



COMPACT HIGH VOLTAGE POWER SUPPLY

SERIES OL330 & OL400

FEATURES

- 330 & 400 Watts of output power
- Outputs available from 10kV to 80kV
- Positive or negative polarity
- Digital or analogue meter options
- OEM version available
- Compact size
- Lightweight - from 6.5kg
- Mosfet Switch mode technology
- Local or remote operation
- CE Marked

APPLICATIONS

- X-ray equipment
- Electron microscopes
- Ion implantation
- Cable testing
- Component psu for system integration
- Capacitor charging
- Multi-CRT video displays



COMPACT HIGH VOLTAGE POWER SUPPLY

SERIES OL330 & OL400

DESCRIPTION

The Series OL330 and Series OL400 incorporate the latest switch-mode technology to achieve a high performance and excellent reliability within a compact and lightweight assembly. The design utilises high frequency, Mosfet switching techniques, incorporating low RDS (ON) Mosfets switched at 50kHz, combined with non-dissipative snubbing to achieve a high power to volume ratio. This results in cooler operation and thus increased reliability.

Front Panel:	A choice of either analogue or digital LED meters is available, or a blank panel for OEM applications.
Local/Remote Control:	The power supply units may be operated in either Local or Remote stations, selectable by means of a toggle switch mounted on the front panel. Remote operation is via a 37-way 'D' type connector situated on the rear panel. The power supplies come complete with a standard plug-in interface card. This may be customised to suit specific user requirements.
High Voltage Assembly:	The HV assembly is available air-insulated up to 40kV. An encapsulated version is available for the arduous electrical conditions to be found in an ion implanter or similar environments, where output short circuits are common-place.
Protection:	All models are protected against damage from over-current, over-voltage, over-temperature and output short circuit.
Voltage & Current Control:	Fully adjustable voltage and current control loops with automatic crossover ensure maximum flexibility.
Construction:	Designed to fit a standard 19" rack.
Safety:	These units satisfy the requirements of the European Standard EN60950. Furthermore, all components and materials used meet or exceed the requirements of UL94-V2 for flammability. The power supplies described in this data sheet should only be used by personnel who have received the appropriate training and who are fully aware of the hazards that exist when connecting and operating high voltage equipment.

SPECIFICATION

Input:	99V to 132V AC or 187V to 264V AC selectable by switch on rear panel. 47Hz to 63Hz single phase.
Output Power:	330W and 400W. See table opposite.
Output Voltage:	See table opposite.
Output Polarity:	Positive or negative to order.
Line Regulation:	0.05% of rated max output voltage for 10% line change.
Load Regulation:	Voltage mode: 0.05% at max output voltage for 0 to 100% change in current. Current mode: 0.5% of rated output for 0 to 100% change in voltage.
Ripple:	0.1% pk to pk (0.035% rms) of rated voltage +2V, peak to peak.
Transient Recovery:	Overshoot: less than 2% of rated output voltage. Recovery time: The output voltage will recover to within 0.1% of its set value in less than 500ms after removal of a short circuit.
Rate of Rise:	Factory set to 2 seconds (time taken to reach rated output voltage after operation of HV ON).
Operational Temperature:	0°C to +50°C.
Storage Temperature:	-20°C to +85°C.
Humidity:	Up to 95% relative humidity non-condensing.
Altitude:	Sea level up to 2000 metres.
Reliability:	MTBF of 18,000 hours at +25°C
Protection:	1) Over-temperature trip. 2) Over-voltage trip. 3) Constant current mode or time trip. Selectable by switch on front panel. Timed trip set to 2 seconds.
EMC:	Satisfies the requirements of EN55022 Class B for emissions.

COMPACT HIGH VOLTAGE POWER SUPPLY

SERIES OL330 & OL400

- Efficiency:** Better than 80% at full power.
- Cooling:** Fan cooled.
- Local Controls/Indicators:** Mains (Line) ON/OFF circuit breaker, HV ON/OFF switch, Local/Remote switch, Trip/Limit switch, HV OFF indicator, HV ON indicator, Remote indicator, Trip indicator, Voltage and Current Mode indicators, Arc Monitor indicator, 10-turn voltage demand potentiometer with turns-counting dial, 10-turn current demand potentiometer with turns-counting dial, digital or analogue output voltage meter, digital or analogue output current meter.
- Remote Controls:** Connections are made via a 37-way D-type connector situated on the rear panel.
User interlock: Opto-coupled input enabled by linking 2 pins together.
HV ON/OFF Control: Opto-coupled input.
Voltage Demand: 0 to +10V for 0 to 100% +/- 1% of rated voltage.
Current Demand: 0 to +10V for 0 to 100% +/- 1% of rated current.
Voltage Demand Monitor: 0 to +10V +/- 1% for 0 to 100% of rated voltage.
Current Demand Monitor: 0 to +10V +/- 1% for 0 to 100% of rated current.
Output Voltage Monitor: 0 to +10V +/- 1% for 0 to 100% of rated voltage.
Output Current Monitor: 0 to +10V +/- 1% for 0 to 100% of rated current.
Local/Remote - uncommitted relay contacts.
HV ON/OFF status.
Voltage Mode.
Current Mode.
Trip Status.
Arc Monitor status.
- Mechanical Specification:** Dimensions: See outline drawing.
Weight: 6.5kg (air insulated HV assembly), 11.6kg (encapsulated HV assembly)
Connections: All connectors are mounted on the rear panel.
Mains input: CE222/IEC320 Euroconnector cable, supplied with unit
HV Output: 2m coaxial cable fitted with UHF style connector, supplied with psu.
User interface: 37 way 'D' type with backshell, supplied with unit.
Earthing: M6 earth stud.

OUTPUTS & ORDERING INFORMATION:

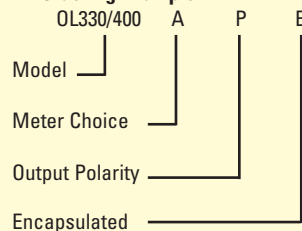
MODEL	OUTPUT VOLTAGE (max)	OUTPUT CURRENT (max)
OL330/102	1kV	330mA
OL330/202	2kV	160mA
OL330/502	5kV	66mA
OL330/103	10kV	33mA
OL330/203	20kV	16mA
OL330/303	30kV	11mA
OL330/403	40kV	8mA
OL330/603	60kV	5.5mA
OL330/803	80kV	4mA
OL400/102	1kV	400mA
OL400/202	2kV	200mA
OL400/502	5kV	80mA
OL400/103	10kV	40mA
OL400/203	20kV	20mA
OL400/303	30kV	13mA
OL400/403	40kV	10mA
OL400/603	60kV	6.5mA
OL400/803	80kV	5mA

Consult factory for other voltages.

Once a model number has been chosen, please add:

- A** Analogue meters
- D** Digital meters
- B** Blank panel-remote control only
- P** Positive polarity
- N** Negative polarity
- E** Encapsulated

Ordering Example:



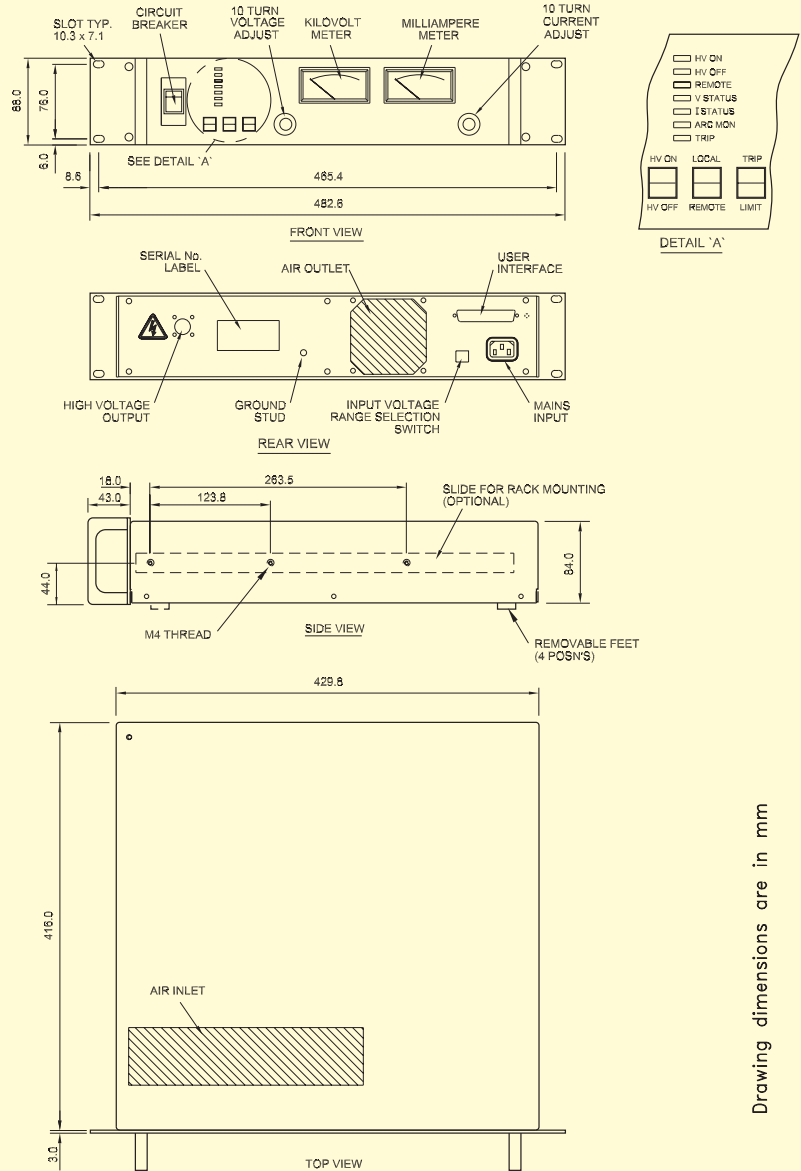
Note: Unit will be supplied with the input voltage range selection switch set to 187V to 264V AC.



**COMPACT
HIGH VOLTAGE
POWER SUPPLY**

SERIES OL330 & OL400

**SPECIFICATION
OUTLINE DRAWING**



Drawing dimensions are in mm

Design developments may result in specification changes



UK
 Durban Road, South Bersted,
 Bognor Regis
 West Sussex PO22 9RL UK
 Tel: **+44 (0) 1243 841888**
 Fax: **+44 (0) 1243 820555**
 e-mail: sales.uk@hitekpower.com
 Web Site: www.hitekpower.com

USA
 10221 Buena Vista Avenue
 Santee, CA 92071, USA
 Tel: **001 (619) 258 7700**
 Fax: **001 (619) 258 7733**
 e-mail: sales.us@hitekpower.com

GERMANY
 Gutenbergring 5
 D-63110 Rodgau
 Germany
 Tel: **+49 (0) 6106 7080-30**
 Fax: **+49 (0) 6106 7080-40**
 e-mail: sales.de@hitekpower.com