8000 Series

70kV DC Power Supply

GENVOLT HIGH VOLTAGE POWER



High Voltage PSU

- ✓ Universal Mains Input
- ✓ Models from 500V to 70kV
- ✓ Positive or Negative Polarity Available
- ✓ Remote Interface
- ✓ Multiple Circuit Protection
- ✓ Including Arc and Overcurrent

We recommend visiting our website for any updated model information

Specification Summary

The Genvolt 8000 series is a rugged modularised range of AC-input DC High Voltage supplies, designed to operate from a universal mains input from 85VAC to 256VAC 50/60Hz. Power Output options from 500V to 70kV at 120W and 40kV to 70kV at 200W. They feature an active boost-style Power Factor Correction front end – i.e. an active rectifier. This offers a very low harmonic distortion at mains frequencies with a power factor of up to 0.92.

The modules have a FIXED polarity output which should be specified at the time ordering using the "Model Finder" table.

They operate in both Voltage Control and Current Control modes with fast active crossover between the modes.

Protection against output short circuits or arcs, over temperature and output overvoltage allow for operation in demanding environments.

Standard features as fitted at the factory

Control	Logic level for high voltage enable/disable
Overvoltage Protection	An overvoltage protection circuit monitors the output for excessive voltage generation. Overvoltage conditions can be caused by excessive input program signal. If an overvoltage condition is detected, the power supply is latched off until input power is reset.
PS Fault Condition	A PS fault indicator and a PS fault output on J1, indicate an OVP or a regulation error.
PF and Universal Input	The input voltage of the 8000 can operate within the range from 85VAC to 265VAC. The power factor is actively corrected across the entire range and is better than 0.99 at full load.
Internal EMI Filter	An internal EMI filter and fuse provide protection against line voltage surges and power supply faults.

Specification

AC Input Voltage Range	85VAC to 256VAC, 47 – 63 Hz
Power Factor	Full Load 0.92
Output Polarity	+ve or –ve (Please specify when ordering)
Voltage Load Regulation	0.01% of full voltage for a no load to a full load charge
Voltage Line Regulation	+/- 0.005% of full voltage over the specified input voltage range
Current Load Regulation	0.01% from 0V to full voltage
Current Line Regulation	+/- 0.01% of full current over the specified input voltage range per 8 hours after
Voltage Ripple	0.2% p-p of output voltage for 200W 0.1% p-p of output voltage for 120W
Current Stability	0.02% per 8hrs after ½hr warm up
Temperature Coefficient	100 ppm per °C
Temperature	Operating 0°C to 45°C Storage -20°C to +85°C
Interlock	Open Interlock will shut down unit
Circuit Protection	Overvoltage, Overcurrent, Arcing and Over temperature
Relative Humidity	Non condensing 95%

The control signal is NOT a safety interlock and must NOT be used for a protection system from high voltage generation for safety purposes.

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Remote Programming	Allows remote adjustment of the output voltage and current, via an external voltage source.
Remote Monitor	Allows remote monitoring of the output voltage and current.
High Voltage Enable/Disable	Allows remote ON/OFF control of the high voltage.
+10VDC Reference	A +10VDC is provided for remote programming via a potentiometer or voltage divider.

Mechanical Details

Weight	Model specific, approximately 3Kg for 120W model up to 50kV and 4kg for 60kV, 70kV & 200W model
Dimensions	95.25mm (H) x 127mm (W) x 229mm (D) for 120W model up to 50kV. 95.25mm (H) x 127mm (W) x 279.4mm (D) for 60kV, 70kV & 200W model.
Power Input Connector	IEC320 with mating connector x 2 Metres
HV Output Connector	Proprietary HV Connector
Control Interface Connector	15 pin 'D' connector (Male)

Regulatory Approvals

Compliant to 2004/108/EC, the EMC directive 2006/95/EC, the low voltage directive

RoHS compliant and CE approved

Model Finder Table

120W Model:

Maximum Voltage	Maximum Current	Product Code
500 V	240mA	8000.5
1kV	120mA	8001
2.5kV	48mA	8002.5
5kV	24mA	8005
10kV	12mA	8010
20kV	6mA	8020
30kV	4mA	8030
40kV	3mA	8040
50kV	2.4mA	8050
60kV	2mA	8060
70kV	1.7mA	8070

200W Model:

Maximum Voltage	Maximum Current	Product Code
40kV	5mA	840200
50kV	4mA	850200
60kV	3.3mA	860200
70kV	2.85mA	870200

Typical Applications Include:

Electrospinning & Electrospraying X-Ray Generation

Insulation Testing

Capacitor Charging (Contact us for individual applications)

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