

R1472ETS

**1 Ch 3 kV/2 mA
Desktop 19" Power
Supply Module
(USB/Ethernet/T.scr
een)**



Features



- 1 channel 19" rack unit
- 220V / 110 V AC powered
- 3 kV / 2 mA output ranges
- 6 W Max output power
- SHV coaxial output connector
- 100 mV Vset resolution
- 50 nA Iset/Imon resolution (Imon-Zoom: 5 nA)
- Under/Overvoltage alert, overcurrent and max. voltage protection
- Programmable ramp-up / ramp-down (1-500 V/s)
- Daisy-chain capability
- 2.8" color touch screen display
- Local and Remote control (USB2.0/Ethernet)
- Interlock logic for board enable and Individual channel kill
- Software Tool for easy channel management

Description

The CAEN **Mod. R1472ETS** provides **1** High Voltage positive channel in a 19" rack unit (110/220V AC Powered). The channel can provide a **+3 kV** max voltage, a **2 mA** max current and a 6 W max power. HV output is delivered through SHV connector. The HV output RAMP-UP and RAMP-DOWN rates may be selected in the range 1÷500 V/s in 1 V/s steps. The module features 50 nA Iset/Imon resolution. Zoom (x 10) for Imon increases resolution to 5 nA.

Module control can take place either **locally** thanks to a **2.8" Touchscreen Graphic color LCD display** with a completely redesigned user interface or **remotely**, via **USB 2.0** or **Ethernet**.

SHV connector

19" 2U, 1 channel for Mod. R1570ETS

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

A complete set of **free software Tools** is available to control this unit: **GECO2020** with user friendly GUI and **CAEN HV Wrapper library** for custom SW development. **EPICS** and **LabVIEW** also supported.

Safety features allows the module to perform as a current generator and includes:

Channel	inhibit.
Overvoltage and Undervoltage	warning when the output voltage differs from the programmed value by more than 2% of set value (minimum 10V).
Overcurrent detection	if a channel tries to draw a current larger than its programmed limit, it enters TRIP status, keeping the maximum allowed value for a programmable time (TRIP), before being switched off.
VMAX	Programmable VMAX protection limit.

Technical Specifications

Packaging

19" rack (h: 2U; d: 360 mm). Weight: ~8kg;

Power Requirements

100–240V ~ 50/60 Hz; 0.6A RMS; fuse 2xT1A 6.3x32 250VAC

Output ranges

3 kV / 2 mA

Output channels

1 Positive channel, SHV connector

Max. Ch. Output Power

6 W

Vset / Vmon Resolution

100 mV

Iset Resolution

50 nA

Imon Resolution

50 nA (IMonRange = High)
5 nA (IMonRange = Low) - Imon Zoom Active

Vmax

0 ÷ 3100 V Absolute maximum HV level that the channel is allowed to reach, independently from the preset value Vset.
Output voltage cannot exceed the preset value Vmax. The accuracy is 1 % ± 5 V

Vmax resolution

± 1 V

Ramp Up / Down

1 ÷ 500 Volt/s, 1 Volt/s step

Trip

- Max. time an “overcurrent” can last (seconds). A channel in “overcurrent” works as a current generator; output voltage varies in order 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.
- Trip range: 0 ÷ 999.9 s; 1000 s = INFINITE. Step = 0.1 s (If trip= INFINITE, “overcurrent” lasts indefinitely)

Voltage Ripple

- Typical: <math><3\text{ mVpp}</math> (> 1kHz) <math><5\text{ mVpp}</math> (10Hz ÷ 1kHz)
- Maximum: <math><10\text{ mVpp}</math> (> 1kHz) <math><15\text{ mVpp}</math> (10Hz ÷ 1kHz)

Vmon vs. Vout Accuracy

$\pm 0.02\%$ of read value $\pm 2\text{V}$

Vset vs. Vout Accuracy

$\pm 0.02\%$ of read value $\pm 2\text{V}$

Imon vs. Iout Accuracy

- $\pm 2\%$ of read value $\pm 2\text{ }\mu\text{A}$ (IMonRange = High)
- $\pm 2\%$ of read value $\pm 200\text{ nA}$ (IMonRange = Low) - Imon Zoom Active

Iset vs. Iout Accuracy

- $\pm 2\%$ of read value $\pm 2\text{ }\mu\text{A}$ (IMonRange = High)
- $\pm 2\%$ of read value $\pm 200\text{ nA}$ (IMonRange = Low) - Imon Zoom Active

Ventilation Fan

50x50 24V; 62 dBA maximum noise level

Humidity range

0 ÷ 80%

Storage temperature

-10 ÷ 70°C

Operating temperature

0 ÷ 45°C

Vout / Temperature coefficient

max. 50 ppm/°C

Imon / Temperature coefficient

max 100 ppm/C°; max 300 ppm/C° with Imon X10 zoom

Long term stability Vout vs. Vset

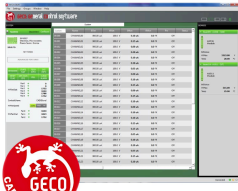
$\pm 0.02\%$ (after one week @ constant temperature)

Ordering Options

Code	Description
WR1472ET1CEA	R1472ETS - 1 Channel 3kV 2mA (6W) 19" HV Power Supply Module with Ethernet & 2.8" Touchscreen RoHS

Related Software

GECO2020



General Control Software for CAEN HV Power Supplies

Related Software Libraries

CAEN HV Wrapper Library



Library for CAEN Power Supply Control

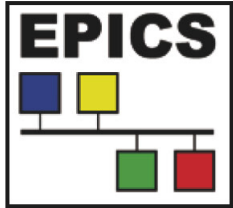
Related Products

R8034



8-16 Channel 6 kV/1 mA Rack 19" HV Power Supply (USB/Ethernet/Touchscreen)

EPICS IOC (PSM Power Supply Modules)



EPICS IOC for Power Supply Modules

R8031



8-16 Channel 100 V / 10 mA 19" Power Supply Module (USB/Ethernet/Touchscreen)

R8034H



8-16 Channel 6 kV/20 μ A Rack 19" HV Power Supply (USB/Ethernet/Touchscreen)

LabVIEW Driver (PSM - Power Supply Modules)



LabVIEW Instrument Driver for Power Supply Modules

R8032



8-16 Channel 500 V/10 mA 19" Power Supply Module (USB/Ethernet/Touchscreen)

R8033



8-16 Channel 4 kV/ 3 mA (6W) 19" Power Supply Module (USB/Ethernet/Touchscreen)

Gallery



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