DT5472

1 Ch 500 V/1 mA USB-Powered Desktop HV Power Supply

1	500 V	1 mA
No. of Channels	Max Output V	Max Output I

The CAEN DT5472 is a USB-powered desktop high-voltage power supply with one channel delivering up to 500 V and 1 mA through an SHV output connector. It is available with positive or negative polarity and provides low ripple, programmable 1 to 100 V/s ramp-up and ramp-down rates, and 200 nA Iset/Imon resolution, enhanced to 20 nA with x10 Imon Zoom. USB enables parameter programming and monitoring. Interlock control, channel kill, overcurrent protection with TRIP mode, under/over-voltage alerts and a hardware VMAX limit support safe operation.

Overview

Product Highlights

- Single Desktop HV channel powered and controlled by USB
- Available with positive or negative polarity
- Low Ripple
- Interlock logic for board enable and Individual channel kill
- Software Tools for easy channel management
- 500 V / 1 mA output range
- SHV output connector
- Under/over-voltage alert, overcurrent and max. voltage protection
- 20 nA Current monitor resolution (with x10 Imon Zoom: 2 nA)

Product Description

The CAEN **Mod. DT5472** is a desktop module housing one high voltage power supply channel delivering up to **500 V** and **1 mA**. The unit is available with either positive or negative output polarity and is **powered via the USB link**.

The HV output is delivered through a Radiall R317580 SHV coaxial connector; for further technical information, consult our connectors reference page. Ramp-up and ramp-down rates can be set from 1 to 100 V/s in 1 V/s steps. The module offers 200 nA Iset/Imon resolution, and the x10 Imon Zoom increases the current monitor resolution to 20 nA. All functional parameters can be programmed and monitored via USB.

The module also includes dedicated safety features that allow it to operate as a current generator. The channel can be enabled or disabled through a front panel manual switch or via the interlock logic, and a warning is issued when the output voltage differs from the programmed value. When the channel attempts to exceed its programmed current limit, it is flagged as being in “overcurrent” and enters TRIP status: the output voltage is adjusted to keep the current below the programmed limit for a programmable TRIP time, after which the channel is switched off. If TRIP is set to “constant current mode”, the channel behaves as a current generator. A hardware VMAX limit can be set via a front panel potentiometer, and its value can be read out via software.

Software is available for Windows: the **LabVIEW Instrument Driver** and the **DT547x Control Software**, a LabVIEW application with logging capability. Through its graphical user interface, the DT547x Control Software allows all the unit’s functional parameters to be set and monitored, and while running it creates a data-log file that records any changes in the monitored parameters.

AT A GLANCE	
No. of Channels	**1**
Max Output V	**500 V**
Max Output I	**1 mA**
Vset/Vmon Resolution	**100 mV**
Iset/Imon Resolution	**Iset: 200 nA Imon: 20 / 2 nA**
Max. Ramp Up/Down Rate	**100 V/s**

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Technical Specifications

Package	• Alloy box dimension: 81 W x 43 H x 127 L mm³ (without connectors); 81 W x 43 H x 171 L mm³ (including connectors) • Weight: 280 g
Polarity	0 ÷ 500 V
Output Voltage	Positive / Negative depending on purchased version
Max. Output Current	1 mA
Voltage Set Resolution	100 mV
Voltage Monitor Resolution	10 mV
Current Set Resolution	200 nA
Current Monitor Resolution	2nA (low range) / 20nA (high range)
Current Set Maximun Value	1100 µA
VMAX hardware	0 ÷ 510 V
VMAX hardware resolution	1 V
VMAX hardware accuracy	± 2% of FSR
Ramp Up/Down	1 ÷ 100 Volt/sec, 1 Volt/sec step
Temperature Resolution	1° C

TRIP

0-999s; 1000 = Infinite (current generator)

Voltage Ripple	<10 mV
Vmon vs. Vout accuracy	±0.05% of read ±1 V
Vset Vs. Vout accuracy	±0.05% of read ±1 V
Imon vs. Iout accuracy	±1% of read ±400 nA
Iset vs. Iout Accuracy	±1% of read ±400 nA
Humidity range	0 ÷ 80%
Operating temperature	0 ÷ 45°C
Storage temperature	-10 ÷ +70°C
Vout / Temperature coefficient	100 ppm
Imon / Temperature coefficient	100 ppm
Long term stability Vout vs. Vset	0,05% (after one week @ constant temperature)

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Ordering Information

ORDERING CODE	DESCRIPTION
WDT5472XNAAA	DT5472N – USB High Voltage Power Supply -500V/1mA (1W max)
WDT5472XPAAA	DT5472P – USB High Voltage Power Supply +500V/1mA (1W max)

1. Ordering codes and descriptions are reproduced from the product record. Availability is confirmed at order entry.

Accessories

HV CABLES — High Voltage Cable Assemblies

Software & Control Tools

LabVIEW Driver (PSM – Power Supply Modules) — LabVIEW Instrument Driver for Power Supply Modules

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