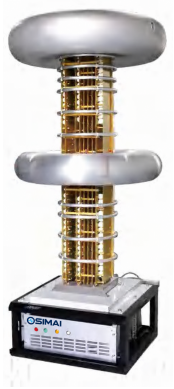
osi1800 Series

450 kV; 4 kW; low ripple; high stability



Product Introduction

The OSIMAI osi1800 series high-voltage supply provides up to 4 kW with maximum output voltage 450 kV, adjustable over the full range. Its high-frequency resonant inverter with proprietary control enables reliable operation in extreme environments. The air-insulated voltage-multiplier unit reduces overall size.

Product Features

- Selectable output voltages 200–450 kV
- High stability
- Arc counting
- Customization available
- Low ripple
- Overvoltage, overcurrent, short-circuit, arc and overtemperature protection
- Lightweight, compact design

Specifications

Parameter	Description
Input	Standard ≤2 kW: 220 VAC ±10%, 16 A, single-phase, 50/60 Hz. Standard >2 kW: 380 VAC ±10%, 16 A, three-phase, 50/60 Hz.
Output	Selectable maximum voltages 200–450 kV; maximum power 4 kW. Continuously adjustable from zero to maximum voltage; positive or negative single-polarity output.
Voltage regulation	Load: 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Current regulation	Load: 0.01%, no load to rated load. Line: ±0.01% for ±10% input-voltage change.
Ripple	Better than 0.1% rms at rated output.
Ambient temperature	Operating: 0 to +50°C. Storage: −20 to +80°C.
Temperature coefficient	Voltage and current: better than 25 ppm/°C.
Stability	After 0.5-hour warm-up: less than 0.01% per hour; less than 0.05% per 8 hours.
Protection	Overvoltage, overcurrent and overtemperature protection.
Dimensions	Inverter drive rack: W 482 × H 267 × D 510 mm. Multiplier unit: W 600 × H 1691 × D 800 mm.
Communication interfaces	DB25 and RS-485.

Model Selection (Customizable)

Output kV	Output mA	Positive model	Negative model
200	20	osi1800P200-4000	osi1800N200-4000
250	16	osi1800P250-4000	osi1800N250-4000
300	13.33	osi1800P300-4000	osi1800N300-4000
350	11.42	osi1800P350-4000	osi1800N350-4000
400	10	osi1800P400-4000	osi1800N400-4000
450	8.888	osi1800P450-4000	osi1800N450-4000

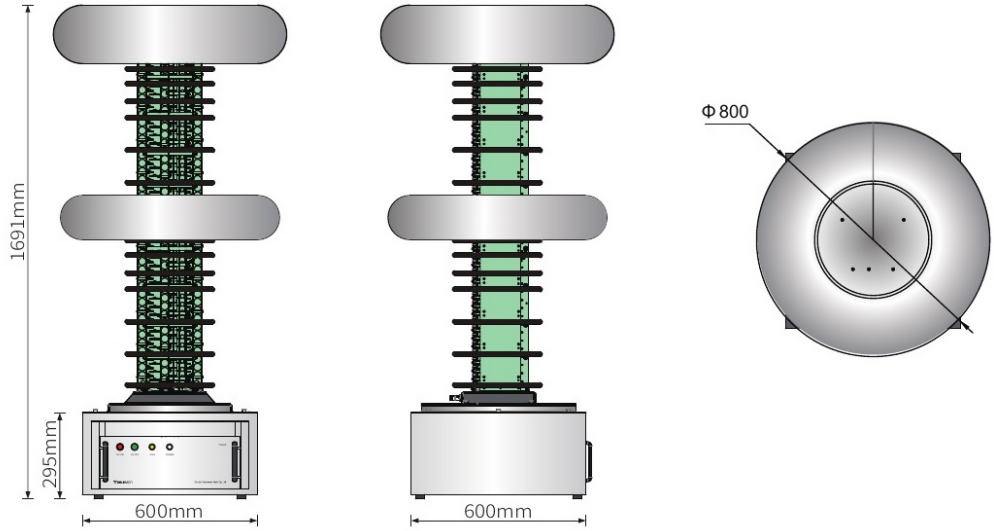
DB25 Connector Signal Definitions

Pin	Signal	Description
1	Remote indication	Open collector; conducting = remote control
2	Constant-voltage indication	Open collector; conducting = constant-voltage output
3	High-voltage OFF indication	Open collector; conducting = high-voltage output OFF
4	High-voltage ON signal	Rising edge = ON; pin 17 at +15 V
5	Remote enable	High (+15 V) = active
6	Main-circuit power enable	High (+15 V) = active
7	+15 V	+15 V, 100 mA maximum
8	Current setting	0–10 V = 0–100% rated output
9	Voltage setting	0–10 V = 0–100% rated output
10	+15 V	+15 V, 100 mA maximum
11	+10 V	+10 V, 1 mA maximum
12	Voltage monitor	0–10 V = 0–100% rated output
13	Current monitor	0–10 V = 0–100% rated output
14	Fault indication	Open collector; conducting = power-supply fault
15	Constant-current indication	Open collector; conducting = constant-current output
16	High-voltage ON indication	+15 V rising edge = high-voltage output ON
17	High-voltage OFF signal	+15 V rising edge = high voltage OFF
18	Fault reset	High (+15 V) = reset
19	Ground	Signal ground
20	Ground	Signal ground
21	Ground	Signal ground
22	Ground	Signal ground
23	Ground	Signal ground
24	Ground	Signal ground
25	Ground	Signal ground
Shield	Ground	Signal ground

Typical Applications

Ion implantation; particle accelerators; electron guns.

Dimensions



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