

AG550

12/24 Channel 5 kV/1 mA Common Ground Boards



Features



- 12/24 independently controllable High Voltage channels
- 5 kV / 1 mA output range
- Available with either positive or negative polarity
- Radial 52 pin or SHV coaxial connectors
- Low ripple
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for unit enable
- Software Tool for easy channel management

Description

The CAEN Mod.AG550 houses 12 or 24 high voltage channels and is available in different versions equipped with SHV or with Radial Multipin connector.

Radial multipin connector

Single width (5 TE wide), 24 channel for Mod. AG550

SHV connector

Single width (5 TE wide), 12 channels for Mod. AG550DP, AG550DN
Double width (10 TE wide), 24 channels AG550S

Consult our [connectors reference page](#) for technical information.

The channels share a common ground and the output voltage range is $0 \div 5$ kV, with 500 mV set and monitor resolution. The maximum output current is 1 mA, with 100 nA current set and monitor resolution. The board is available with either positive or negative output polarity. The boards are provided with both current and voltage protections. If overcurrent occurs, the relevant channel can be programmed either to turn off after a programmable trip time or to keep on providing the maximum allowed current: this particular feature allows the modules to work as current generator.

The maximum output voltage can be set through a potentiometer to a value which is common to all channels and can be read out via software. Channel can be enabled or disabled through the Interlock logic. The HV RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the **1 ÷ 500 V/s range** (1 V/s step).

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

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 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 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 (only for Multipin Connector versions).

For boards with Radial 52 pin connector are available the following accessories:

- Mate cable connector (Mod. **A996**) and relevant insertion/extraction tool (Mod. **A995**)
- 24 Channel Multipin Radial to SHV Adapter (Mod. **A647 - R647**)

Technical Specifications

No. of Channels

12 / 24 (Common Ground)

Polarity

Positive / Negative

Output Voltage

0÷5 kV

Max. Output Current

1 mA

Voltage Set Resolution

500 mV

Voltage Monitor Resolution

0.5V

Current Set Resolution

100 nA

Current Monitor Resolution

100 nA

VMAX hardware

0÷5 kV common for all the board channels

VMAX hardware accuracy

± 2.5% of FSR

VMAX software

0÷5 kV settable for each channel

VMAX software resolution

1 V

Ramp Up/Down

1÷500 Volt/sec, 1 Volt/sec step

Voltage Ripple

< 25 mV typical; max 40mV

Voltage Monitor vs. Output Voltage Accuracy

typical: $\pm 0.3\% \pm 0.5 \text{ V}$

max: $\pm 0.3\% \pm 2 \text{ V}$

Voltage Set vs. Voltage Monitor Accuracy

- typical: $\pm 0.3\% \pm 0.5 \text{ V}$

- max: $\pm 0.3\% \pm 2 \text{ V}$

Current Monitor vs. Output Current Accuracy

- typical: $\pm 2\% \pm 500 \text{ nA}$

- max: $\pm 2\% \pm 1 \mu\text{A}$

Current Set vs. Current Monitor Accuracy

- typical: $\pm 2\% \pm 500 \text{ nA}$

- max: $\pm 2\% \pm 1 \mu\text{A}$

Maximum output power

5 W per channel (software limit)

Power consumption

200 W @ full power (24 channels)

Accessories

R647



24 Channel Multipin Radial to SHV connector Adapter (Max: 8 kV - 19" Rack)

A995



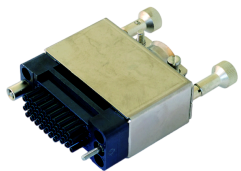
Insertion/extraction tool for A996

HV CABLES



High Voltage Cable Assemblies

A996



52 pin cable connector

R649B



32 Channel Multipin Radial to SHV connector Adapter (Max: 8 kV - 19" Rack)

A647



24 Channel Multipin Radial to SHV connector Adapter (Max: 8 kV - Desktop)

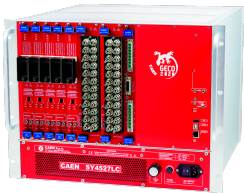
Related Products

SY4527



Universal Multichannel Power Supply System / 19"wide, 8U-high (16 slot)

SY4527LC



Universal Multichannel Power Supply System Low Cost / 19"wide, 8U-high (10 slot)

SY5527LC



Universal Multichannel Power Supply System Low Cost / 19"wide, 4U-high (4 slot)

SY5527



Universal Multichannel Power Supply System / 19"wide, 4U-high (6 slot)

Gallery



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