

A7460

12 Channel 6 kV, 1 mA/100 μ A (6W) Common Floating Return Dual Range Board



Features



- 12 independently controllable High Voltage channels
- Output Voltage: 6000 V
- Dual range current:
 - High Power: 1 mA (2 nA monitor resolution)
 - High resolution: 0.1 mA (0.2 nA monitor resolution)
- Available with Negative / Positive Polarity
- SHV 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 CAEN Mod A7460 is a single width board (5 TE wide) that houses 12 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 or negative output polarity Channels are delivered with SHV connectors. Consult our **connectors reference page** for technical information.

The output voltage range is **0 ÷ 6000 V**, with **10 mV** monitor resolution. The output channels offer **dual current ranges** (software selectable):

High Power:	0 ÷ 1 mA
	I set resolution: 5 nA
	I mon resolution: 2 nA
High Resolution:	0 ÷ 0.1 mA
	I set resolution: 5 nA
	I mon resolution: 0.2 nA

Independently programmable for each channel:

Output voltage:	0 ÷ 6000 V	Step: 10 V
Current limit (Iset):	0 ÷ 1 / 0.1 mA selectable	Step: 5 nA
V Ramp up/down:	1 ÷ 500 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.

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 (Common Floating Return)

Output Voltage

0÷6 kV

Polarity

Positive / Negative depending on purchased version

Max. Output Current

1 mA / 100 μ A (dual range)

Voltage Set Resolution

10 mV

Voltage Monitor Resolution

10 mV

Current Set Resolution

5 nA

Current Monitor Resolution

2 nA (high range) / 200 pA (low range)

VMAX hardware

0÷6 kV common for all the board channels

VMAX hardware accuracy

$\pm 1\%$ of FSR

VMAX software

0÷6 kV settable for each channel

VMAX software resolution

1 V

IMAX hardware

0÷1 mA common for all the board channels

IMAX hardware accuracy

$< \pm 1\%$ of FSR

Ramp Up/Down

1÷500 Volt/sec, 1 Volt/sec step settable for each channel

Voltage Ripple

20 ÷ 1000 Hz: $\pm 15 \text{ mVpp (Typ)}$ $\pm 20 \text{ mVpp (Max)}$
1 ÷ 20000 kHz: $\pm 5 \text{ mVpp (Typ)}$ $\pm 10 \text{ mVpp (Max)}$

Voltage Monitor vs. Output Voltage Accuracy

$\pm 0.01\%$ of reading $\pm 0.03\%$ of Max Output Voltage

Voltage Set vs. Output Voltage Accuracy

$\pm 0.01\%$ of setting $\pm 0.03\%$ of Max Output Voltage

Current Monitor vs. Output Current Accuracy

$\pm 0.02\% \pm 1 \mu\text{A}$ (high range) $\pm 0.02\% \pm 500 \text{ nA}$ (low range)

Current Set vs. Output Current Accuracy

$\pm 0.02\% \pm 1 \mu\text{A}$ (high range) $\pm 0.02\% \pm 500 \text{ nA}$ (low range)

Consumption @ full power

120 W

Maximum output power

6 W per channel (software safety limit)

Ordering Options

Code	Description	
WA7460DNXAA1	A7460DN - SYx527 H.V. channels -6kV 1mA - SHV Conn. common floating (12 ch)	RoHS
WA7460DPXAA1	A7460DP - SYx527 H.V. channels +6kV 1mA - SHV Conn common floating (12 ch)	RoHS

Accessories

HV CABLES



High Voltage Cable Assemblies

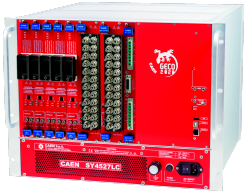
Related Products

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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