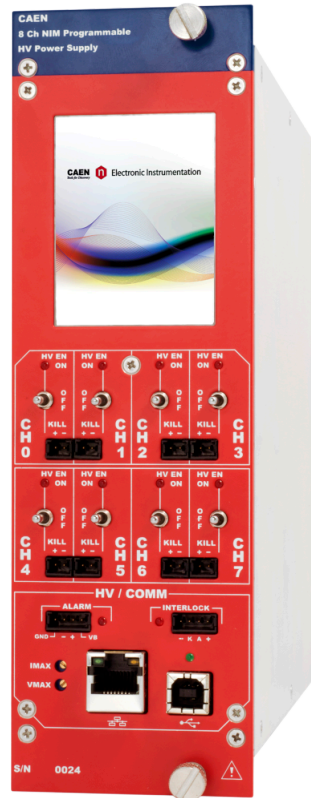


N8031

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



Features



- 8 independent channels in a 2U NIM module
- 100 V / 10mA output range
- Channels with either positive or negative polarity
- BNC coaxial output connectors
- Temperature probe input
- Low Ripple
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for board enable and Individual channel kill
- 50 nA Current monitor resolution (with x10 Imon-Zoom: 5 nA)
- 2.8" color touch screen display
- Local and Remote control (USB2.0/Ethernet)
- Software Tools for easy channel management

Description

The CAEN **Mod. N8031** provides **8** independent 100 V/10 mA channels in a double width NIM mechanics. Each channel can provide a **100V** max voltage and a **10 mA** max current. The unit is available with positive, negative and "mixed" (4 positive and 4 negative) channels. Channels outputs are delivered through BNC connectors.

BNC connector

NIM double width, 8 channels for Mod. N8031

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

The HV output RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the range 1÷50 V/s in 1 V/s steps. The module features 50 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, BNC connector
- Positive, Negative or Mixed (4-8 positive and 4-8 negative) Polarity; Common Ground

Output Voltage

0 ÷ 100 V

Max. Output Current

10 mA

Max. Ch. Output Power

1 W

Vset Resolution

500 μ V

Vmon Resolution

500 μ V

Iset Resolution

50 nA

Imon Resolution

50 nA (high range) / 5 nA (low range)

Vmax

0 ÷ 100 V

Vmax resolution

1 V

IMAX hardware

10 mA

IMAX hardware resolution

10 μ A

Ramp Up/Down

1 ÷ 50 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 - 1000Hz: < 3 mVpp typ; <5 mVpp max
- 1kHz - 20MHz: < 1 mVpp typ; <3 mVpp max

Vmon vs. Vout Accuracy

± 0.02% ± 20mV

Vset vs. Vout Accuracy

± 0.02% ± 20mV

Imon vs. Iout Accuracy

± 0.5% ± 50µA

Iset vs. Iout Accuracy

± 0.5% ± 50 µA

Humidity range

0 ÷ 80% non condensing

Operating temperature

0 ÷ 45°C

Storage temperature

-10 ÷ 70°C

Vout / Temperature coefficient

±10 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	
WN8031XAAAAA	N8031N - 8 Channel NIM Programmable High Voltage Power Supply (-100V 10mA) - BNC conn. Common Gnd	RoHS
WN8031XMAAAA	N8031M - 8 Channel NIM Programmable High Voltage Power Supply (4ch-100V 10mA, 4ch+100V 10mA) - BNC	RoHS
WN8031XPAAAA	N8031P - 8 Channel NIM Programmable High Voltage Power Supply (+100V 10mA) - BNC conn. Common Gnd	RoHS

Accessories

A1484

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

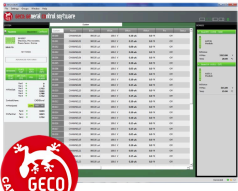
A148x



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

N8034



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

N8032



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

N8033



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

LabVIEW Driver (PSM - Power Supply Modules)



LabVIEW Instrument Driver for Power Supply Modules

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