

NHV5000 - HIGH VOLTAGE POWER SUPPLY

The NHV5000 is a single width general-purpose NIM module that contains one adjustable power supply providing the low noise, regulated, very stable high voltage necessary for operation of photomultipliers, ionization chambers, semiconductor detectors, electron multipliers, and other devices. The low-noise output is adjustable from ± 10 to ± 5000 V dc with up to 2 mA load current. Noise on the output is < 2 mV peak-to-peak.

The front-panel graphic display 96x64 pixel and 4 touch bottom permit set all control parameters and visual monitoring of either the output voltage or the output current.

The output voltage can be controlled from ± 10 to ± 5000 V. Output current can be monitored with resolution 1 μ A. The module NHV5000 has overload and short-circuit protection. The module can be controlled through RS232 interface. The local or remote control can be selected by switch on the front panel of the module.

POWER SUPPLY REQUIREMENTS

The module has NIM standard power supply.

P. Voltage (V)	Current/ch (mA)
+24	500
-24	500
+6	120
-6	120

SPECIFICATION

Output range	10 to 5000 V
Output load capacity	0 to 2 mA
Regulation	$\leq 0,003\%$ variation in output voltage
Temperature instability	$< \pm 50$ ppm/ $^{\circ}$ C after 30-minute warm-up; operating range 0 to 50 $^{\circ}$ C.
Long-term drift	$< 0,01\%$ /hour and $< 0,03\%$ /24-hour variation in output voltage at constant input line voltage, load, and ambient temperature after 30-minute warm-up.
Output ripple	Max value is < 5 mV peak-to-peak, typical is < 2 mV in bandwidth from 50 Hz to 20 MHz.
Overload protection	Internal circuitry protects against overloads and short circuits.

CONTROLS

Outputs	The SHV connector is placed on the rear panel
Output voltage	Can be set by using graphic display and four touch bottoms (Optional version with one 10-turn precision potentiometer, in this case graphic display used like indicator and set up protection parameters.); The values are displayed by graphic display voltage in V and current in uA (the resolution are 1 Volt and 1uA).
Polarity	Positive or negative output polarity by positions of internal modules is selected. Two LED are indicated polarity output voltage. Green LED Positive polarity, Yellow LED Negative polarity
Ramp up and down	Are selected in the range $1 \div 255$ V/s step
Overvoltage and undervoltage	Warning have set before Enable output (usually $\pm 10\%$ of installed parameter)
Reset	Output voltage can be reset by external TTL signal