

ULTRAVOLT DUAL OUTPUT AUX SERIES

HIGH VOLTAGE BIASING SUPPLY



The AUX Series accessory provides a second fixed HV output in addition to the adjustable main high voltage power supply output. This second output is set for a specific fixed voltage at the factory.

The AUX output is achieved by adding a daughter board inside either 1/16A to 6A or 1/16C to 6C high voltage power supplies. This AUX board is encapsulated with the main high voltage power supply. All of the advantages of the base power supply remain.

PRODUCT HIGHLIGHTS

- Adds a second + or - HV output
- Fixed regulated output
- Full capability is available over an input range of 12 to 15 VDC $\pm 10\%$ for 4 W units and 24 to 28 VDC $\pm 5\%$ for 20 W / 30 W units.
- Encapsulated with A or C Series high voltage power supply
- Creates a 4.9 in³ dual-output supply
- Fixed-frequency, low-stored-energy design
- High power density
- UL/cUL Recognized Component; CE Mark (LVD and RoHS)

TYPICAL APPLICATIONS

- Bipolar outputs
- Ionization / strike
- Trigger coils
- Pulse generator or amplifiers
- Tube elements such as G1, G2, cathode, and spark gap initiator

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HIGH VOLTAGE AUX OUTPUT

The AUX output is a non-isolated, unipolar output. Positive or negative output must be specified. The polarity of this AUX is not dependent on the polarity of the base HVPS. Full capability is available over an input range of 12 to 15 VDC $\pm 10\%$ for 4 W units and 24 to 28 VDC $\pm 5\%$ for 20 W / 30 W units. The AUX fixed output is fully functional when the main output voltage is adjusted from 100% to 75%. As the main output is adjusted from 75% to 50% the AUX output current is reduced from 100% to 0%. The manufactured tolerance on the fixed output is $\pm 5\%$. Line regulation error is $< 0.1\%$; load regulation error is $< 0.1\%$ per 100 μA . The output has a temperature co-efficient of $\pm 0.11\%$ per $^{\circ}\text{C}$.

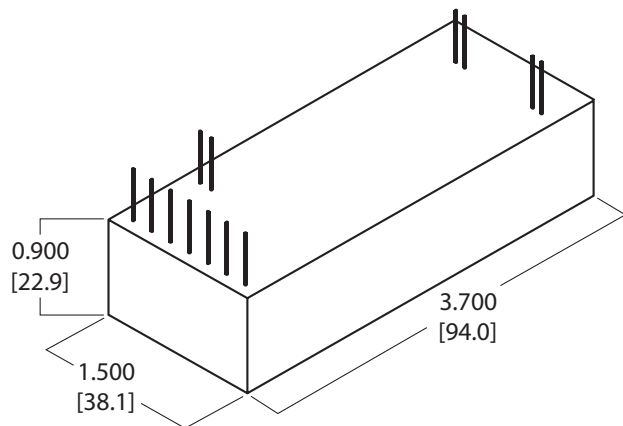
Available Fixed Outputs		
47 V @ 2 mA	235 V @ 2 mA	600 V @ 1 mA
94 V @ 2 mA	282 V @ 2 mA	750 V @ 1 mA
141 V @ 2 mA	329 V @ 2 mA	900 V @ 1 mA
188 V @ 2 mA	450 V @ 1 mA	1050 V @ 1 mA

* Specified AUX output should be $< 40\%$ of the main output.

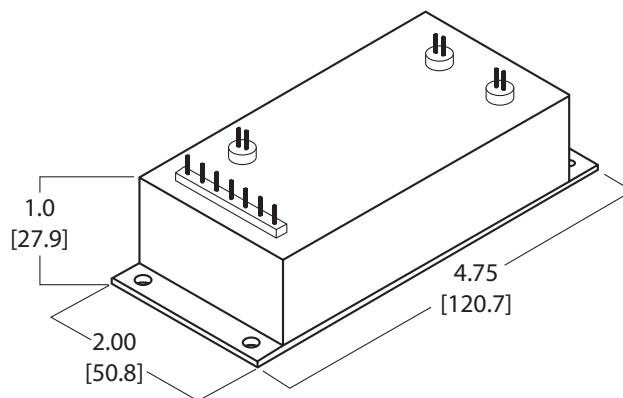
** The AUX HV output connection is via an additional pair of standard .025 in (0.635 mm) square IDC pins. These pins can be used for PCB mounting or direct wiring. High voltage connector and cable options are available.

MECHANICAL SPECIFICATION

Standard Case



With -C Option



Construction	
Case	Epoxy-filled DAP box, certified to ASTM-D-5948
	Plastic box
Tolerance	Overall ± 0.050 " (1.27 mm)
	Pin to Pin ± 0.015 " (0.38 mm)
	Mounting hole location ± 0.025 " (0.64 mm)

* 20 W and 30 W versions are an additional 0.062" (1.57 mm) in height.

** M equipped units are an additional 0.030" (0.76 mm) for each dimension.

*** Contact Advanced Energy for drawings of models equipped with -E or -H option.

Construction	
Case	Epoxy-filled DAP box, certified to ASTM-D-5948
	Aluminum box, Chem film per MIL-A-8625 Type II (Anodizing)
Tolerance	Overall ± 0.025 " (0.64 mm)
	Pin to Pin ± 0.015 " (0.38 mm)
	Mounting hole location ± 0.025 " (0.64 mm)

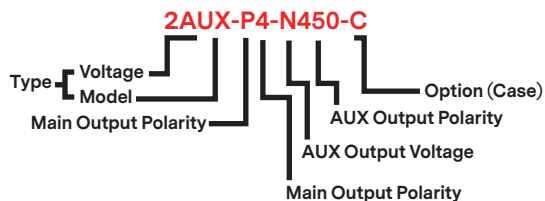
INTERFACE

Connections	
Pin	Function
1	Input-Power Ground Return
2	Positive Power Input
3	Iout Monitor
4	Enable / Disable
5	Signal Ground Return
6	Remote Adjust Input
7	+5 VDC Reference Output
8	HV Ground Return
9	HV Ground Return or Eout Monitor (-Y5 only)
10 and 11	HV Output
12 and 13	AUX HV Output

All grounds joined internally. Power-supply mounting points isolated from internal grounds by > 100 kΩ, .01 uF / 50 V (Max) on all models except -M (20 W and above), -M-E, -M-C, and -M-H configurations which are 0 Ω.

ORDERING INFORMATION

Type	0 to 62 VDC Main Output	1/16AUX or 1/16CAUX
	0 to 125 VDC Main Output	1/8AUX or 1/8CAUX
	0 to 250 VDC Main Output	1/4AUX or 1/4CAUX
	0 to 500 VDC Main Output	1/2AUX or 1/2CAUX
	0 to 1000 VDC Main Output	1AUX or 1CAUX
	0 to 2000 VDC Main Output	2AUX or 2CAUX
	0 to 4000 VDC Main Output	4AUX or 4CAUX
	0 to 6000 VDC Main Output	6AUX or 6CAUX
AUX Output	2 mA @ 47, 94, 141, 188, 235, 282, 329	-VVV
	1 mA @ 450, 600, 750, 900, 1050	-VVV
Polarity	Positive Output	-P
	Negative Output	-N
Power	Watts Output (12 V Only)	4
	Watts Output (24 V Only)	20
	Watts Output (24 V Only)	30
Case	Plastic Case - Diallyl Phthalate	(Standard)
	'Eared' Heatsink Plate (plastic case)	-E
	RF-Tight Aluminum Case	-C
Heat Sink	.400" High (sized to fit case)	-H
Shield	Six-sided Mu-Metal Shield	-M
Voltage Monitor	Optional Eout Monitor (A Series only)	-Y5





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ABOUT ADVANCED ENERGY

Since 1981, Advanced Energy (AE) — and its UltraVolt® family of products — has perfected how power performs for its customers. For both end users and OEMs, AE's comprehensive portfolio of standard and custom high voltage components precisely match system specifications to deliver unparalleled energy, quality, and performance. Through close customer collaboration, design expertise, application insight, and world-class support, AE creates successful partnerships and enables customers to push the boundaries of innovation and stay ahead of evolving market needs.

PRECISION | POWER | PERFORMANCE



CAUTION:
High Voltage

Read and understand all documentation before you install, operate, or maintain Advanced Energy high voltage power supplies. Follow all safety instructions and precautions to protect against property damage and serious or possibly fatal bodily injury. Never defeat safety interlocks or grounds.

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