



AMERICAN HIGH VOLTAGE

ST Series MIL - Industrial Modules

HIGH VOLTAGE POWER SUPPLY



The ST Series is a line of compact high voltage DC to DC converters which have been designed especially for electro-optic applications. These devices use the original design Royer sine-wave oscillator improved by Charles Lien in 1972. They are rugged, arc resistant, and virtually burn-out proof. Their high efficiency makes them suited for battery operated high voltage power supplies and equipment. The output voltage of the ST power supply is directly proportional to the input voltage. All ST power converters are reverse input voltage and short circuit protected.

TYPICAL APPLICATIONS

Electro Optics
Electron Microscope
Image Intensifiers
Microchannel Plates
Photo Multiplier Tubes (PMT)
Pockell Cell

SPECIFICATIONS

Input Voltage:
0 – 15VDC Input

Output Voltage:
From 10,000VDC to 25,000 VDC
See "model selection table"

Output Polarity:
Positive or negative depending on model

Output Current:
depends upon power level
See "model selection table"

ST Series 3 Watts up to 25kV

- Output proportional to input
- Positive or negative output
- Vin: 0 – 15VDC
- Low noise sine-wave oscillator

SPECIFICATIONS Continued

Voltage Regulation:
20% No Load – Full Load (typical) Resistive load

Ripple:
1% maximum at full load

Temperature Coefficient:
200 ppm/ °C

Stability:
< 0.5% drift / hour after warm-up to operating temperature

Operating Temperature:
-55 °C to +100 °C case temperature

Humidity:
10% to 90% RH non-condensing

Input Terminals:
Teflon solder terminals

Output Terminals:
Flying HV lead with connector

Input Current:
3W Module: 60 mA (No load)
3 W Module: 250 mA (Full load)

Power Efficiency:
70% typical

Encapsulation:
RTV potting

Short Circuit Ability:
Fold-back circuitry

Switching Frequency:
Typical 40-50kHz

HIGH VOLTAGE
for the
WORLD

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Elko, Nevada 89801
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www.ahv.com
American High Voltage is an
ISO 9001 company

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SPECIFICATIONS Continued

Cooling:

Convection: 3W module = 15 ° C case temperature rise

Dimensions:

4.0 L x 2.0 W x 0.85 H (101.6mm x 50.8mm x 21.6mm)

Weight:

5.6 oz (156 grams)

Encapsulation:

Elastomer potting

Finish:

Black anodized aluminum case

Terminations:

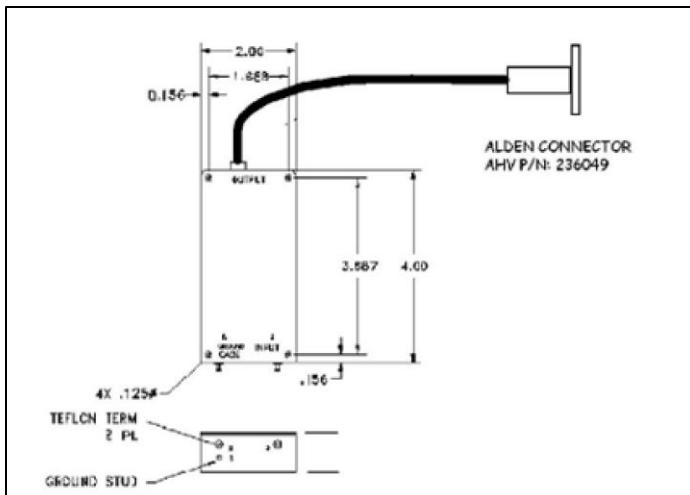
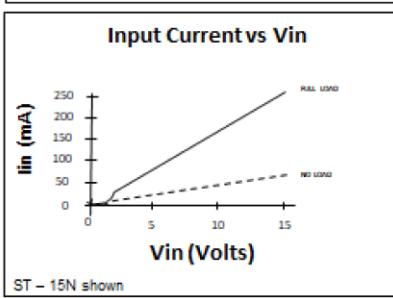
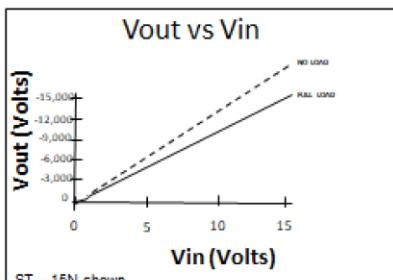
Teflon pins (6)

MODEL SELECTION TABLE

Model	Voltage	Power Available
ST-10P	+10,000v	3w
ST-10N	-10,000v	3w
ST-15P	+15,000v	3w
ST-15N	-15,000v	3w
ST-20P	+20,000v	3w
ST-20N	-20,000v	3w
ST-25P	+25,000v	3w
ST-25N	-25,000v	3w

The above products are available in:
12v, 24v, 28v or 48v input

PERFORMANCE CHARTS



Ordering Information:

ST - XX P or N / Z

XX = Output voltage
Z = Input voltage (blank if 15VDC)

Example:

ST - 10N : Maximum output = -10,000V 15 VDC input
ST - 25P / 24Vin: Maximum output = +25,000V 24VDC input

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