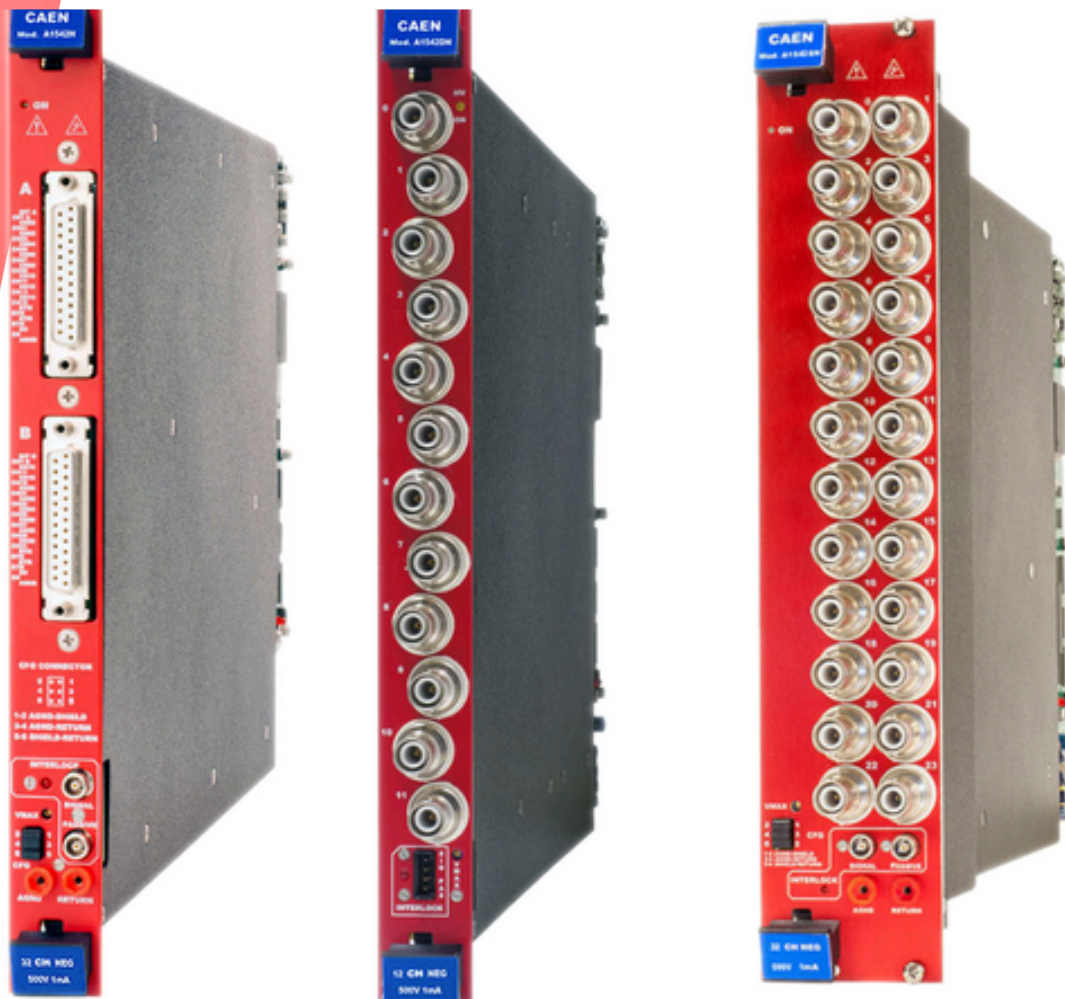


A1542H

12/24/32 Channel 500 V, 1 mA/100 μ A Common Floating Return Dual Range Boards



Features



- 12 / 24 / 32 independently controllable High Voltage channels
- Output Voltage: 500 V
- Dual range current:
 - High Power: 1 mA (1 nA monitor resolution)
 - High resolution: 0.1 mA (0.1 nA monitor resolution)
- Available with Negative / Positive / Mixed Polarity
- SHV / DB25 connectors
- Floating Type: Common Floating Return
- Low ripple
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for unit enable
- Software Tool for easy channel management

Description

The power supplies of the A1542H Family house 12 / 24 / 32 independent high voltage channels.

The channels share a Common Floating Return, which is insulated from the chassis/crate ground. This feature may help to minimize problems of ground-loops. The board is available with positive, negative or mixed output polarity. Channels are delivered with SHV / DB25 connectors. Consult our **connectors reference page** for technical information.

The output voltage range is **0 ÷ 500 V**, with **1 mV** monitor resolution. The output channels offer **dual current ranges** (software selectable):

High Power:	0 ÷ 1 mA
	I set resolution: 20 nA
	I mon resolution: 1 nA
High Resolution:	0 ÷ 0.1 mA
	I set resolution: 20 nA
	I mon resolution: 0.1 nA

Independently programmable for each channel:

Output voltage:	0 ÷ 500 V	Step: 10 V
Current limit (Iset):	0 ÷ 1 / 0.1 mA selectable	Step: 20 nA
V Ramp up/down:	1 ÷ 100 V/s	Step: 1 V/sec
TRIP parameter	0 ÷ 999.9 s; 1000 s = Infinite	Step: 0.1 s

Safety features 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 allows to disable the primary HV generation when the HV outputs are not connected to their loads.

CAEN provides a complete software range to control, monitor and configure its Power Supply products.

- **GECO2020 General Control Software**
- **CAEN HV Wrapper Library,**
- **HiVoCS web tool**
- **OPC Server for CAEN Power Supplies**
- **EPICS Service**

These tools, which support the most used operating systems, spread from low level libraries (**CAEN HV Wrapper Library**), to be used as a source for customer designed software, to the WEB interface (**HIVOCS**) available on each mainframe, up to the all-inclusive Control Software (**GECO2020**) with user friendly graphical interfaces, to meet any application need.

Advanced control via OPC Server (**CAEN OPC Server**) and EPICS (**EPICS IOC**) is supported, to easily include CAEN power supplies within existing setups featuring such standards. **All CAEN Control Software are available for free download.**

Technical Specifications

No. of Channels

12 / 24 / 32 (Common Floating Return)

Output Voltage

0÷500 V

Polarity

Positive / Negative / Mixed depending on purchased version
(Mixed boards have half of the channels with positive polarity and half with negative)

Max. Output Current

- High Power: 1 mA
- High Resolution: 100 μ A

Voltage Set Resolution

10 mV

Voltage Monitor Resolution

1 mV

Current Set Resolution

20 nA

Current Monitor Resolution

- High Power: 1 nA
- High Resolution: 100 pA

VMAX hardware

0÷500 V common for all the board channels

VMAX hardware accuracy

1 V

VMAX software

0÷500 V settable for each channel

VMAX software resolution

1 V

Ramp Up/Down

1÷100 Volt/sec, 1 Volt/sec step

Voltage Ripple

- < 5 mVpp (Max)
- < 3 mVpp (Typ)

Vmon vs. Vout accuracy

±0.02 % ±50 mV

Vset Vs. Vout Accuracy

±0.02 % ±50 mV

Imon vs. Iout accuracy

- High Power: ±2% ±1 µA
- High Resolution: ±2% ±0.1 µA

Iset vs. Iout accuracy

- High Power: ±2% ±1 µA
- High Resolution: ±2% ±0.1 µA

Maximum output power

0.5 W per channel

Power consumption @ full power

- 32 channels (A1542H): 32 W
- 24 channels (A1542HL, A1542HS): 24 W
- 12 channels (A1541HD): 12 W

Ordering Options

Code	Description	
WA1542HDXAAA	A1542HDN - SYx527 H.V.channels -500V 1mA/100µA - SHV Conn. common floating (12 ch) 100pA res.	RoHS
WA1542HDXMAA	A1542HDM - SYx527 H.V.ch +500V 1mA/100µA (6ch) - 500V 1mA/100µA (6CH) - SHV C. Float. 100pA res.	RoHS
WA1542HDXPAA	A1542HDP - SYx527 H.V.channels +500V 1mA/100µA - SHV Conn. common floating (12 ch) 100pA res.	RoHS
WA1542HLXAAA	A1542HLN - SYx527 H.V.channels -500V 1mA/100µA - Mltipin Conn. common floating (24 ch) 100pA res.	RoHS
WA1542HLXPAA	A1542HLP - SYx527 H.V.channels +500V 1mA/100µA - Mltipin Conn. common floating (24 ch) 100pA res.	RoHS
WA1542HSXAAA	A1542HSN - SYx527 H.V.channels -500V 1mA/100µA - SHV Conn. common floating (24 ch) 100pA res.	RoHS
WA1542HSXMAA	A1542HSM - SYx527 H.V.chs +500V 1mA/100µA (12ch) --500V 1mA/100µA (12CH) - SHV C. Float. 100pA res.	RoHS
WA1542HSXPAA	A1542HSP - SYx527 H.V.channels +500V 1mA/100µA - SHV Conn. common floating (24 ch) 100pA res.	RoHS
WA1542HXAAAA	A1542HN - SYx527 H.V.channels -500V 1mA/100µA - Multipin Conn. common floating (32 ch) 100pA res.	RoHS
WA1542HXPAAA	A1542HP - SYx527 H.V.channels +500V 1mA/100µA - Multipin Conn. common floating (32 ch) - 50pA res.	RoHS

Accessories

HV CABLES



High Voltage Cable Assemblies

Related Products

SY4527



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

SY5527



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

SY5527LC



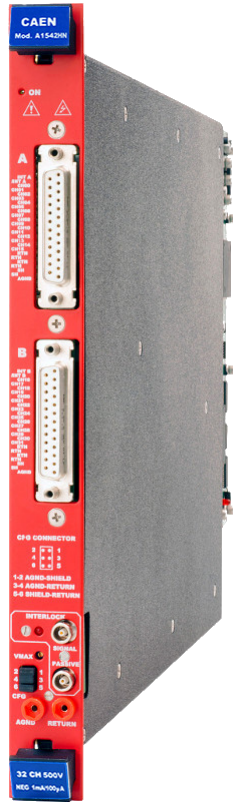
Universal Multichannel Power Supply System Low Cost / 19"wide, 4U-high (4 slot)

SY4527LC



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

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

