

R8034

8-16 Channel 6 kV/1 mA Rack 19" HV Power Supply (USB/Ethernet/Touc hscreen)



Features



- 8 or 16 independent channels in a 19" rack unit (110/220V AC Powered)
- 6 kV / 1 mA output ranges
- Channels with either positive or negative polarity
- SHV coaxial output connectors
- Low Ripple
- 20 mV Vset resolution
- 5 nA Iset resolution
- Under/over-voltage alert, overcurrent and max. voltage protection
- Programmable ramp-up / ramp-down (1-500 V/s)
- 2.8" color touch screen display
- Local and Remote control (USB2.0/Ethernet)
- Interlock logic for board enable and Individual channel kill
- Software Tool for easy channel management

Description

The CAEN **Mod. R8034** provides **8 or 16** independent 6 kV / 1 mA channels in a 19" rack unit (110/220V AC Powered). Each channel can provide a **6 kV** max voltage and a **1 mA** max current. The unit is available with positive, negative and "mixed" (4 positive and 4 negative) channels.

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 5 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**.

SHV connector

19" 2U, 8/16 channels for Mod. R8034

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

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.

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

Packaging

19" rack (h: 2U; d: 360mm). 110/220V AC Powered

Output Channels

- 8-16 channels, SHV connector
- Positive, Negative or Mixed (4-8 positive and 4-8 negative) Polarity; common ground

Output Voltage

0÷6 kV

Max. Output Current

1 mA

Max. Ch. Output Power

6W

Vset Resolution

20 mV

Vmon Resolution

20 mV

Iset Resolution

5 nA

Imon Resolution

5 nA (high range) / 500 pA (low range)

Vmax

0 ÷ 6 kV

Vmax resolution

2V

IMAX hardware

0÷1 mA

IMAX hardware resolution

1 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. Trip range: 0 ÷ 999.9 s; 1000 s = INFINITE. Step = 0.1 s (If trip= INFINITE, “overcurrent” lasts indefinitely)

Voltage Ripple

- 10 - 1000 Hz: <4 mVpp typ; <8 mVpp max
- 1kHz - 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% ± 1 µA

Iset vs. Iout Accuracy

± 0.2% ± 1 µA

Humidity range

0 ÷ 80% non condensing

Operating temperature

0 ÷ 45°C

Storage Temperature

-10 ÷ 70°C

Vout / Temperature coefficient

±50 ppm / °C

Long Term stability (1 week after 1h warmup)

±0.02% / full scale

Local Control

LCD touchscreen

Remote Control

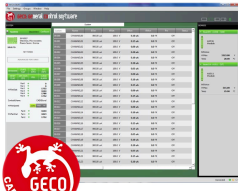
USB & Ethernet

Ordering Options

| Code | Description | |
|--------------|--|------|
| WR8034DXAAAA | R8034DN - 16CH Rack-mount Programmable HV PowerSupply(-6KV 1mA) - SHV conn. - Common Gnd | RoHS |
| WR8034DXMAAA | R8034DM - 16CH Rack-mount Programmable HV P.S.(8ch-6KV 1mA,8ch +6KV 1mA) - SHV conn. - C. Gnd | RoHS |
| WR8034DXPAAA | R8034DP - 16CH Rack-mount Programmable HV PowerSupply(+6KV 1mA) - SHV conn. - Common Gnd | RoHS |
| WR8034XAAAAA | R8034N - 8CH Rack-mount Programmable HV PowerSupply(-6KV 1mA) - SHV conn. - Common Gnd | RoHS |
| WR8034XMAAAA | R8034M - 8CH Rack-mount Programmable HV P.S.(4ch -6KV 1mA,4ch +6KV 1mA) - SHV conn. - Common Gnd | RoHS |
| WR8034XPAAAA | R8034P - 8CH Rack-mount Programmable HV PowerSupply(+6KV 1mA) - SHV conn. - Common Gnd | RoHS |

Related Software

GECO2020



General Control Software for CAEN HV Power Supplies

Related Products

R8031



8-16 Channel 100 V / 10 mA 19" Power Supply Module (USB/Ethernet/Touchscreen)

R8032



8-16 Channel 500 V/10 mA 19" Power Supply Module (USB/Ethernet/Touchscreen)

R8033



8-16 Channel 4 kV/ 3 mA (6W) 19" Power Supply Module (USB/Ethernet/Touchscreen)

Gallery



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CAEN S.p.A.

Via Vetraia 11
55049 - Viareggio
Italy

Phone +39.0584.388.398

Fax +39.0584.388.959

info@caen.it

www.caen.it

CAEN GmbH

Brunnenweg 9
64331 Weiterstadt, Germany

Phone +49 (0)212.254.4077

Mobile +49 (0)151.16.548.484

info@caen-de.com

www.caen-de.com

CAEN Technologies, Inc.

1 Edgewater Street - Suite 101
Staten Island, NY 10305
USA

Phone +1.718.981.0401

Fax +1.718.556.9185

info@caentechnologies.com

www.caentechnologies.com

CAENspa India Private Limited

B205, BLDG42, B Wing,
Azad Nagar Sangam CHS,
Mhada Layout, Azad Nagar, Andheri West
Mumbai, Maharashtra 400053, India

info@caen-india.in

www.caen-india.in

