AMERICAN HIGH VOLTAGE

SW Series
MIL - Industrial Modules

HIGH VOLTAGE POWER SUPPLY

SW Series
20 Watts – Regulated

- **Regulated line and load 0.005%**
- **Positive or negative available**
- **7,500 VDC to 30,000 VDC outputs available**
- **Voltage or resistance programable**

The SW series precision switching high voltage power supplies are highly efficient DC to DC converters designed for applications such as electron microscopes, or e-beam lithography which require a highly regulated source of high voltage. These models use state of the art switching circuitry, as opposed to older linear designs, with the result that the input current into the power supply is greatly reduced. This has a profound effect on the reliability of the power supply and since the power dissipation is low, operation up to 85° Celsius is standard. All SW units are reverse input voltage and short circuit protected.

TYPICAL APPLICATIONS

Electron Microscope
X-ray generation
Electron beam Lithography
Corona Generation
Pulsed Power
Kerr Cell
Ion Beam

SPECIFICATIONS

Input Voltage:
28 VDC Input

Output Voltage:
From 7,500 VDC to 30,000 VDC
See “model selection table”

Output Polarity:
Input return is common to output return
Positive or negative units are available

Output Current:
depends upon power level
See “model selection table”

SPECIFICATIONS Continued

Voltage Regulation
0.01% No Load – Full Load (typical) Resistive load
0.005% Line regulation

Ripple:
0.1% maximum at full load

Temperature Coefficient:
50 ppm/ ºC

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

Operating Temperature:
-55 ºC to +100 ºC case temperature

Humidity:
10% to 90% RH non-condensing

Input Terminals:
Teflon solder terminals

Output Terminals:
AMP LGH Connector

Input Current:
20W Module: 125 mA (No load)
20W Module: 890 mA (Full load)

Power Efficiency:
80% typical

Encapsulation:
Epoxy potting

Short Circuit Ability:
”Try-Again” circuitry

Switching Frequency:
Typical 40-50kHz

HIGH VOLTAGE for the WORLD

Corporate Office:
2002 Idaho Street
Elko, Nevada 89801
(775) 777-3631

www.ahv.com
American High Voltage is an ISO 9001 company

SPECIFICATIONS Continued

Cooling:
Convection: 20W module = 25 ° C case temperature rise

Dimensions:
5.0 L x 3.1 W x 2.0 H (127mm x 79mm x 51mm)

Weight:
31.4oz (875 grams)

Encapsulation:
Epoxy potting

Finish:
Black anodized aluminum case

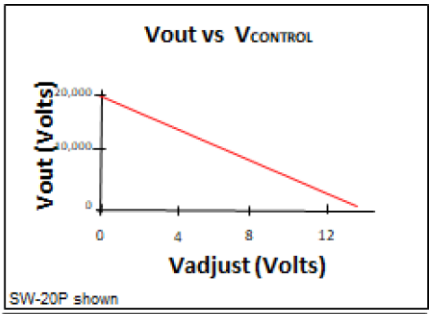
Terminations:
Teflon pins (4)

MODEL SELECTION TABLE

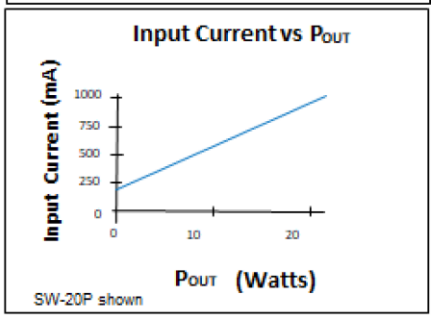
Model	Voltage	Power Available
SW-7.5P	+7,500v	20w
SW-10P	+10,000v	20w
SW-10N	-10,000v	20w
SW-20P	+20,000v	20w
SW-20N	-20,000v	20w
SW-25P	+25,000v	20w
SW-25N	-25,000v	20w
SW-30P	+30,000v	20w
SW-30N	-30,000v	20w

The above products are available in:
24v, 28v(standard) or 48v input

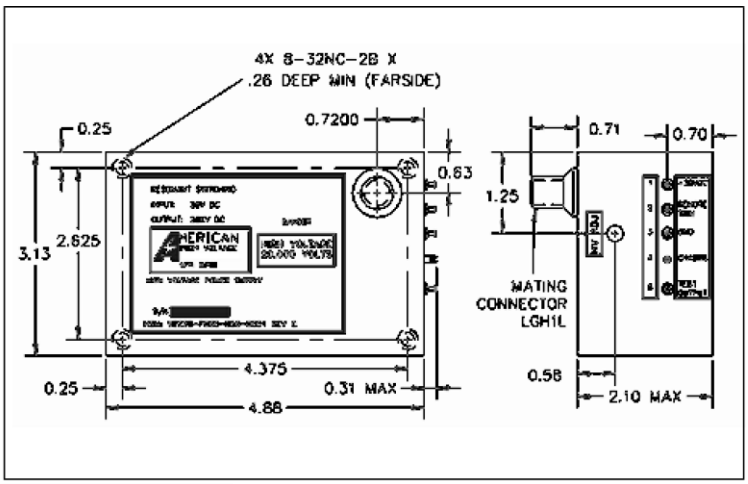
PERFORMANCE CHARTS



SW-20P shown



SW-20P shown



Ordering Information:

SW – XX P or N / Z

XX = Output voltage
Z = Input voltage (blank if 24VDC)

Example:
SW – 10P : Maximum output = 10,000V 28 VDC input
SW-30N / 48: Maximum output = -30,000v 48 VDC input

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