



ULTRAVOLT® D SERIES
MICRO-SIZED HIGH VOLTAGE BIASING SUPPLIES





Single-output micro-sized HV modules

The D series of high voltage power supplies is designed to meet the needs of customers with low-profile, < 13 mm (< 0.511") or < 17.5 mm (< 0.689") applications at 1 to 6 W. These ultra-compact modules are ideal for detectors that require high-bias voltages and currents at low ripple. D series PCB-mount high voltage power supplies feature a lightweight design, state-of-the-art surface-mount technology, and five-sided metal enclosures.

Features

- › 4 models from 0 to 1 kV through 0 to 6 kV
- › 1, 2, 4 or 6 W output power
- › Low ripple (< 0.02% peak to peak)
- › Tight line/load regulation
- › Output current limit protection
- › Adjustable from 0 to full output
- › Buffered voltage and current monitoring
- › 15 or 24 VDC Input
- › Low profile and lightweight
- › PCB flat mounting

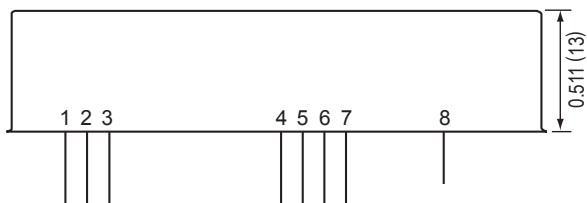
Typical Applications

- › Scanning electron microscopes (SEM)
- › Mass spectrometry
- › Gas chromatography
- › Spectrometers
- › Electrostatic chuck (e-chuck)
- › PZT drivers
- › Pulse generators
- › Laser electro-optic modulation
- › Fiber-optic telecom detectors
- › Particle physics detectors
- › Laser range finder detectors
- › Detectors
- › Geiger-Muller tubes (GM)
- › Avalanche photo diodes (APD)
- › Photo multiplier tubes (PMT)
- › Photodiodes (PD)
- › Multi-pixel photon counters (MPPC)
- › Channel electron multipliers
- › Silicon detectors (SiD)
- › Silicon photomultipliers (SiPM)
- › Image intensifiers (II and IIT)
- › Microchannel plates (MCP)
- › Ionization chamber detectors
- › Thin-film bias
- › High voltage testing
- › ATE leakage testing
- › General laboratory
- › Bias supplies

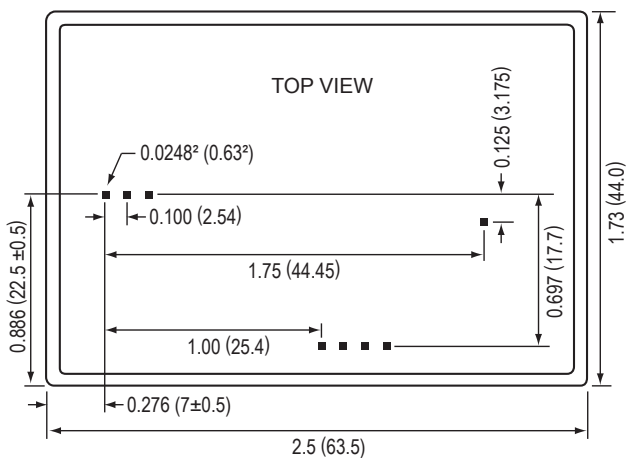
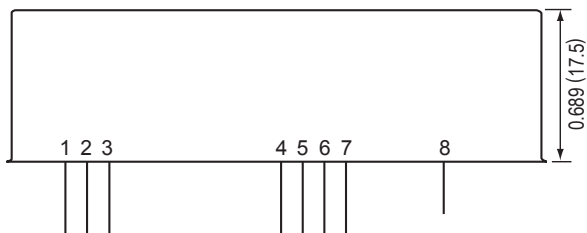


| PARAMETERS | SPECIFICATIONS | UNITS |
|---|--|-------------------|
| Input Voltage Vin (Pins 2 and 3) | 15 VDC ± 1.5 V or 24 VDC ± 2 V, according to type | VDC |
| Input Current | Example for a 15 VDC, output 6000 V, 1 mA model: inhibition mode: 27 mA at no load and HV = 6000 V 46 mA, at full load < 630 mA | - |
| Polarity | Fixed positive or negative | - |
| Output Voltage | 0 to 1000 0 to 2000 0 to 4000 0 to 6000 | VDC |
| Output Power | 1 2 4 6 1 2 4 6 1 2 4 6 1 2 4 6 | W |
| Output Current | 1 2 4 6 0.5 1 2 3 0.25 0.5 1 1.5 0.17 0.33 0.67 1 | mA |
| Programming (Pins 4 and 6) | Via external voltage source 0 to +5 V $\pm 0.1\%$ at full scale, and input impedance = 94 k Ω | - |
| Max Output Current Iout | Limited to 110% of nominal current | - |
| Load Voltage Regulation | $\pm 0.01\%$ of full output voltage for no load to full load | VDC |
| Line Voltage Regulation | $\pm 0.01\%$ of full output voltage over specified input voltage range | VDC |
| Residual Ripple | < 0.02% at full load | V pk to pk |
| Temperature Coefficient | 100 | PPM/ $^{\circ}$ C |
| Output HV Monitoring (Pin 7) {still operating in inhibition mode} | Analog 0 to +5 V buffered output signal, accuracy $\pm 0.2\%$ | - |
| | Output impedance = 1 k Ω | |
| | Temperature coefficient: 50 ppm/ $^{\circ}$ C for ≤ 4 kV units, 100 ppm/ $^{\circ}$ C for 6 kV units | |
| Output Current Monitoring (Pin 5) {still operating in inhibition mode} | Analog 0 to +5 V buffered output signal, accuracy $\pm 2\%$ | - |
| | Output impedance = 1 k Ω | |
| | Temperature coefficient: 100 ppm/ $^{\circ}$ C | |
| HV ON/OFF (Pin 1) | To disable (opened remote interlock) or enable (closed remote interlock) | - |
| Operating Temperature | -10 to +65, full load, max Eout, Tcase temp | $^{\circ}$ C |
| Storage Temperature | -10 to +70 | $^{\circ}$ C |
| Safeguards | Protected against reverse Vin | - |
| | Soft start feature: the start is guaranteed with no overshoot | |
| | Auto inhibition if case > 75 $^{\circ}$ C | |
| | HV setting internally limited to 5.3 V | |

1 to 4 kV, 1 to 4 W



1 to 4 kV, 6 W and 1 to 6 kV, 1 to 6 W



PHYSICAL SPECIFICATIONS

| | |
|---------------------|---|
| Construction | Tin steel plate, thickness 0.5 mm |
| | Insulation: fully potted in an epoxy resin |
| Volume | 1 to 4 kV, 1 to 4 W: 36.2 cc (2.21 in ³) |
| | 1 to 4 kV, 6 W and 1 to 6 kV, 1 to 6 W: 48.6 cc (2.97 in ³) |
| Weight | 1 to 4 kV, 1 to 4 W: 72 g (2.54 oz) |
| | 1 to 4 kV, 6 W and 1 to 6 kV, 1 to 6 W: 85 g (3 oz) |

Tolerance

| | |
|--------------------|-------------------|
| Overall | ±0.3 mm (0.0118") |
| Pin to Pin | ±0.1 mm (0.0039") |
| Case to Pin | ±1.5 mm (0.0591") |

Standard case length, width, and height specs are 1.27 mm (0.050")

Pin length > 6 mm (0.24"), spacing 2.54 mm (0.1")

CONNECTIONS

| Pin | Function |
|-----|----------------------|
| 1 | ENABLE/DISABLE |
| 2 | POWER GROUND |
| 3 | POSITIVE POWER INPUT |
| 4 | SIGNAL GROUND |
| 5 | IOUT MONITOR |
| 6 | REMOTE ADJUST INPUT |
| 7 | EOUT MONITOR |
| 8 | HV OUTPUT |

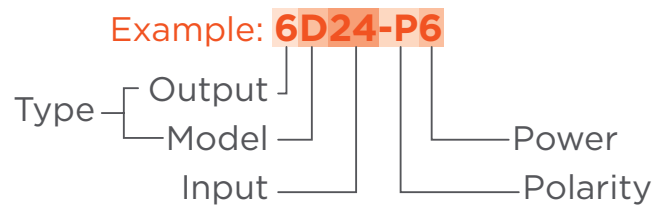


RoHS COMPLIANT Non-RoHS compliant units are available. Please contact the factory for more information.

ORDERING INFORMATION

| | | |
|-----------------|----------------------|------------|
| Type | 0 to 1000 VDC Output | 1D |
| | 0 to 2000 VDC Output | 2D |
| | 0 to 4000 VDC Output | 4D |
| | 0 to 6000 VDC Output | 6D |
| Input | 15 VDC Nominal | 15 |
| | 24 VDC Nominal | 24 |
| Power | W Output | 1 |
| | W Output | 2 |
| | W Output | 4 |
| | W Output | 6 |
| Case | Steel, Tin-plated | (Standard) |
| Polarity | Positive Output | -P |
| | Negative Output | -N |

The D series is not available in all territories. Please contact Advanced Energy for details concerning sales in your area.



For international contact information, visit advanced-energy.com.

Данный компонент на территории Российской Федерации

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Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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