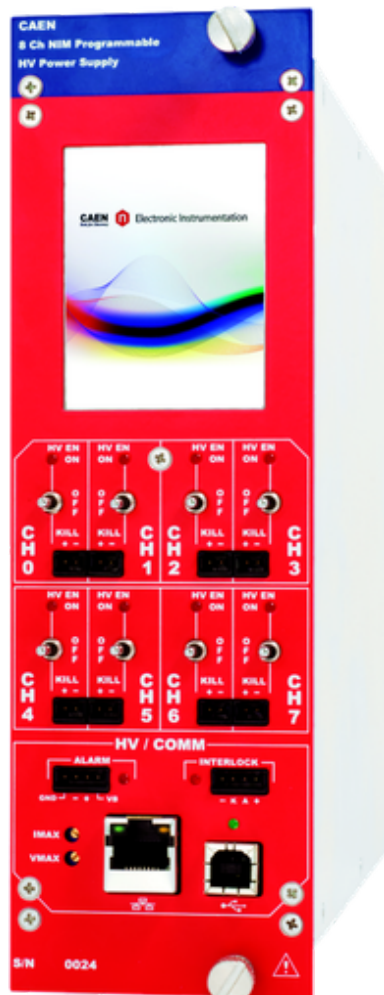
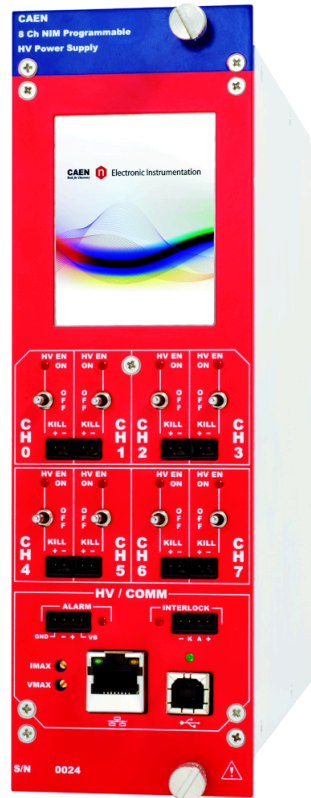


N8033

8 Channel 4 kV/ 3 mA (6W) NIM Power Supply Module (USB/Ethernet/Touchscreen)



Features



- 8 independent channels in a 2U NIM module
- 4 kV / 3mA output range
- Channels with either positive or negative polarity
- SHV coaxial output connectors
- Low Ripple
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for board enable and Individual channel kill
- 10 nA Current monitor resolution (with x10 Imon-Zoom: 1 nA)
- 2.8" color touch screen display
- Local and Remote control (USB2.0/Ethernet)
- Software Tools for easy channel management

Description

The CAEN **Mod. N8033** provides **8** independent 4 kV/ 3 mA (6W) channels in a double width NIM mechanics. Each channel can provide a **4 kV** max voltage and a **3 mA** max current (up to 6W). The unit is available with positive, negative and "mixed" (4 positive and 4 negative) channels.

SHV connector

NIM double width, 8 channels for Mod. N8033

Consult our **connectors reference page** for technical information.

Channels outputs are delivered through SHV connectors. The HV output RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the range 1÷500 V/s in 1 V/s steps. The module features 10 nA Iset resolution. Module control can take place either **locally** thanks to a **2.8" Touchscreen Graphic color LCD display** with a completely redesigned user interface or **remotely**, via **USB 2.0** or **Ethernet**.

A complete set of **Software Tools** is available to control these units; the user can freely download low level libraries, LabVIEW driver and Graphical application software. The user can monitor the status of the module and configure the HV parameters for each channel in real time.

Safety features allows the module to perform as a current generator and includes:

Overvoltage and Undervoltage warning

When the output voltage differs from the programmed value by more than 2% of set value (minimum 10V).

Overcurrent detection

When a channel attempts to exceed the programmed current limit, it signalled to be in "overcurrent" and enter in a TRIP status. The output voltage is varied to keep the current below the programmed limit for a programmable TRIP time, then the channel is switched off. If TRIP is set to "constant current mode", the channel behaves like a current generator.

Hardware VMAX and IMAX

Maximum output voltage and maximum current value can be fixed, via front panel potentiometer, at the same common value for all the board channels. IMAX and VMAX values can be read out via software.

Safety Board Interlock

Common Interlock logic for channels enable/disable and individual inputs signal for channel Kill function.

Technical Specifications

Package

Double width NIM mechanics. Weight: ~2.6 kg

Output channels

8 channels, SHV connector

Positive, Negative or Mixed (4-8 positive and 4-8 negative) Polarity; common ground

Output Voltage

0 ÷ 4 kV

Max. Output Current

3 mA

Max. Ch. Output Power

6 W

Vset Resolution

10mV

Vmon Resolution

10 mV

Iset Resolution

10 nA

Imon Resolution

10 nA (high range) / 1 nA (low range)

Vmax

0 ÷ 4 kV

Vmax resolution

1 V

IMAX hardware

3 mA

IMAX hardware resolution

10 μ A

Ramp Up/Down

1 ÷ 500 Volt/s, 1 Volt/s step

Trip

Max. time an "overcurrent" can last (seconds). A channel in "overcurrent" works as a current generator; output voltage varies in order to keep the output current lower than the programmed value. "Overcurrent" lasting more than set value (1 to 9999) causes the channel to "trip". Output voltage will drop to zero either at the Ramp-down rate or at the fastest available rate, depending on Power Down setting; in both cases the channel is put in the off state.

If trip= INFINITE, "overcurrent" lasts indefinitely. TRIP range: 0 ÷ 999.9s; 1000 s = Infinite. Step = 0.1 s

Voltage Ripple

10 - 1000 Hz: <4 mVpp typ; <8 mVpp max
1 kHz - 20 MHz: <2 mVpp typ; <5 mVpp max

Vmon vs. Vout Accuracy

± 0.02% ± 1V

Vset vs. Vout Accuracy

± 0.02% ± 1V

Imon vs. Iout Accuracy

± 0.2% ± 2 µA

Iset vs. Iout Accuracy

± 0.2% ± 2µA

Humidity range

0 ÷ 80% non condensing

Operating temperature

0 ÷ 45°C

Storage temperature

-10 ÷ 70°C

Vout / Temperature coefficient

50 ppm/°C typ

Long Term stability (1 week after 1h warmup)

±0.02% / full scale

Local Control

LCD touchscreen

Remote Control

USB & Ethernet

Ordering Options

Code	Description	
WN8033XAAAAA	N8033N - 8 Channel NIM Programmable High Voltage Power Supply (-4KV 3mA 6W max) - SHV Common Gnd	RoHS
WN8033XMAAAA	N8033M - 8 Channel NIM Programmable High Voltage Power Supply (4ch-4KV 3mA, 4ch+4KV 3mA 6W) - SHV	RoHS
WN8033XPAAAA	N8033P - 8 Channel NIM Programmable High Voltage Power Supply (+4KV 3mA 6W max) - SHV Common Gnd	RoHS

Accessories

A148x



Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

A1483

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

HV CABLES



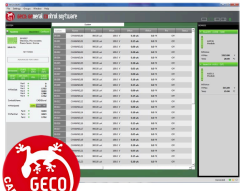
High Voltage Cable Assemblies

A1484

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

Related Software

GECO2020



General Control Software for CAEN HV Power Supplies

Related Software Libraries

CAEN HV Wrapper Library



Library for CAEN Power Supply Control

Related Products

N8031



8 Channel 100 V / 10 mA NIM Power Supply Module (USB/Ethernet/Touchscreen)

N8034



8 Channel 6 kV / 1 mA NIM Power Supply Module (USB/Ethernet/Touchscreen)

LabVIEW Driver (PSM - Power Supply Modules)



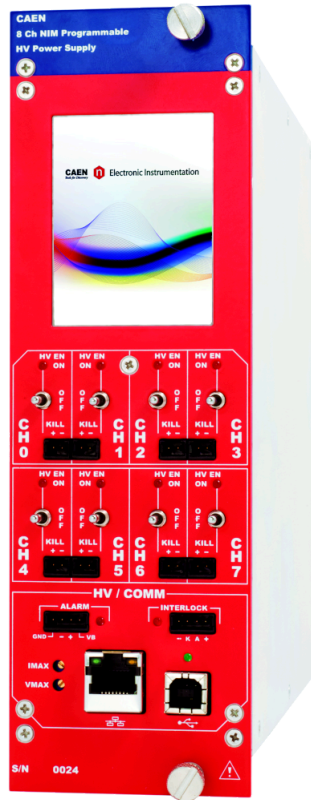
LabVIEW Instrument Driver for Power Supply Modules

N8032



8 Channel 500 V / 10 mA NIM Power Supply Module (USB/Ethernet/Touchscreen)

Gallery



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