Genvolt

High Voltage Power Supplies

Sirius 3 – High Voltage Rack Mounted Laboratory Power Supply

Product Brochure

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Sirius 3

Summary

The Sirius range of high voltage power supplies are suitable for a wide range of laboratory applications.

The Sirius 3 has the output current and voltage displayed on two digital meters mounted on the front panel.

Output control is achieved using two multi-turn potentiometers and a HV on / off switch, also mounted on the front panel.

The unit is available in a standard 19 inch housing.

Default control is via local controls on the front of the power supply, however, the power supply can also operate in remote mode via RS232 or RS485.

The monitoring system uses intelligent PC based software based on VB visual interface. The entire monitoring system can realise operational control of the Sirius Range of power supplies. Please contact us to discuss your requirements.

Technical Specification

Input Specifications	
AC Input Voltage	240VAC +/- 10%
Output Specifications	
Output Voltage	30kV Maximum
Output Polarity	Negative
Output Power	900W
Stability	Less than 0.5%
Line Regulation	Less than 0.5%
Load Regulation	Less than 0.5%
Environmental	
Ambient Temperature	-10°C - 40°C
Relative Humidity	Less than 80% non-condensing

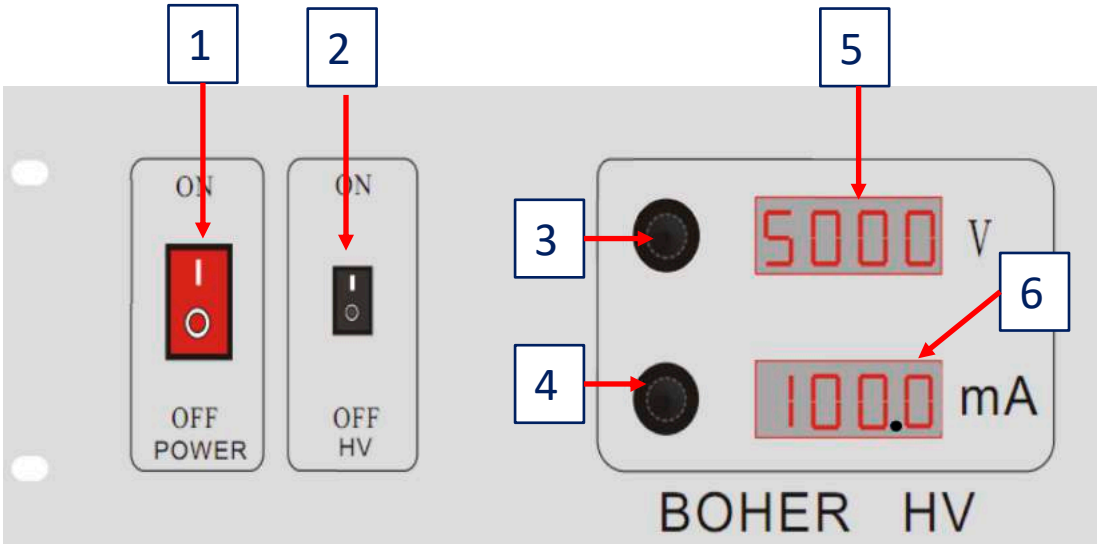
Protection

Short circuit protection
When short circuit occurs, inverter works at constant current mode, and the output voltage becomes 0.

Spark protection
When the HV sparks over to the ground, protection circuit activates, and the output voltage becomes 0.

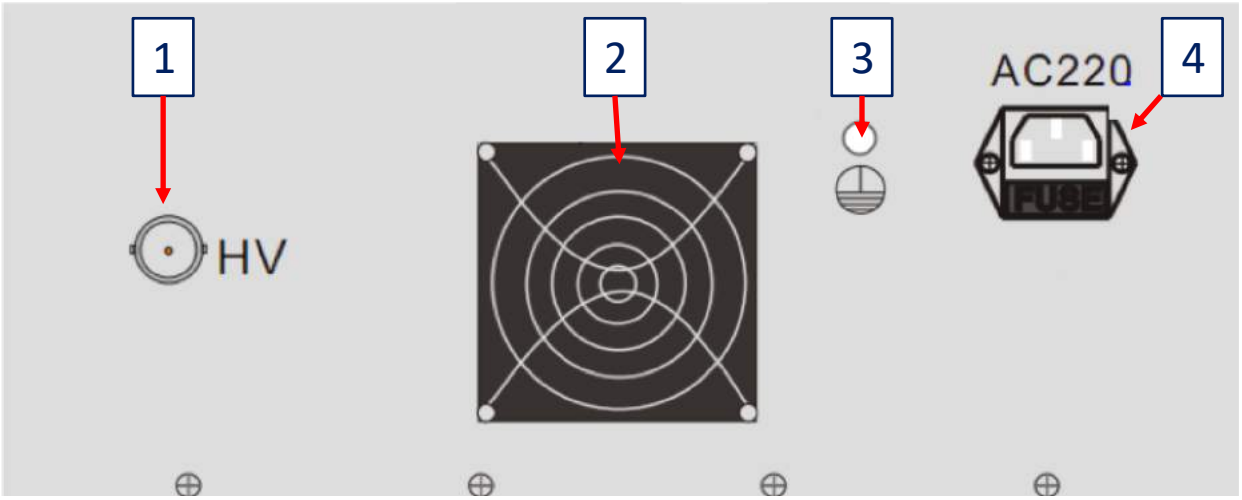
Overcurrent protection
When the load current exceeds rated current, the power supply runs at protection mode, and the output voltage reduces.

Controls



Front		
No.	Description	Function
1	Power main switch	This switch controls the input of the entire power supply. Please ensure equipment is turned off during maintenance.
2	High Voltage switch	This switch controls the opening of high Voltage.
3	High voltage setting control	Controls output voltage when in local control mode. Turn the potentiometer clockwise to increase.
4	High voltage output display	Shows the high voltage output value (kV)
5	Current Setting control	In local control mode enables user to control the output current, without adjusting the output voltage, this knob is best set the maximum output by turning the potentiometer fully clockwise.
6	Current output display	Current output value (mA)

Controls



Back		
No.	Description	Function
1	HV Output	Install HV plug and rotate anticlockwise to lock (the HV output connector may vary depending on the actual product).
2	Cooling Fan	The fan blows air towards the inside of the power supply. Keep the airflow path clear when installing. Do not block the inlet with any obstacles.
3	M6 for Earth bonding	In addition to the ground and the load, this terminal must also be connected to the earth.
4	Power Input	Standard 220V AC mains power.
Optional Controls		Both RS232 and RS485 control attachments are available if required

Optional Intelligent Monitoring System

The Sirius range can be installed with our BR-2H intelligent monitoring system, which includes PC software based on the VB visual interface.

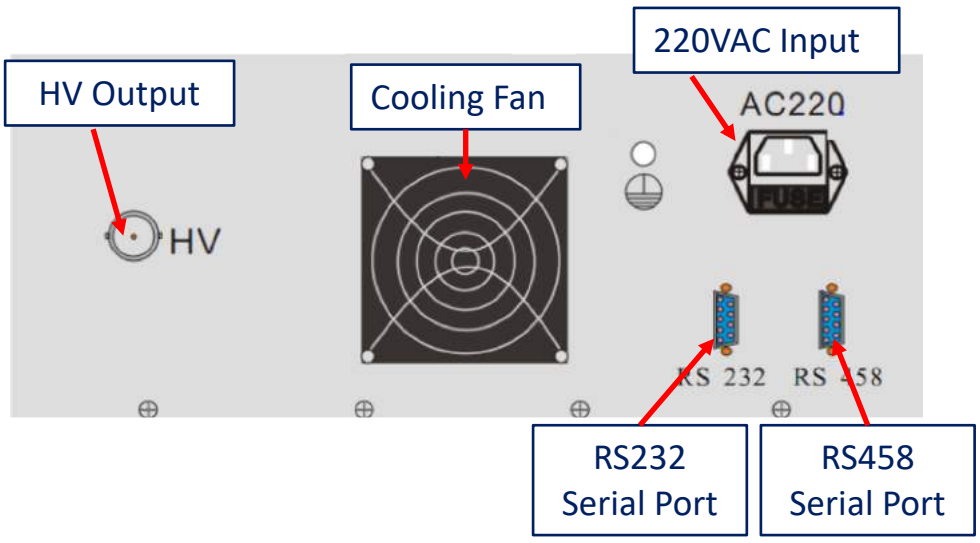
The monitoring system can realize operational control of the Sirius power supply, allowing voltage and current setting as well as recording and querying of output parameters.

The host computer program is based on visual interface of VB6.0 with COM port control to communication between the upper and lower computer, while using Microsoft Office Access 2003 database to record the power parameters, which allows for easy user query.

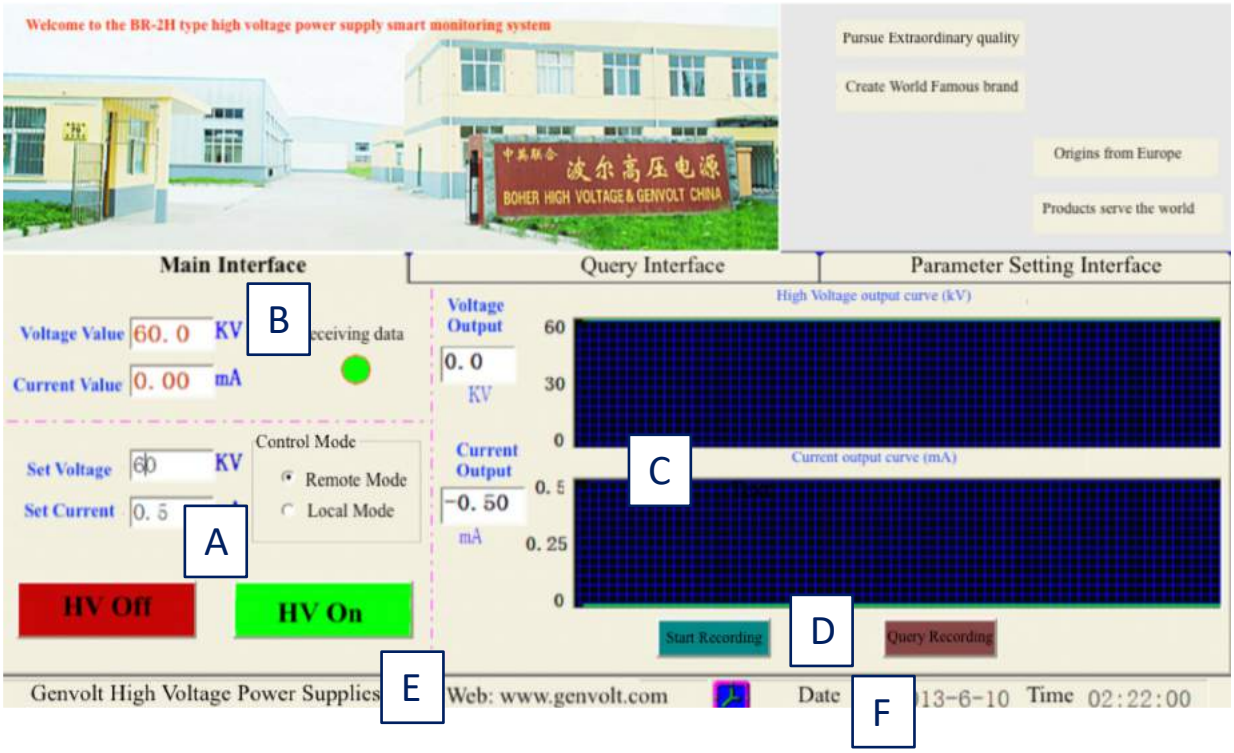
The host computer includes a total of 3 main interfaces –
The main interface, The record query interface and the parameter setting interface.

Please see the following pages for information on the different monitoring interface operations and functions.

Optional: RS232 Serial Port and RS485 Serial Port



Main Interface



A: Set the control zone, first select the remote control mode, set the output voltage and current of the power supply, and then click to turn on the high voltage, the power supply can output the corresponding high voltage, current (The load should be appropriate, the power supply is constant power output, Excessive load will lead to low output voltage, too light load will make current less

B: parameter feedback area, can see the current output high voltage and current value in real time. The communication status indicator is used to indicate the current communication status of the system, the green light is the normal receiving data, and the blue light is the system is in sending mode or communication failure.

C: High voltage and current output curves are used to visually reflect the output trend of the power supply and can reflect the output stability of the power supply.

D: power output parameter operating area, click the start record button, the database can be recorded according to the set recording cycle (output voltage, current, deviation value, record time) Click the query record button, you can switch to the record query interface, For details about the interface functions, see the record query interface. If the system is turned on, the recording stops temporarily.

E: Company name, website introduction.

F: System Time.

Record Query Interface

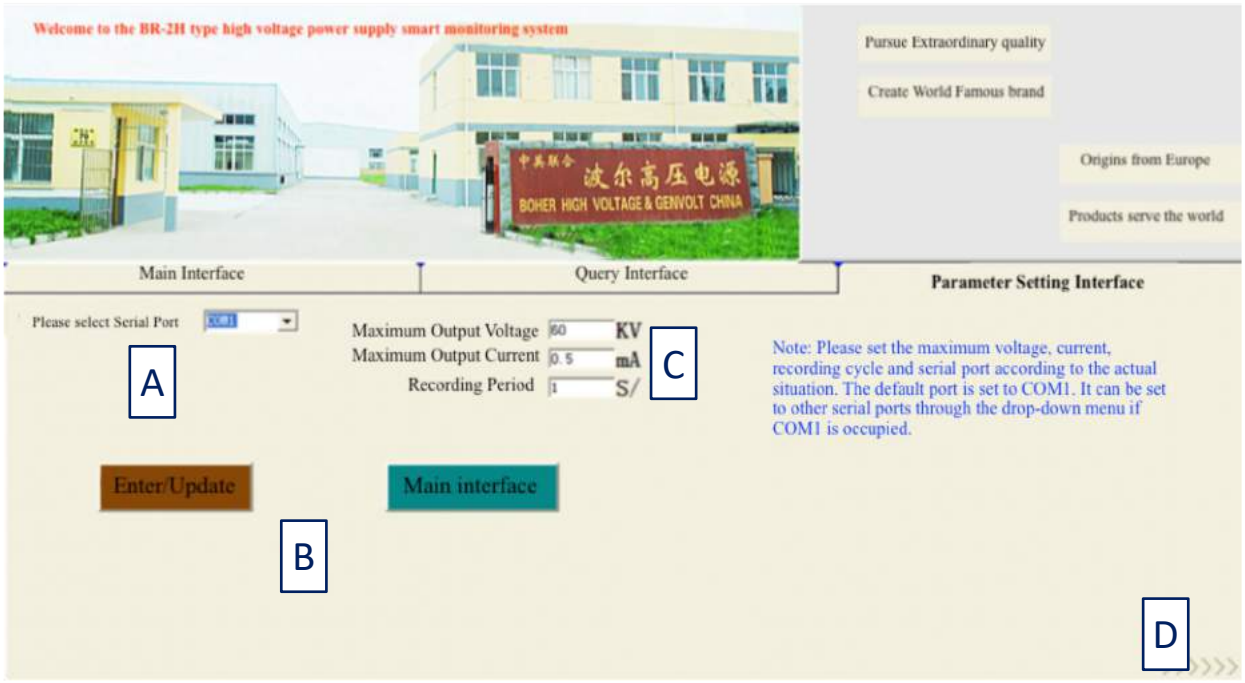
A: Enter the query time, and click Query Record on the main interface. The default time is the current moment, and change according to actual needs.

B: Used to display all records and change rate exception records within the query start time.

C: used to query abnormal changes in the rate of change in the initial time, for example: If a discharge occurs, the voltage change rate will vary greatly. According to this judgment, the number of discharges in the initial time can be easily found. number.

D: Click to start the query, then all records in the beginning moment will be displayed in zone B. Click to return to the main interface, the focus returns to the main interface, the main interface displays, at this time, if the system is turned on, it will be recorded when returning to the main interface.

Parameter Setting Interface



A: Used to set the communication serial port. The default is COM1.

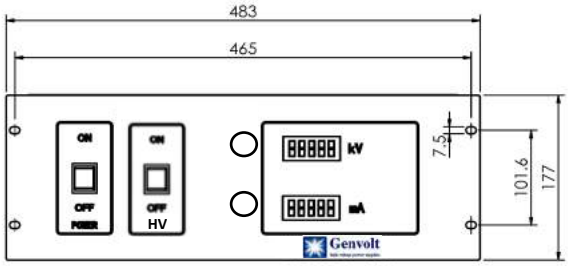
B: Click Enter\Update to enter all the parameters (serial port, maximum output voltage, maximum output current, recording period) into the database, and click to return to the main interface. The main interface is displayed.

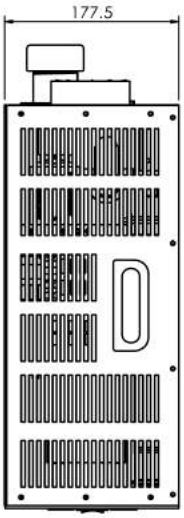
C: Set the power supply and system parameters. The maximum output voltage and current are set according to the specific conditions. The recording period is used to set the interval for the system to enter data into the database.

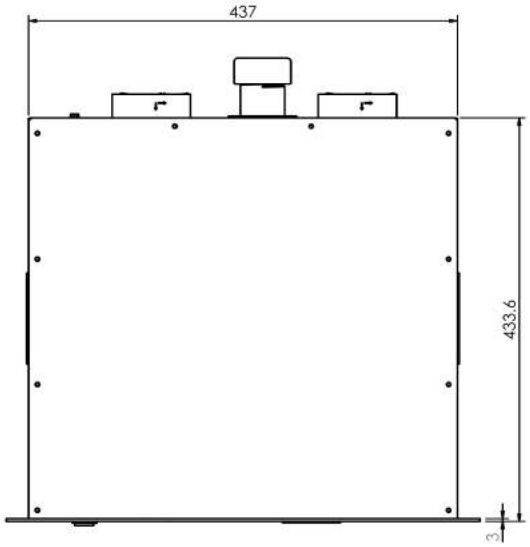
D: Interface expansion arrows: Used to expand and reduce the interface.

Dimensions

Height – 177mm
Width – 483mm
Length – 433.6mm





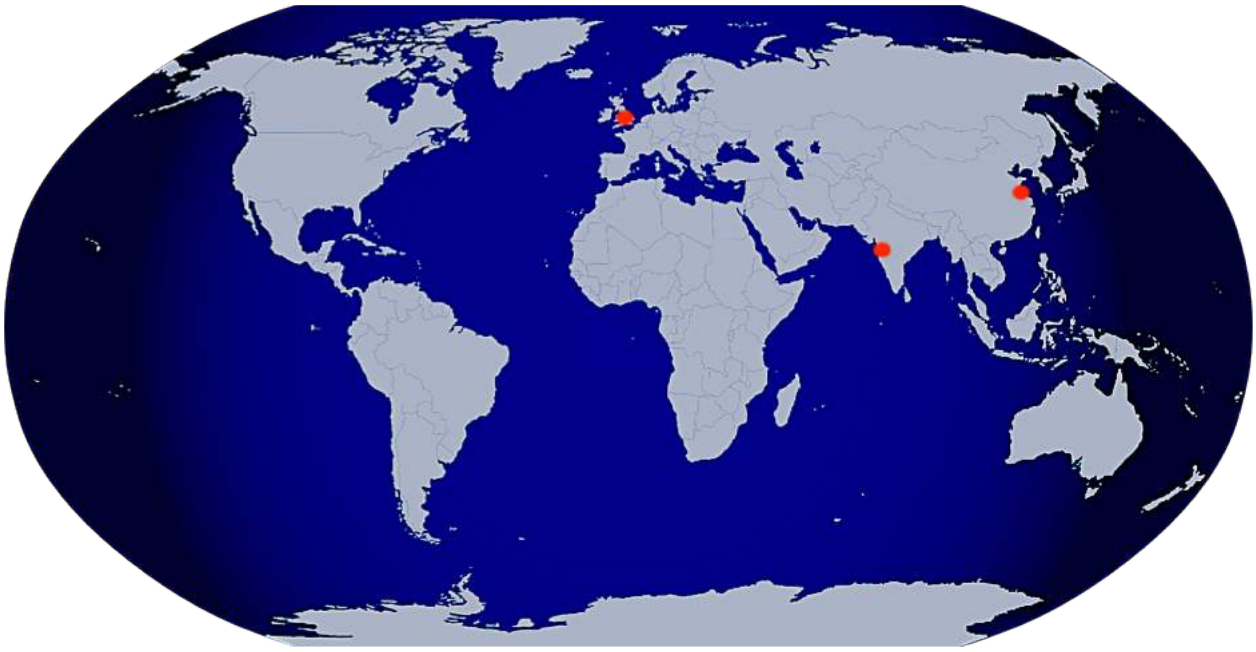


Safety

This power supply contains hazardous voltages and stored energy. Contact with the output may result in fatal injury. It should only be used and maintained by trained personnel. Please check the following before switching the power supply on –

- The area where the power supply is to be used should be kept clean and dry.
- Before switching the power supply on please confirm that the 10-turn potentiometer is turned fully in counter-clockwise.
- Keep a safe distance from the output connector and any items connected to it.
- Ensure that a secure connection is made between the Earth side of the load and the green and yellow Earth lead.
- Please do not hesitate to contact us at info@Genvolt.co.uk

Global Presence



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