A1590

16 Channel 9 kV / 50 µA Common Floating Return Board

If you work with Hybrid APD or application that need up to 9 kV, these are the boards for you

Features

- 8/16 independently controllable High Voltage channels
- Independently programmable for each channel:
  - Output voltage (200 mV resolution)
  - Current limit (1 nA resolution)
  - Ramp up/down (1÷500 Volt/sec)
  - TRIP parameter
- Double width board
- 16 independently controllable High Voltage channels
- Common floating return shared by all channels
- Radiall 52 pin connector
- Available with positive or negative polarity
- 0 ÷ 9 kV output voltage
- 50 µA maximum output current
- 10 mV voltage monitor resolution
- 100 pA current monitor resolution
- Voltage Ripple < 10 mVpp (typical)

Overview

The power supply A1590 is a double width board (10 TE wide) that houses 16 Independent high voltage channels. The board is available with either positive or negative output polarity

The A1590 channels share a common floating return, which allows on-detector grounding reducing the noise level; the floating return is insulated from the crate earth up to ±50 V (with a 65 V hardware limit). Channels are delivered through Radiall 52 pin HV connectors.

The output voltage range is 0 ÷ 9 kV with 10 mV set and monitor resolution.

The Maximum output current is 50 µA with 100 pA monitor resolution.

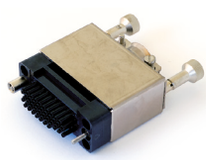
Independently programmable for each channel:

- Output voltage:	0 ÷ 9 kV	step: 200 mV
- Current limit (Iset):	0 ÷ 50 µA	step: 1 nA
- HV Ramp up/down:	1 ÷ 500 V/sec	step: 1 V/sec
- TRIP parameter		

Safety features include:

- Channels can be enabled or disabled through the Global Interlock logic.
- Overvoltage and Undervoltage warning when the output voltage differs from the programmed value.
- Overcurrent detection: when a channel attempts to exceed the programmed current limit, it is signaled 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: maximum output voltage can be set, via front panel potentiometer, at the same common value for all the board channels. VMAX value can be read out via software.
- Safety Board Interlock: this protection disables the HV generation when the HV outputs are not connected to their loads

Accessories available:



Mate cable connector (Mod. A996)

Relevant insertion/extraction tool (Mod. A995)

Multipin to SHV Adapter for 32 ch HV Boards (Mod. R649B)

Universal Multichannel System - Mainframes

Modularity, Compatibility, Connectivity, Usability and Solidity are the keywords of the system design. The Mainframes have been specifically designed to power all detector technologies found in modern Physics Experiments, such as photomultipliers, wire chambers, streamers tubes, silicon detectors and others.

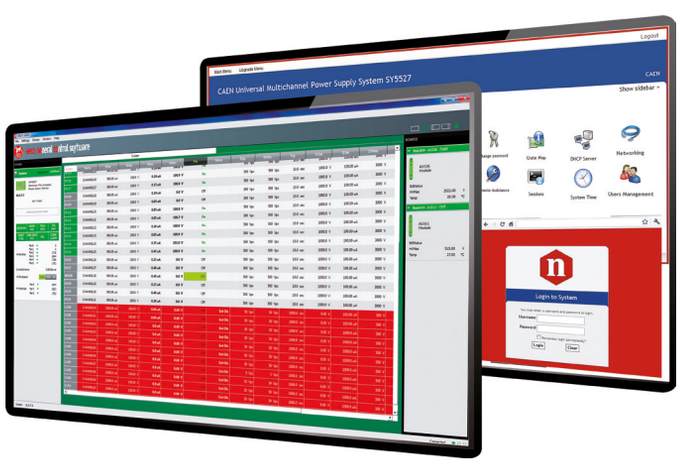
The systems are modular, flexible and match not only the requirements of major experiments with large number of channels but also the practical needs of test laboratories, where simple manual operations on a limited number of channels are often desired.

FREE DOWNLOAD

All CAEN Control Software is available for free download on the web site.

Control Software available: GECO2020 with user friendly GUI, CAEN HV Wrapper library for custom SW development and HiVoCS Web Interface. EPICS and OPC Server also supported.

EPICS | CAEN OPC Server | CAEN HV Wrapper | CAEN HiVoCS | CAEN GECO 2020



GECO2020 Control Software

Ordering Option

Code	Description
WA1590NAAAAA	A1590N - SYx527 H.V. channels -9 KV 50 µA - Multipin Conn. comm float (16 ch)
WA1590PAAAAA	A1590P - SYx527 H.V. channels +9 KV 50 µA - Multipin Conn. comm float (16 ch)

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