

HV FLEX

High Voltage Low Noise High Stability Floating Power Supply



Highlights

Feature	Benefit
Floating high voltage capability	Allows for connecting together multiple HV modules in order to configure complex HV power distribution systems (up to ± 6000 V vs. earth ground)
Based on the FLEX platform	Modules for different applications (power supplies, picoammeters, DAC, ADC) can be housed together in the same 3U-19" rack
Flexible housing	HV FLEX modules can be used on bench as well as in the rack

Applications

- Electrostatic lenses
- Electron analysers

How Does It Work?

The HV Flex high voltage floating power supply is composed of a particular HV DC/DC converter output stage combined with a dedicated low pass output filter, which is especially designed to guarantee very high stability and an extremely low output noise.

A high-speed fibre-optic interface combined with a high-voltage isolated DC/DC converter allows for biasing the HV output stage up to 6 kV with respect to earth ground. It allows for connecting several HV modules together in order to make complex HV power distribution systems.

Software control and voltage monitoring of the HV power supply can be performed remotely, directly via the Ethernet interface, using either TCP/IP or UDP transmission protocols. At the same time, through control knob and the installed on-board display, manual operation of the power supply is also possible.

Deliverables

- HV Flex single channel, high-voltage floating Power supply
- Power supply unit
- Optional: 3U-19" rack unit with integrated power supply for 6 modules
- Optional: 3U bench top rack unit for 3 modules

Specifications

HV output channels	1
HV voltage range	From $\pm 100V$ to $\pm 6kV$ (selectable on order)
HV max output power	1W
DAC Resolution bits	16
Polarity	Positive or Negative (selectable on order)
Noise (Pk-Pk): < 5mV @20MHz BW (typ. on module 6200P)	Noise (Pk-Pk): < 5mV @20MHz BW (typ. on module 6200P)
Noise (RMS): < 1mV @20MHz BW (typ. on module 6200P)	Noise (RMS): < 1mV @20MHz BW (typ. on module 6200P)
Stability: +/-0.5 bit in 48h (T +/-2K) (typ. on module 6200P)	Stability: +/-0.5 bit in 48h (T +/-2K) (typ. on module 6200P)
HV floating output capability	Up to 6kV with respect to protective ground
ADC Resolution bits	16
Manual operation	Yes
Communication	Ethernet TCP-IP and UDP
Supply voltage	+12 V

HV FLEX Block Diagram

