

N470 - 4 Channel 8 kV Programmable Power Supply

(<http://www.caen.it/nuclear/printable.php?mod=N470>)

Family: Power Supply

- High flexibility: designed to power a wide range of detectors
- Positive or negative polarity selectable for each channel
- Output voltage up to 8 kV and output current up to 3 mA
- Local control via on-board alphanumeric key-pad and display
- Remote control via H.S. CAENET through: PC- CAENET Controller A303A, VME Controller V288 or CAMAC Controller C117B
- Friendly software user interface
- Non-volatile memory of all operational parameters
- Under/overvoltage signalling, overcurrent and max. voltage protection for each channel

OVERVIEW

The Mod. N470 is a double width NIM unit housing 4 independent High Voltage channels .

The output voltage ranges of each channel are the following:

- from 0 to ± 3 kV / 3 mA;
- from ± 3 kV to ± 4 kV / 2 mA;
- from ± 4 kV to ± 8 kV / 1 mA.

The range selection occurs automatically. The current resolution is 1 μ A. The output polarity is independently selectable for each channel.

It is possible on each channel to control several operating parameters: two levels of presettable high voltage, two levels of current limit, Ramp -up, Ramp -down. All these parameters can be programmed and monitored either in remote mode, via HIGH SPEED CAENET, or in local mode, via front panel alphanumeric keypad and two 8character displays. In addition some LEDs display the status of the selected channel.

All the functional parameters are stored in a non-volatile memory.

Four front panel trimmers allow the setting of 4 max. voltage limits, and the two current and voltage limits can be selected by 2 external NIM/TTL signals. A NIM/TTL signal is also available for the KILL function.

The User can also calibrate the module via an appropriate menu.

The module is intrinsically safe: the High Voltage is present only on the female SHV output connectors.

TECHNICAL SPECIFICATIONS TABLE

Number of channels	4
Output voltage	0 to ± 8 kV
Output current (each channel)	max. 3 mA with $0 < V < \pm 3$ kV max. 2 mA with ± 3 kV < V < ± 4 kV max. 1 mA with ± 4 kV < V < ± 8 kV
Polarity	positive or negative, setttable by inverting internal diode bridge
Ripple	300 mVpp at full load (3 kV)
Long term stability	± 2 V
HV Mon resolution	± 1 V
I Mon resolution	± 1 μ A

HV Set resolution	± 1 V
Current Set resolution	± 1 μ A
MAXV	Settable via front panel screwdriver trimmer for each channel
Humidity range	0 - 80%
Operating temperature	0 - 45 °C
Output voltage temp. Coefficient	max. 0.005% °C