frequency control	Internal: built-in multi-turn potentiometer sets frequency within ±10% of center frequency. Remote: external 0–10 V signal sets frequency within ±10% of center frequency.
Center frequency	5–30 kHz, adjustable ±10%.
Voltage/current monitoring	0 to +10 V; accuracy 1% at rated output.
Voltage regulation	Load: better than 0.5%, no load to rated load. Line: ±0.5% for ±10% input change.
Current regulation	Load: better than 0.5%, no load to rated load. Line: ±0.5% for ±10% input change.
Stability	Less than 0.5% per 8 hours after a 0.5-hour warm-up.
High-voltage cable	Recessed epoxy-insulated conduit and inserted HV cable are joined by a 16 mm diameter metal connector. Standard cable length approximately 2 m.
Ambient temperature	Operating: 0°C to +50°C. Storage: −20°C to +80°C.
Temperature coefficient	Voltage and current: better than 100 ppm/°C.
Dimensions	482 mm wide, 133.5 mm high, 380 mm deep.
Remote voltage/current control	External potentiometers use the internal 10 V reference to control output voltage and current remotely.

DB25 connector signal definitions

Pin	Signal
1	+5 V
2	NC
3	High voltage OFF
4	Ground
5	Ground
6	+12 V
7	Ground
8	Frequency monitor
9	Voltage monitor
10	High-level output during protection
11	Voltage command input
12	Current monitor
13	+10 V
14	Frequency command input
15	Frequency command output
16	+12 V
17	Protection status indicator
18	High voltage ON indicator
19	High voltage OFF indicator
20	Ground
21	High voltage ON
22	Ground
23	Voltage command output
24	+10 V
25	NC

Input terminal block

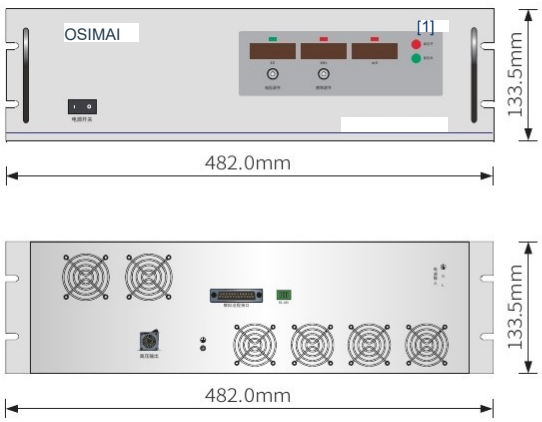
Terminal	Signal
L	Line
N	Neutral
G	Protective earth
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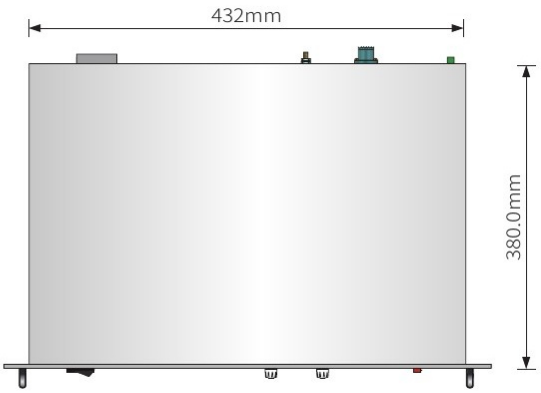
Typical applications

Ion implantation; Hi-POT testing; plasma systems; AC electrostatic fields; liquid leak detection; dielectric withstand testing, etc.

Outline dimensions

Dimensions in mm.





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