osi1605 Series

10 kV/20 kV rated output, 2 W, low ripple



Product introduction

The osi1605 is a hot-switchable polarity high-voltage module whose output polarity is controlled by a logic input. It provides reliable packaging, low ripple, precision regulation, voltage/current monitoring and high-voltage inhibit. Applications include mass spectrometry, capillary electrophoresis and electrostatic printing. OEM customization is available to customer requirements.

Product features

- Logic-controlled hot-switching polarity
- Precision regulation and low ripple
- Polarity switching time <500 ms
- Voltage and current output monitoring
- Remote high-voltage inhibit
- Current-control option

Specifications

Parameter	Specification
Input voltage	+24 VDC ±1.2 V.
Input current	Normal continuous current <500 mA; <1.2 A during reversal.
Output voltage	±500 VDC to ±20 kV.
Output current	0 to maximum 100 µA.
Polarity	Remotely reversible through logic signal; settles to ±2% in 500 ms; maximum switching rate 1 Hz.
Voltage regulation	Load: 0.02% of maximum output voltage from no load to full load. Line: 0.01% of maximum output voltage for 1 V input change.
Current regulation (optional)	Load: 0.1% of maximum rated current for 0–100% voltage change. Line: 0.01% of maximum rated current for 1 V input change.
Voltage/current programming	0–10 V = 0–100% rated output voltage/current.
Voltage/current monitoring	0–10 V = 0–100% rated output voltage/current.
Programming/monitoring accuracy	±2% voltage programming/monitoring; ±5% current programming/monitoring.
Ripple	Better than 25 ppm at rated output.
Stability	Less than 0.05% per 8 hours after a 0.5-hour warm-up.
Temperature coefficient	Voltage and current: better than 100 ppm/°C.
Ambient temperature	Operating: 0°C to 40°C. Storage: −40°C to 85°C.
Humidity	10–90%, non-condensing.
Cooling	Convection cooling.
Dimensions	52 mm wide, 168 mm high, 165 mm deep.
Weight	Approximately 2.5 kg.
Interface/power connector	9-pin male D-type connector.
High-voltage cable	Non-detachable, shielded, 1 m.

DB9 connector signal definitions

Pin	Signal	Description
1	Voltage monitor	0–10 V = 0–100% rated output
2	External inhibit input	Open or >10 V: OFF; <4 V: ON
3	Current programming input	0–10 VDC = 0–100% rated output (current-control option)
4	Signal ground	Signal ground
5	Current monitor	0–10 VDC = 0–100% rated output
6	Polarity control input	Open or >10 V: negative; <4 V: positive
7	Voltage programming input	0–10 VDC = 0–100% rated output
8	+24 V input	+24 V input
9	Power ground	Power ground

Typical applications

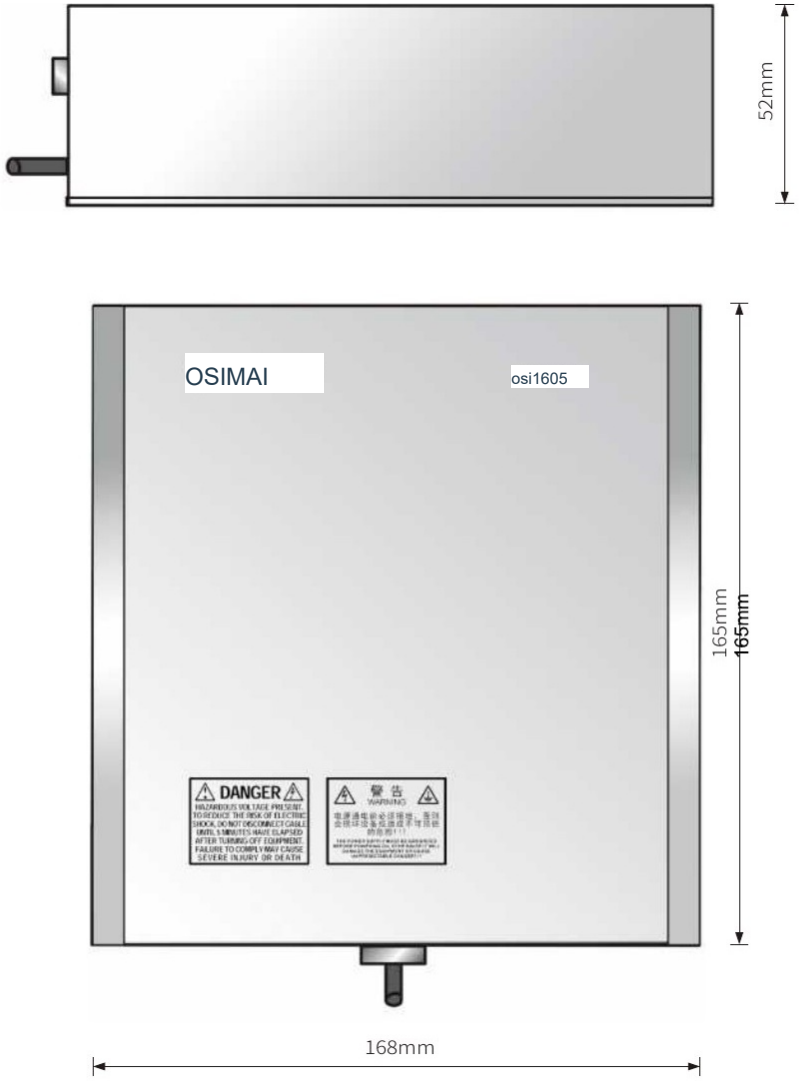
Mass spectrometry; capillary electrophoresis; electrostatic printing.

Optional functions

Variable current control.

Outline dimensions

Dimensions in mm.


52mm
OSIMAI
osi1605
DANGER
165mm
165mm
168mm