



Product Mini-Catalog



MODULES



TEST FIXTURES



ACCESSORIES



HIGH VOLTAGE SYSTEMS

1-800-9HV-POWER



- Over 450 Models of High Voltage Power Supplies
- Voltage Ranges from 0 to 62V through 0 to 40kV
- Output Power from 4 Watts to 250 Watts
- Stock to 3 Weeks

About UltraVolt

UltraVolt, Inc. was founded in 1990 to take advantage of over 35 years of experience in the military and aerospace marketplace. UltraVolt's product designs incorporate a fixed-frequency high voltage topology that provides wide input and output operating ranges, while retaining excellent stability and efficiencies ranging up to 92%. Standard accessories and options create more than 8500 application-specific configurations.

Standard Product Lines

“A” and “AA” Series

Our “A” and “AA” Series provide 0 to 62V through 0 to 6kV at 0 to 4 Watts and 0 to 30 Watts in only 4.5 in³ (“A” Series) and 3.34 in³ (“AA” Series). -F option reduces ripple 10 to 100 times on “A” Series units.



“C” Series

Our “C” Series models are designed for fast rise time capacitor charging applications from 0 to 62V through 0 to 6kV @ 0 to 20 Watts to 0 to 30 Watts.

High Power “C” Series

Our High Power “C” Series units extend the 0 to 125V through 0 to 6kV “C” Series to 60 Watts, 125 Watts or 250 Watts. This series also adds 0 to 8kV through 0 to 30kV models at 60 Watts and 125 Watts.



Accessories



-H

-H: Heat Sink for PCB mounted >4 watt “A” and “C” Series with plastic package.



-E

-E: Eared Mounting Plate for chassis mounting “A” and “C” Series plastic package units.



-M

-M: Mu-Metal Shield attenuates EMI, RFI and HV Electrostatic fields. This six-sided wrap-around feature is compatible with all accessories.



“10A → 40A” Series

Our “10A → 40A” Series extends the “A” Series from 6kV to 0 to 10kV through 0 to 40kV with the same 4 Watt to 30 Watt capacity. -F option reduces ripple as much as 50%.

Bi-Polar “C” Series

Our Bi-polar “C” Series units feature dual independent HV outputs from 0 to ±125Vdc through 0 to ±6kV @ 0 to 125 Watts (62 Watts x 2) and 250 Watts (125 Watts x 2).



“AUX”

Our “AUX” Series units are standard “10A → 35A” units with Focus and G2 outputs for CRT’s or 1/16 to 6 “A” and “C” units with a second auxillary fixed output.

NEW! “EFL” and “FL” Series

Our “FL” Series and “EFL” Series provide floating low voltage power supplies with isolated controls, allowing high voltage power supplies, filaments, and electronics to operate while floating on up to 15 kV. The “EFL” Series provides two precision analog channels, improved faraday shielding, and more.



“TF” Series

Our “TF” Series of test fixtures provides convenient inline measurement of HV power supplies and HV system performance in only 16.24 in³. The “TF” Series, when coupled with an oscilloscope or conventional meter, becomes a stand alone test fixture, which can measure ripple, noise, pulses, absolute DC, DC stability, DC line regulation, DC load regulation, and more.



-C: RF-Tight aluminum enclosure for ruggedized chassis mounting of any 4 Watt to 30 Watt “A” & “C” Series units.



BR: Bracket Kits for chassis mounting “A” & “C” Series plastic package units.



BR7 and BR8: Bracket Kits for chassis mounting High Power “C” Series units.

UltraVolt is Making High Voltage Easier!®

UltraVolt's product line includes over 450 models from 0 to 62V to 0 to 40kV and from 0 to 4 Watts through 0 to 250 Watts. With accessories such as six-sided Mu-Metal Shielding, RF-Tight enclosures, Ripple Stripper® Output Filters, chassis mounting brackets and plates, finned heat sinks and Auxiliary Outputs, UltraVolt offers a cost-effective solution to most high voltage needs, while maintaining a level of flexibility rivaling custom designs. Various UltraVolt HV power supplies are safety agency approved through component listing programs UL/CUL, with CB test certifications supporting the UL/CUL, CE, and DEMKO marks.

- Wide Input Range
- Arc Protection
- Short Circuit Protection
- PCB or Chassis Mount
- High Efficiency
- Specially Designed Shielding
- Wide Output Range
- TTL Enable/Disable
- High MTBF
- Fixed Frequency
- Small Size
- Low Stored Energy
- Standard Accessories & Monitoring Configurations
- Fully Regulated Programmable Output
- Conservative Component Rating
- Input Reverse Polarity Protection
- Effective Thermal Management
- Temp Compensated +5V Ref.



“HV Rack” Series

Our “HV Rack” Series is configurable with up to 4 independent channels, selected from among our >450 standard power supplies, for a 4W to 1kW total HV output capability. Features include local and remote controls, preset before and during bias, CV/CC regulation auto-crossover, and simultaneous voltage and current monitoring of all channels. Configuration options include floating channels, green meters, and the new **USB interface**.

NEW!

“FIL” Series

Our “FIL” Series is a precision, center-tapped, non-isolated, low-voltage filament supply rated for 0 to 5 VDC at 0 to 3 Amps.



NEW!

“E” Series

Our “E” Series operates from 0 to 1kV through 0 to 15kV at 4 watts, 15/20 watts, or 30 watts. This series offers PPM level for temperature coefficients, line and load regulation, and ripple.



For more product lines and options, please visit us at www.ultravolt.com/products.htm



Low Voltage Connector Kits:
Various low voltage connector kits are available for PC board mount connections and wire-harness connections.



Industrial “AT-xx”/“FT-xx”:
Various types of industrial grade high voltage connectors.



Military/Aerospace “AT-xx”/“FT-xx”:
Various types of military/aerospace grade high voltage connectors.

UltraVolt Standard Products Quick Select Chart

All models are available as Positive Output (-P) or Negative Output (-N) ✓ = Available Options

| Model Number | Output Voltage | 4 Watt | 20 Watt | 30 Watt | 60 Watt | 125 Watt | 250 Watt | Output Current Monitor | Output Voltage Monitor | Fast Rise Version | PCB Mount Plastic Case | Chassis Mount Metal Case | Plastic Case Mounting Bracket [BR-] | Mounting Plate w/ Ears [-E] | RF-Tight Metal Case [-C] | Heat Sink [-H] | Mu-Metal Shield [-M] | Ripple Stripper Module [-F] | |
|--|----------------|--------|------------|---------|---------|----------|----------|------------------------|------------------------|-------------------|------------------------|--------------------------|-------------------------------------|-----------------------------|--------------------------|----------------|----------------------|-----------------------------|--|
| SINGLE OUTPUT MODULES UP TO 6kV | | | | | | | | | | | | | | | | | | | |
| 1/16A12* | 0 to 62 | 64 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/16A24* | | | 320 mA | 480 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/16C24 | | | 320 mA | 480 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 1/8A12* | 0 to 125 | 32 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/8A24* | | | 160 mA | 240 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/8C24 | | | 160 mA | 240 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 1/8C24 | | | | | 480 mA | 1000 mA | 2000 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 1/4A12* | 0 to 250 | 16 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/4A24* | | | 80 mA | 120 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/4C24 | | | 80 mA | 120 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 1/4C24 | | | | | 240 mA | 500 mA | 1000 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 1/2A12* | 0 to 500 | 8 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/2A24* | | | 40 mA | 60 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1/2C24 | | | 40 mA | 60 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 1/2C24 | | | | | 120 mA | 250 mA | 500 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 1A12* | 0 to 1 kV | 4 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1A24* | | | 20 mA | 30 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 1C24 | | | 20 mA | 30 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 1C24 | | | | | 60 mA | 125 mA | 250 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 1E24 | 0 to 1 kV | 4mA | 20mA | 30mA | | | | STD | STD | | | STD | | | | | | | |
| 2A12* | 0 to 2 kV | 2 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 2A24* | | | 10 mA | 15 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 2C24 | | | 10 mA | 15 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 2C24 | | | | | 30 mA | 62 mA | 125 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 2E24 | 0 to 2 kV | 2 mA | 10 mA | 15 mA | | | | STD | STD | | | STD | | | | | | | |
| 4A12* | 0 to 4 kV | 1 mA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 4A24* | | | 5 mA | 7.5 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 4C24 | | | 5 mA | 7.5 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 4C24 | | | | | 15 mA | 31 mA | 62 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 4E24 | 0 to 4 kV | 1 mA | 5 mA | 7.5 mA | | | | STD | STD | | | STD | | | | | | | |
| 6A12* | 0 to 6 kV | 660 µA | | | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 6A24* | | | 3.3 mA | 5 mA | | | | STD | † | | STD | | ✓ | ✓ | "A" only | ✓ | ✓ | "A" only | |
| 6C24 | | | 3.3 mA | 5 mA | | | | STD | STD | STD | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 6C24 | | | | | 10 mA | 21 mA | 41 mA | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 6E24 | 0 to 6 kV | 667 µA | 3.3 mA | 5 mA | | | | STD | STD | | | STD | | | | | | | |
| SINGLE OUTPUT MODULES OVER 6kV | | | | | | | | | | | | | | | | | | | |
| 8C24 | 0 to 8 kV | | | | 7.5 mA | 15.5 mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 10A12 | 0 to 10 kV | 400 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 10A24 | | | 1.5mA/15W | 3 mA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 10C24 | | | | | 6 mA | 12 mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 10E24 | 0 to 10 kV | 400 µA | 1.5 mA | 3 mA | | | | STD | STD | | | STD | | | | | | | |
| 12C24 | 0 to 12 kV | | | | 5 mA | 10 mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 15A12 | 0 to 15 kV | 260 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 15A24 | | | 1mA/15W | 2 mA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 15C24 | | | | | 4mA | 8.3 mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 15E24 | 0 to 15 kV | 267 µA | 1 mA | 2 mA | | | | STD | STD | | | STD | | | | | | | |
| 20A12 | 0 to 20 kV | 200 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 20A24 | | | 750µA /15W | 1.5 mA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 20C24 | | | | | 3mA | 6.25mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 25A12 | 0 to 25 kV | 160 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 25A24 | | | 600µA /15W | 1.2 mA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 25C24 | | | | | 2.4mA | 5mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 30A12 | 0 to 30 kV | 133 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 30A24 | | | 500µA /15W | 1 mA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 30C24 | | | | | 2mA | 4.17mA | | STD+ | STD | STD | | STD | | | | ✓ | | | |
| 35A12 | 0 to 35 kV | 110 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 35A24 | | | 420µA/15W | 840 µA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 40A12 | 0 to 40 kV | 100 µA | | | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 40A24 | | | 375µA/15W | 750 µA | | | | STD+ | STD | | STD | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |

*Represents "A" and "AA" Series units with the same input and output voltages.

†All 'AA' Series units have an output voltage monitor. 'A' Series units with an -F option have an output voltage monitor.

UltraVolt Standard Products Quick Select Chart: Specialty Products

| BI-POLAR AND MULTI-OUTPUT HVPS | | | | |
|---|--|------------------|---|--|
| <i>Bi-Polar "C" Series units feature dual independent HV outputs from 0 to ±125VDC through 0 to ±6kV @ 0 to 125 watts and 250 watts.</i> | | | | |
| Model | Output Voltage | Output Power | Features | |
| 1/8C to 6C | 0 to ±125V to 0 to ±6kV | NP-125 & NP-250 | Independently controllable dual outputs | |
| <i>"AUX" Series units are standard "10A" or "30A" units with Focus and G2 outputs for CRTs or 1/16 to 6 "A" and "C" units with a second auxiliary fixed output.</i> | | | | |
| Model | Anode Voltage | Anode Current | Focus & G2 Voltage | Features |
| 10AUX | 8.7 to 10.7kV | .4, 1.5 or 3mA | 0 to 1.1 kV | 10A for CRTs - Focus & G2 adjustment range of 450V |
| 15AUX | 11 to 16.1kV | .26, 1 or 2mA | 0 to 1.1 kV | 15A for CRTs - Focus & G2 adjustment range of 450V |
| 20AUX | 16 to 21.5kV | .2, .75 or 1.5mA | 0 to 1.1 kV | 20A for CRTs - Focus & G2 adjustment range of 450V |
| 25AUX | 21.5 to 26.8kV | .16, .6 or 1.2mA | 0 to 1.1 kV | 25A for CRTs - Focus & G2 adjustment range of 450V |
| 30AUX | 26.8 to 32.2kV | .13, .5 or 1.0mA | 0 to 1.1 kV | 30A for CRTs - Focus & G2 adjustment range of 450V |
| Model | Fixed Second Output | | Features | |
| 1/8AUX → 6AUX | 47V → 329 V @2mA or 450V ± 1050V @ 1mA | | Added to any 1/8A → 6A | |
| 1/8CAUX → 6CAUX | 47V → 329 V @2mA or 450V ± 1050V @ 1mA | | Added to any 1/8A → 6C | |

| FLOATING HOT DECK SUB-SYSTEMS | | |
|--|---------------------------------|--|
| <i>"FL" Series units provide floating low-voltage power supplies with isolated controls.</i> | | |
| Model | Floating Output Voltage | Features |
| 15FL12 | +12VDC, -12VDC, +5VDC | Floating Low Voltage Power Supply & Analog/Digital Controls |
| 15FL24 | +24VDC, -12VDC, +5VDC | Floating Low Voltage Power Supply & Analog/Digital Controls |
| 15EFL12 | +12VDC, +15VDC, -15VDC, +5.1VDC | Enhanced Floating Low Voltage Power Supply & Analog/Digital Controls |
| 15EFL24 | +24VDC, +15VDC, -15VDC, +5.1VDC | Enhanced Floating Low Voltage Power Supply & Analog/Digital Controls |

| FILAMENT SUPPLIES | |
|---|--|
| <i>"FIL" Series units are precision, center-tapped non-isolated, low-voltage filament supplies rated for 0 to 5 VDC at 0 to 3 Amps.</i> | |
| Model | Features |
| FIL-5V-3A | Output load regulation is <0.5% in constant voltage mode, no load to full load; <0.05% in constant current mode, short circuit to full load. Output line regulation is <0.01% in CV or CC mode (+26.4VDC to +21.6VDC). Temperature coefficient of 15ppm/°C in CC mode. |

| HV SYSTEMS | |
|--|---|
| <i>"HV Rack"® Series of rack mount power supplies are configurable with up to 4 independent channels, 0 to 62V through 0 to 40kV, with total output power up to 1kW.</i> | |
| Model | Features |
| HV Rack-1-250 | 19" HV Rack with (1) set of meters & controls with 300W of LV power configured for: One 4W to 250W UltraVolt HVPS. |
| HV Rack-2-250 | 19" HV Rack with (2) sets of meters & controls with 300W of LV power configured for: Two 4W to 250W UltraVolt HVPS. |
| HV Rack-2-500 | 19" HV Rack with (2) sets of meters & controls with 600W of LV power configured for: Two 4W to 250W UltraVolt HVPS. |
| HV Rack-3-250 | 19" HV Rack with (3) sets of meters & controls with 300W of LV power configured for: Three 4W to 250W UltraVolt HVPS. |
| HV Rack-3-500 | 19" HV Rack with (3) sets of meters & controls with 600W of LV power configured for: Three 4W to 250W UltraVolt HVPS. |
| HV Rack-3-750 | 19" HV Rack with (3) sets of meters & controls with 900W of LV power configured for: Three 4W to 250W UltraVolt HVPS. |
| HV Rack-4-250 | 19" HV Rack with (4) sets of meters & controls with 300W of LV power configured for: Four 4W to 250W UltraVolt HVPS. |
| HV Rack-4-500 | 19" HV Rack with (4) sets of meters & controls with 600W of LV power configured for: Four 4W to 250W UltraVolt HVPS. |
| HV Rack-4-750 | 19" HV Rack with (4) sets of meters & controls with 900W of LV power configured for: Four 4W to 250W UltraVolt HVPS. |
| HV Rack-4-1000 | 19" HV Rack with (4) sets of meters & controls with 1200W of LV power configured for: Four 4W to 250W UltraVolt HVPS. |

| TEST FIXTURES | |
|--|--|
| <i>"TF" Series of test fixtures provides convenient inline measurement of high voltage power supplies and HV system performance in only 16.24in³.</i> | |
| Model | Features |
| 40TF-DCD | Precision 10,000:1 divider, ±1%, ±25PPM per °C, voltage coefficient if <1% per 40kV. DC Loading is 1 GigΩ. |
| 40TF-ACV&DCD | 1:1 AC viewing capacitor, 35Hz to 10MHz (Monitor 10Hz to 20MHz), 1mV to 75V PK, 1000:1 DC divider, ±2%, ±100 PPM per °C. DC Loading is 2 GigΩ. Capacitive loading is < 50pF |
| 40TF-CDCD&CLOAD | Compensated 1,000:1 DC Divider, ±2%, ±100 PPM per °C, showing Trise, Tfall, overshoot & settling over a bandwidth of 35Hz to 10MHz (Monitor 10Hz to 20MHz), 300pF capacitive load, DC Loading is 1 GigΩ. |