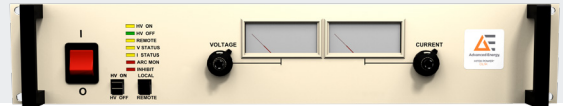


# HITEK POWER OL1K SERIES

## HIGH VOLTAGE POWER SUPPLY



The HiTek Power® OL1K Series range of single output high voltage power supplies meets the exacting requirements found in electron and ion beam systems, ion implantation and X-ray equipment. Designed using the latest power switching IGBTs to ensure efficient and reliable operation over the full operating range, the OL1K Series will give excellent performance in the most severe of electrical environments.

### PRODUCT HIGHLIGHTS

- 1 kW of output power
- Output voltages from 1 to 60 kV available with customer-defined derivatives upon request
- Positive or Negative polarity to order
- Analogue meter or blank front panel options
- IGBT switch mode technology
- Local or remote operation
- CE and UKCA marked

ELECTRICAL SPECIFICATIONS

Output Power	1 kW maximum at full rated output voltage and current
Output Voltage	Units available with maximum output voltages from 1 to 60kV
Output Current	Up to 1 A for 1 kV and 16 mA for 60 kV
Input Voltage	187 VAC to 255 VAC 47-63 Hz single phase plus protective earth
Input Current	Less than 12 A
Polarity	Positive or negative to order
Specification Range	Specifications apply above 5% of rated output voltage. The output can be controlled down to less than 0.25% of rated output voltage.
Recovery Time	Less than 500 ms to within 0.1% of previous operating level following a short circuit or arc. Maximum overshoot 2% of rated output voltage.
Temperature Coefficient	Less than 200 ppm/°C
Drift	Less than 0.02% per hour after 1 hour warm up
Operating Temperature	0°C to +40°C
Storage Temperature	-20°C to +70°C
Humidity	80% maximum relative humidity up to 31°C, reducing linearly to 50% at 40°C. Non-condensing (ref BS EN61010-1)
Altitude	Sea level up to 2000 metres (6500 feet)
Installation Category	II (BS EN61010-1)
Pollution Degree	2 (BS EN61010-1)
Usage	Indoor use only
Protection	The units are fully protected against over-temperature and overcurrent, peak arc current is resistively limited.
Arc Count and Extinguish	Each time the ACE system detects an arc it blanks the supply off for a brief period to extinguish the arc. The unit is then allowed to recover. If more arcs occur they are counted to determine the arc rate; if this exceeds a safe level the power supply is shut down. The parameters are factory set to 25 arcs in any 5 second period.
Cooling	Fan assisted, air is drawn in via side panel vents and exits at the rear of the unit. Minimum airflow required is 3m/s. Ambient air around the unit must not exceed 40°C.
Safety	Meets the requirements of Low Voltage Directive, 2014/35/EU, SI 2016 No.1101 by complying with BS EN61010-1:2010 when installed as a component part of compliant equipment. Units are CE and UKCA marked accordingly.
Safety Class	Equipment Class 1
EMC <sup>1</sup>	EN55022 Class B for conducted and radiated emissions
	EN61000-4-2 ESD - levels ±4 kV contact, ±8 kV air discharge
	EN61000-4-4 Fast transients on mains input - levels ±2 kV
	EN61000-4-5 surges - levels ±2 kV line to earth, ±1 kV line to line
	EN61000-4-8 magnetic fields - levels 30 A/m at 50/60 Hz
	EN61000-4-11 voltage dips, interruptions

**ELECTRICAL SPECIFICATIONS (CONTINUED)**

RoHS	Meets the requirements of EU directive 2011/65/EU, delegated directive 2015/863 and SI 2012 No. 3032 on the restriction of use of certain Hazardous Substances in Electrical and Electronic equipment (RoHS).
<b>Voltage Ripple</b>	
Voltage Mode	Less than 0.1% of rated output voltage +2 V, peak to peak
Current Mode	Less than 0.5% of rated output voltage peak to peak
<b>Voltage Regulation</b>	
Line	Less than 0.05% +1 V change in output voltage for a 10% change in line voltage
Load	Less than 0.05% +1 V change in output voltage for a 0 to 100% change in load current.
<b>Current Regulation</b>	
Line	Less than 0.5% of rated output current for a 10% change in line voltage
Load	Less than 0.5% change of rated output current for a 0 to 100% change in output voltage

## HITEK POWER OL1K SERIES

- <sup>1</sup> The Series OL1K is intended for installation as a component of a system and is designed to meet these requirements.  
The unit will not trip and recovers to normal operation after a disturbance as defined in SEMI F47-0706.  
The EMC performance of the power supply can only be fully assessed when installed within, and as a part of, the final system.

**MECHANICAL SPECIFICATIONS**

Dimensions	See outline drawing
Weight	14 kg
Connections	All connections are mounted on the rear panel
Mains	IEC320
Safety earth	M6 stud
HV output	Proprietary coaxial connector
Front panel	Stoving enamel trimite full gloss S60/6 colour cream R87177 as standard

**ORDERING INFORMATION**

For ordering information and to find a solution for your exact requirements, please contact your local Advanced Energy sales representative.



For international contact information,  
visit [advancedenergy.com](http://advancedenergy.com).

[powersales@aei.com](mailto:powersales@aei.com) (Sales Support)  
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+1.888.412.7832

## ABOUT ADVANCED ENERGY

Since 1981, Advanced Energy (AE) has perfected how power performs for its customers. For both end users and OEMs, AE's comprehensive portfolio of standard and custom high voltage components precisely match system specifications to deliver unparalleled energy, quality, and performance. Through close customer collaboration, design expertise, application insight, and world-class support, AE creates successful partnerships and enables customers to push the boundaries of innovation and stay ahead of evolving market needs.

PRECISION | POWER | PERFORMANCE | TRUST



**CAUTION:**  
High Voltage

Read and understand all documentation before you install, operate, or maintain Advanced Energy high voltage power supplies. Follow all safety instructions and precautions to protect against property damage and serious or possibly fatal bodily injury. Never defeat safety interlocks or grounds.

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