osi1615 Series

1–10 kV, 10 W, high stability, low ripple



Product introduction

The osi1615 series is a modular 10 W high-voltage DC supply with maximum output voltage 10 kV and maximum output current 2 mA. It provides low noise, high efficiency, compact packaging, low ripple and high stability. A 15-pin D-type connector supports remote user control and adjustment. The unit is compact and lightweight, with selectable output polarity.

Product features

- Analog voltage programming
- 10 W output power
- Voltage and current monitoring
- High stability
- Low ripple and noise
- Compact design

Specifications

Parameter	Specification
Input voltage	+24 VDC ±2 VDC.
Input current	Maximum 1 A.
Output voltage	0.5–10 kV selectable.
Output polarity	Specify positive or negative polarity when ordering.
Power	Maximum 10 W.
Voltage regulation	Line: better than 10 ppm at rated output voltage over the specified input voltage range. Load: better than 40 ppm at rated output voltage for full-load change.
Ripple	Better than 10 ppm peak-to-peak at rated output.
Stability	After a 1-hour warm-up: better than 70 ppm/hour and 300 ppm per 8 hours.
Protection	Overvoltage, overcurrent, arc and short-circuit protection.
Temperature coefficient	Voltage and current: better than 50 ppm/°C.
Ambient temperature	Operating: 0°C to 60°C. Storage: −20°C to 80°C.
Humidity	10–90% relative humidity, non-condensing.
Cooling	Convection cooling.
Dimensions	70 mm wide, 30 mm high, 130 mm deep.
Weight	0.49 kg.
Interface connector	15-pin male D-type connector.
Grounding	Common chassis ground.
Output connection	Cable output.
High-voltage cable	Fixed 1 m shielded HV cable supplied.

DB15 connector signal definitions

Pin	Signal	Description
1	Power ground	GND; also analog signal ground
2	24 V	+24 VDC, 1 A maximum
3	Voltage monitor output	0–10 V = 0–100% rated output
4	Local programming	Potentiometer connected to +10 VDC and ground; wiper provides adjustable 0–10 V output
5	Voltage programming input	0–10 V = 0–100% rated output ±2%; Zin = 10 MΩ
6	Differential voltage programming output (not available)	0–10 V = 0–100% rated output ±2%; Zin = 10 MΩ
7	Positive differential voltage programming input (not available)	0–10 V differential between pins 7 and 9 = 0–100% rated output; pin 2 grounded; Zin = 38 kΩ
8	Current monitor output	0–10 V = 0–115% rated output
9	Negative differential voltage programming input (not available)	0–10 V differential between pins 7 and 9 = 0–100% rated output; pin 2 grounded; Zin = 38 kΩ
10	NC	/
11	Current programming input (optional)	0–10 V = 0–100% rated output ±2%; Zin = 10 MΩ
12	Enable input	Low level = ON; TTL, CMOS, open collector
13	NC	/
14	NC	/
15	Analog signal ground	Analog signal ground

Typical applications

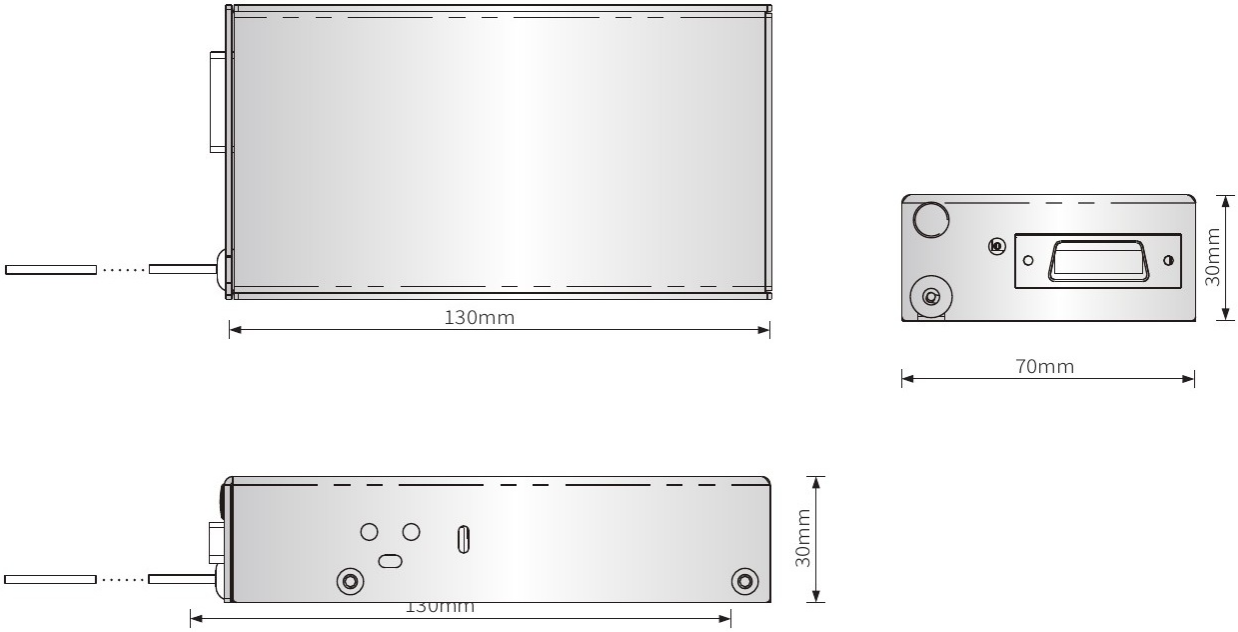
Photomultiplier tubes; electrostatic printing; electron and ion beams; electron-multiplier detectors; mass spectrometry; microchannel plate detectors; electrostatic lenses; nuclear instrumentation.

Optional functions

Option	Function
VCC	Variable current control
HS	High stability
/	Special options must be ordered in advance.

Outline dimensions

Dimensions in mm.


130mm
30mm
70mm
30mm
130mm