AMERICAN HIGH VOLTAGE

HTR Series High-Temp Modules

HIGH VOLTAGE POWER SUPPLY

HTR Series - Downhole Operation to 200º Celsius

- **Regulated to 0.02% line / load**
- **Positive or negative output**
- **Temperature coefficient: 20 ppm/°C**
- **Low noise sine-wave oscillator**

The HTR Series high voltage power supplies are the ultimate in exotic power supplies. They are designed to operate at extreme temperatures and in harsh vibration environments especially for the oil well logging industry. The HTR's provide up to 3kV at 100 uA of regulated output, either positive or negative polarity with temperature drift as low as 20 ppm/degree C. All models are adjustable over a 3:1 output voltage range by either an external voltage or resistance programming. Three different input voltages are standard by model selection. All HTR's are reverse input and output short circuit protected.

TYPICAL APPLICATIONS

Geiger Tube Operation
Photomultiplier
Downhole Detectors
Micro X-Ray Tube Grid
Ion Source Bias

SPECIFICATIONS

Input Voltage:
15VDC Input (-15Vin models)
24VDC Input (-24Vin models)
30VDC Input (-30Vin models)

Output Voltage:
From 1,000VDC to 3,000 VDC max
See "model selection table"

Output Polarity:
Positive or negative depending on model

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

Operation: (Terminals: +Vin, -Vin, Analog Ground, Vcontrol)
Positive units: grounding control provides full output
Negative units: open control provides full output

SPECIFICATIONS Continued

Voltage Regulation
Load: 0.02 % No Load – Full Load (typical) Resistive load
Line: 0.02% for +/- Vin change

Ripple:
Less than 0.03% maximum at full load (typical 600 mVpp)

Temperature Coefficient:
better than 20 ppm/ ºC

Stability:
< 0.01% drift / hour after warm-up to operating temperature

Operating Temperature:
-40 ºC to + 200 ºC case temperature

Humidity:
10% to 90% RH non-condensing

Input Terminals:
Teflon terminals

Output Terminals:
Teflon terminals

Input Current:
15v module: 35 mA (No load)
24v module: 24 mA (No load)
30v module: 22 mA (No load)
15v module: 55 mA (Full load)
24v module: 36 mA (Full load)
30v module: 32 mA (Full load)

Power Efficiency:
40% typical (0.3 Watt maximum)

Encapsulation:
Thermosetting epoxy potting

Short Circuit Ability:
Fold-back circuitry

Switching Frequency:
Typical 40-50kHz

HIGH VOLTAGE for the WORLD

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

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HIGH VOLTAGE POWER SUPPLY

SPECIFICATIONS Continued

Cooling:
Convection: 0.3W module = 10 ° C case temperature rise. In use, 0.45W must be removed from the case through a conductive thermal path from the case. User must prevent case from exceeding 200 ° Celsius.

Dimensions:
Rectangular case: 4.5 L x 1.375 x 0.5 (114mm x 35mm x 13mm)

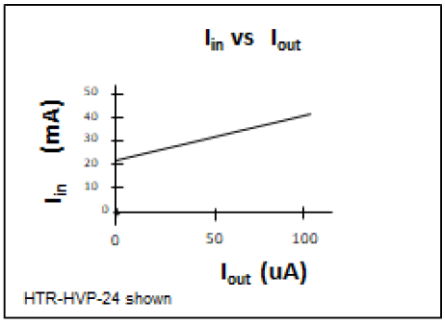
Weight:
4.7 oz (130 grams)

Encapsulation:
Epoxy potting

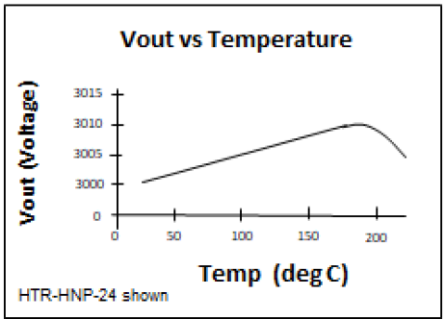
Finish:
Black brass case

Terminations:
Teflon terminals (input): Vin, Vreturn, Vground, Vcontrol
Teflon pins (output, + and -)

PERFORMANCE CHARTS



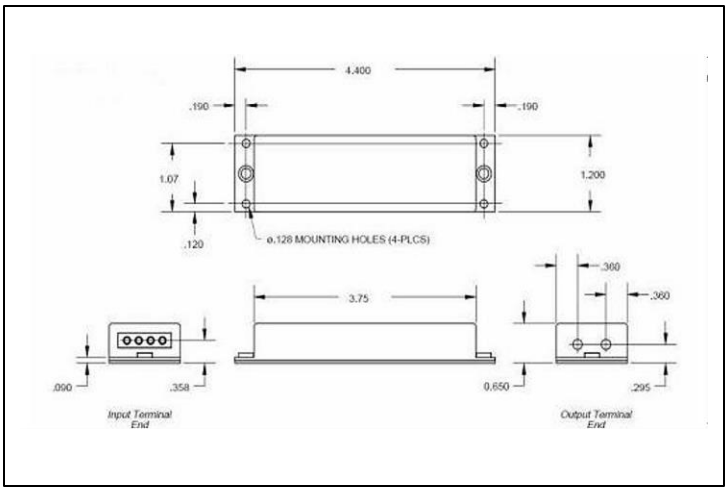
HTR-HVP-24 shown



HTR-HNP-24 shown

MODEL SELECTION TABLE

Model	Output Voltage	Input Voltage
HTR-LVP-15	+1,000v	15v
HTR-LVN-15	-1,000v	15v
HTR-MVP-15	+2,000v	15v
HTR-MVN-15	-2,000v	15v
HTR-HVP-15	+3,000v	15v
HTR-HVN-15	-3,000v	15v
HTR-LVP-24	+1,000v	24v
HTR-LVN-24	-1,000v	24v
HTR-MVP-24	+2,000v	24v
HTR-MVN-24	-2,000v	24v
HTR-HVP-24	+3,000v	24v
HTR-HVN-24	-3,000v	24v
HTR-LVP-30	+1,000v	30v
HTR-LVN-30	-1,000v	30v
HTR-MVP-30	+2,000v	30v
HTR-MVN-30	-2,000v	30v
HTR-HVP-30	+3,000v	30v
HTR-HVN-30	-3,000v	30v



Ordering Information:

HTR – XVY - Z

Example:
HTR - MVN – 24: Maximum output = -2,000V 24 VDC input
HTR - LVP – 15: Maximum output = +1,000V 15 VDC input

X = Output voltage H=3kv,M=2kv,L=1kv
Y = Polarity (P = positive, N = negative)
Z = Input voltage, 15, 24 or 30 VDC

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