DT5521HE

4 Channel 6 kV/20 µA Desktop HV Power Supply Module (USB/Ethernet)

Features

- 4 independent channels in a compact desktop case
- 6 kV / 20 µA output range
- Available with positive, negative or mixed polarity
- SHV coaxial output connectors
- Low Ripple
- 100 pA Current monitor resolution (with x10 Imon-Zoom: 10 pA)
- Remote control (USB 2.0 and Ethernet)
- Software Tools for easy channel management

Description

The CAEN **Mod.DT5521HE** is a desktop module housing **4** independent High Voltage Power Supply Channels **6 kV**, **20 µA**. The unit is available with either positive or negative output polarity; mixed version with 2 positive and 2 negative channels is also available. HV outputs are delivered through **SHV** connectors.

SHV connector

Radiall R317580 HV coaxial connector for Mod. DT5519HE

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

The HV output RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the **1 ÷ 500 V/s** range with **1 V/s** steps. The module features 100 pA Imon resolution. Features include current monitor resolution extended by 10x in a Lower range (selectable via software). Functional parameters can be programmed and monitored via **USB 2.0** or **Ethernet**. A complete set of software tools is available to control these units, from low level libraries to graphical application software.

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 (±0.5% of the set value, ±3 V).
Overcurrent detection	when a channel attempts to exceed the programmed current limit, it 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 of. If TRIP is set to “constant current mode”, the channel behaves like a current generator.
Hardware VMAX, IMAX	Programmable VMAX, IMAX protection limit.
Safety Board Interlock	common Interlock logic for channels enable/disable and individual inputs signal for channel Kill function.

Technical Specifications

Package	Desktop module housed in a 154x50x164 mm^3 (WxHxD) alloy box; weight:~800g
No. of Channels	4
Output Voltage	0 ÷ 6 kV
Polarity	Positive / Negative / Mixed depending on purchased version; common ground
Max. Output Current	20 µA
Voltage Set Resolution	100 mV
Voltage Monitor Resolution	50mV
Current Set Resolution	0.5 nA
Current Monitor Resolution	100 pA (high range) / 10 pA (low range)
Current Set Maximun Value	21 µA
VMAX hardware	0 ÷ 6100 V selectable for each channel
VMAX hardware resolution	25 V
VMAX hardware accuracy	2% of FSR
Ramp Up/Down	1 ÷ 500 Volt/sec, 1 Volt/sec step

Trip

Max. time an “overcurrent" is allowed to last (seconds). A channel in "overcurrent" works as a current generator; output voltage varies to keep the output current lower than the programmed value. "Overcurrent" lasting more than set value (1 to 9999) causes the channel to "trip". Output voltage will drop to zero either at the Ramp-down rate or at the fastest available rate, depending on Power Down setting; in both cases the channel is put in the off state. If trip= INFINITE, "overcurrent" lasts indefinitely. TRIP range: 0 ÷ 999.9 s; 1000 s = Infinite. Step = 0.1 s

Voltage Ripple

20 ÷ 1000 Hz: <7 mVpp typical; < 10 mVpp maximum
1 ÷ 20000 kHz: <2 mVpp typical; < 5 mVpp maximum

Vmon vs. Vout accuracy

±0.05% of read ±1 V

Vset Vs. Vout accuracy

±0.05% of read ±1 V

Imon vs. Iout accuracy

high range: ±2% of read ±5nA; low range: ±2% of read ±500pA

Iset vs. Imon Accuracy

high range: ±2% of read ±5nA; low range: ±2% of read ±500pA

Imon / Temperature coefficient

max 100 ppm/C°

Maximum output power

180 mW per channel

Ordering Options

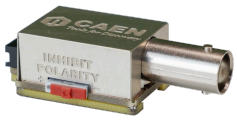
Code	Description	
WDT5521HEMAA	DT5521HEM - 4 Channel 6 kV/20 µA Desktop HV Power Supply (USB/Ethernet) - Mixed	RoHS
WDT5521HENAA	DT5521HEN - 4 Channel 6 kV/20 µA Desktop HV Power Supply (USB/Ethernet) - Negative	RoHS
WDT5521HEPAA	DT5521HEP - 4 Channel 6 kV/20 µA Desktop HV Power Supply (USB/Ethernet) - Positive	RoHS

Accessories

A1484

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

A148x



Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

HV CABLES

High Voltage Cable Assemblies

A1483

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

Related Software

GECO2020

GEneral COntrol Software for CAEN HV Power Supplies

CAEN Toolbox

Multi-Functional Software Suite for the Upgrade of Front-end Boards, Bridges and Power Supplies

Related Software Libraries

CAEN HV Wrapper Library

Library for CAEN Power Supply Control

Related Products

LabVIEW Driver (PSM - Power Supply Modules)

LabVIEW Instrument Driver for Power Supply Modules

Gallery


CAEN
4 Channel HV Power Supply
HV 0
HV 1
HV 2
HV 3
ON
OVC
POL


CH3
CH2
CH1
CH0
DT5521HEM
6kV / 20µA
S/N 085
ALARM
INTLCK
KILL


S/N 271
Ethernet and
USB connections
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