

**Proven  
Reliability**

# A SERIES

## ISOLATED, PROPORTIONAL DC TO HV DC CONVERTERS

100V to 6000V @ 1.0 and 1.5 Watts

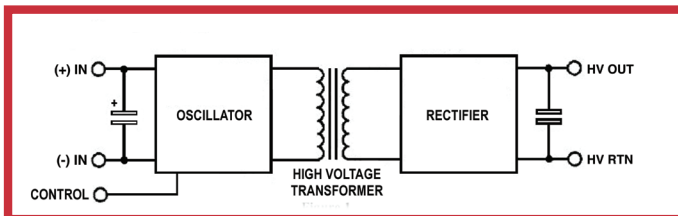
**Extremely Low Profile: 0.25 inches  
and volume of < 0.100 cubic inches<sup>5</sup>**

**NOW  
UL RECOGNIZED**



### PRODUCT DESCRIPTION

The A Series is a new line of ultra-miniature, DC to HV DC converters that set an industry standard in high voltage miniaturization. This unique package occupies less than one tenth of a cubic inch of volume<sup>5</sup>, and features an extremely low profile of only 0.250 inches (6.35mm)! Controllable output voltages range from 100 volts to 6000 volts. These component-sized converters are ideal for applications requiring minimal size and weight. Please refer to our AG series data sheet for surface mount options.



### APPLICATIONS

- Avalanche Photodiodes
- Capacitor Charging
- Electrophoresis
- Photomultiplier Tubes
- Piezo Devices
- Mass Spectrometry
- Sustaining Ion Pumps

### OPTIONS

- 1 Watt and 1.5 Watt Versions Available (A/AH)
- Three Input Voltage Ranges: 0 to 5, 12, or 24VDC (5V only above 3KV)
- Polarity: Choose Positive or Negative Output (P/N)
- Extended Operating Temperature (A Models / 1.0W) (T Suffix)
- Alternate Input / Output Voltages (Consult Factory)
- See Ordering Information (Page 11)

### PRODUCT SELECTION TABLE

VDC	STANDARD 1 WATT - A MODEL		1.5 WATT OPTION - AH MODEL	
	MODEL	MAXIMUM OUTPUT CURRENT*1	MODEL	MAXIMUM OUTPUT CURRENT*1
100 VDC	A01	10 mA	AH01	15 mA
200 VDC	A02	5 mA	AH02	7.5 mA
250 VDC	A025	4 mA	AH025	6 mA
300 VDC	A03	3.33 mA	AH03	5mA
400 VDC	A04	2.5 mA	AH04	3.75 mA
500 VDC	A05	2 mA	AH05	3 mA
600 VDC	A06	1.67 mA	AH06	2.5 mA
700 VDC	A07	1.43 mA	AH07	2.15 mA
800 VDC	A08	1.25 mA	AH08	1.87 mA
900 VDC	A09	1.1 mA	AH09	1.67 mA
1000 VDC	A10	1 mA	AH10	1.5 mA
1200 VDC	A12	0.83 mA	AH12	1.25 mA
1500 VDC	A15	0.66 mA	AH15	1 mA
2000 VDC	A20	0.5 mA	AH20	0.75 mA
3000 VDC	A30	0.32 mA	AH30	0.5 mA
4000 VDC	A40	0.24 mA	-	-
5000 VDC	A50	0.2 mA	-	-
6000 VDC	A60	0.167 mA	AH60	0.25 mA

Complete List of Models on page 2

### FEATURES

- Proportional Input/Output
- Low Noise Quasi-sinewave Oscillator
- Control Pin
- Low Leakage Current
- Low Input/Output Capacitance
- Input to Output Galvanic Isolation
- Short Circuit Protection, 1 Minute Minimum
- No Minimum Load Required<sup>2</sup>
- MTBF > 1,862,000 hours, per Bellcore TR 332
- No External Components Required
- RoHS Compliant
- UL Recognized



## ELECTRICAL SPECIFICATIONS\*3

OUTPUT VOLTAGE*2 (To select polarity, see pg. 10 - How to Order)	STANDARD 1 WATT - A MODEL			1.5 WATT OPTION - AH MODEL		
	MODEL	MAXIMUM OUTPUT CURRENT*1	RIPPLE P-P*4	MODEL	MAXIMUM OUTPUT CURRENT*1	RIPPLE P-P*4
0 to 100 VDC	<b>A01</b>	10 mA	5%	<b>AH01</b>	15 mA	2%
0 to 200 VDC	<b>A02</b>	5 mA	1%	<b>AH02</b>	7.5 mA	3%
0 to 250 VDC	<b>A025</b>	4 mA	0.90%	<b>AH025</b>	6 mA	1.2%
0 to 300 VDC	<b>A03</b>	3.33 mA	0.70%	<b>AH03</b>	5 mA	0.70%
0 to 400 VDC	<b>A04</b>	2.5mA	0.50%	<b>AH04</b>	3.75 mA	0.75%
0 to 500 VDC	<b>A05</b>	2 mA	0.50%	<b>AH05</b>	3 mA	0.70%
0 to 600 VDC	<b>A06</b>	1.67 mA	1%	<b>AH06</b>	2.5 mA	2%
0 to 700 VDC	<b>A07</b>	1.43 mA	0.50%	<b>AH07</b>	2.15 mA	1.2%
0 to 800 VDC	<b>A08</b>	1.25 mA	1%	<b>AH08</b>	1.87 mA	1.2%
0 to 900 VDC	<b>A09</b>	1.1 mA	1%	<b>AH09</b>	1.67 mA	1.2%
0 to 1000 VDC	<b>A10</b>	1 mA	0.79%	<b>AH10</b>	1.5 mA	1%
0 to 1200 VDC	<b>A12</b>	0.83 mA	0.50%	<b>AH12</b>	1.25 mA	0.60%
0 to 1500 VDC	<b>A15</b>	0.67 mA	0.40%	<b>AH15</b>	1 mA	0.60%
0 to 2000 VDC	<b>A20</b>	0.5 mA	0.30%	<b>AH20</b>	0.75 mA	0.50%
0 to 3000 VDC	<b>A30</b>	0.33 mA	0.30%	<b>AH30</b>	0.5 mA	0.30%
0 to 4000 VDC	<b>A40</b>	0.25 mA	0.30%	-	-	-
0 to 5000 VDC	<b>A50</b>	0.2 mA	0.30%	-	-	-
0 to 6000 VDC	<b>A60</b>	0.167 mA	0.30%	<b>AH60</b>	0.25 mA	.30%

	INPUT CURRENT			
	A MODELS – 1 Watt		AH MODELS – 1.5 Watt	
VIN	NO-LOAD	FULL-LOAD	NO-LOAD	FULL-LOAD
5 VDC	<300mA	<500mA	<300mA	<550mA
12 VDC	<100mA	<185mA	<125mA	<250mA
24 VDC	<25mA	<60mA	<40mA	<120mA

0 TO 5V ONLY (FOR MODELS OVER 3kV)