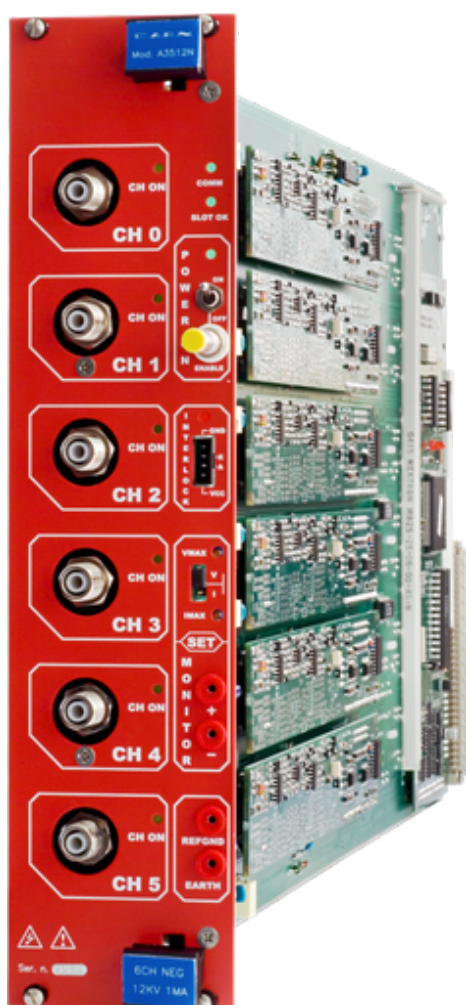
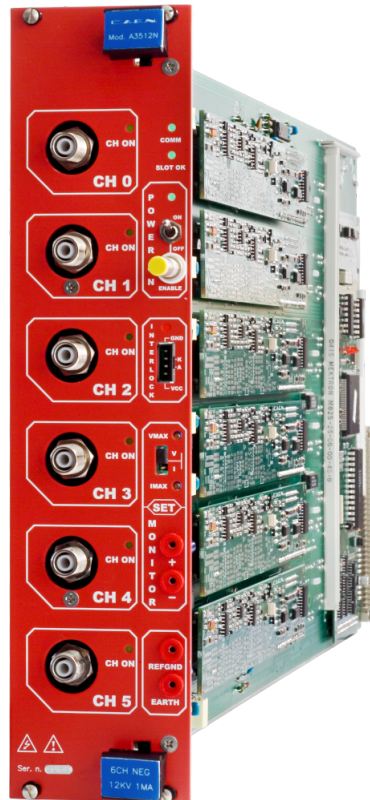


A3512

6 Channel 12 kV / 1 mA Power Supply Board



Features



- EASY Subsystem Power Supply Module
- Magnetic field and radiation tolerant
- Six 12 kV / 1 mA channels
- Channel floating up to 5 V between each other
- VMax and IMax set by trimmer
- Channel protections: overvoltage, overcurrent, overtemperature
- On/Off for each channel
- Interlock capability
- Local and remote 48V Service on/off

Description

The CAEN **Mod.A3512** 12 kV / 1 mA Power Supply Board is developed for operation in magnetic field and radioactive environment. One A3512 houses 6 **individual floating** (up to 5 V between each other) 12 kV / 1 mA channels. The output voltage can be set with 1 V monitor resolution.

If the output voltage differs from the programmed value by more than 3% of voltage full scale range, the channel is signalled to be either in Overvoltage and Undervoltage condition. Moreover, for each channel, a voltage protection limit SVMAX can be fixed via software with 1 V resolution and the output voltage can not be programmed beyond this value.

CPE HV connector

High Voltage Single Pin, 6 channels (**Mod. A3512, A3512H**)

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

The output current is monitored with 100 nA resolution; if a channel tries to draw a current larger than its programmed limit it is signalled to be in Overcurrent condition; the SY1527 system detects this state as a fault and reacts according to the setting of the TRIP parameter.

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 by more than 3% of voltage full scale range.
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.
Overtemperature detection	It is possible to monitor board temperature and to check board status through TEMPERR > 65°C. When the board status is TEMPERR all channels are switched off.
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 channel. IMAX and VMAX values can be read out via software.

Technical Specifications

No. of Channels

6

Polarity

Positive (A3512P, A3512HP) or Negative (A3512N, A3512HN), with Floating return

Output Voltage

0 ÷ 12 kV (connector output)

Max. Output Current

1 mA

Voltage Set/Monitor Resolution

1 V

Current Set/Monitor Resolution

100 nA

VMAX hardware

0 ÷ 12 kV

VMAX hardware accuracy

± 2% of FSR

VMAX software

0 ÷ 12 kV

VMAX software resolution

1 V

Voltage Ripple

- < 50 mVpp
- < 20 mVpp (A3512H version)

Voltage Monitor vs. Output Voltage Accuracy

- Typical: ± 0.3% of reading ± 5 V
- Maximum: ± 0.3% of reading ± 10 V

Voltage Set vs. Output Voltage Accuracy

- Typical: ± 0.3% of setting ± 5 V
- Maximum: ± 0.3% of setting ± 10 V

Current Monitor vs. Output Current Accuracy

- Typical: $\pm 2\%$ of reading $\pm 1 \mu\text{A}$
- Maximum: $\pm 2\%$ of reading $\pm 2 \mu\text{A}$

Current Set vs. Output Current Accuracy

- Typical: $\pm 2\%$ of setting $\pm 1 \mu\text{A}$
- Maximum: $\pm 2\%$ of setting $\pm 2 \mu\text{A}$

Weight

3.5 kg

Ordering Options

Code	Description	
WE3512HXNAAA	A3512HN - EASY3000 H.V. channels -12 KV 1 mA (6ch) - low noise version	
WE3512HXPAAA	A3512HP - EASY3000 H.V. channels +12 KV 1 mA (6ch) - low noise version	
WE3512XAAAAA	A3512N - EASY3000 H.V. channels -12 KV 1 mA(6 ch)	
WE3512XPAAAA	A3512P - EASY3000 H.V. channels +12 KV 1 mA(6 ch)	

Related Products

A3802



128 Channel DAC Board

A3535



32 Channel 3.2 kV / 0.5 mA / 1.1 W Board

A3540

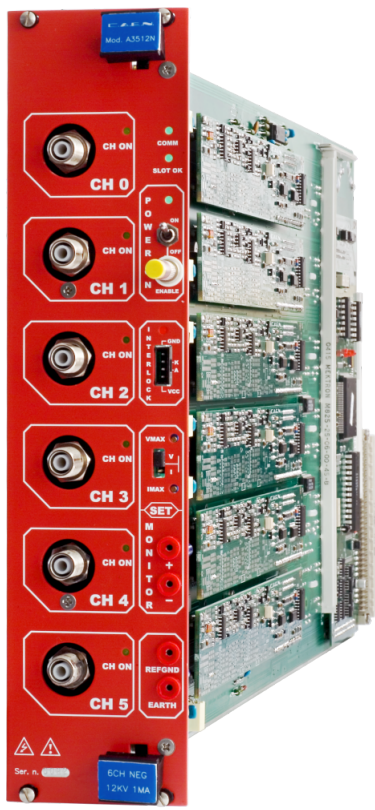


12 Channel 4 kV / 1 mA Power Supply Board

A3501



12 Channels 100 V / 1 mA Power Supply Board



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