



**AMERICAN HIGH VOLTAGE**  
POWER SUPPLIES FOR THE WORLD

## BHTR Series

High Temperature HVPS Series

### 200° C High Voltage Power Supply

#### General Description

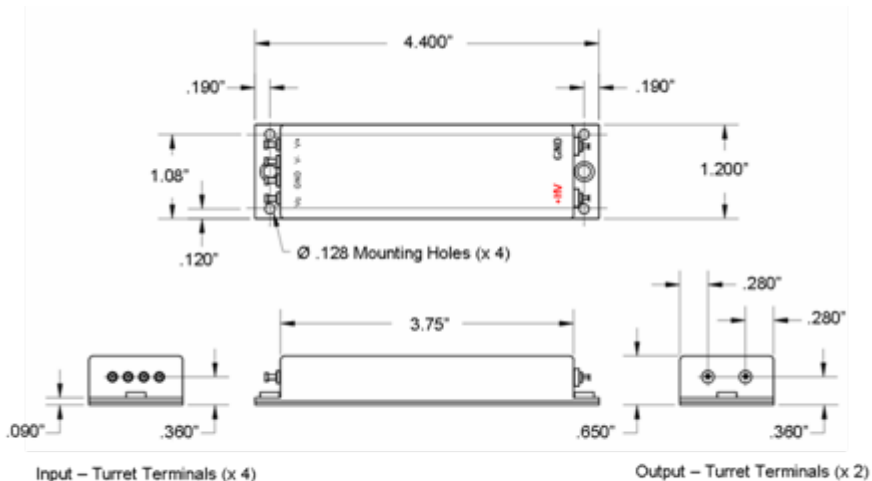
The BHTR Series high voltage power supplies are designed to operate at extreme temperatures and in harsh environments especially for the oil well logging industry. The BHTR units provide regulated output, with either positive or negative polarity.

#### Features

- Regulated
- Encapsulated and Shielded
- Voltage programmable
- 1kV, 1.9kV and 2.5kV available
- Various input voltages available
- Positive or Negative Polarity
- Only Voltage Programming, consult factory for Resistance programming option.



#### Outline Drawing



\*All Dimensions in Inches  
\*Tolerances  $\pm 0.005$ "



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## Electrical Characteristics

(at 25 degrees C unless otherwise specified)

Parameter	Conditions	Value			Units
		Min	Typical	Max	
Supply Voltage*:	BHTR (15V Input)	13.5	15	16.5	VDC
Input Current:	Full Load (15V input):		50	80	mA
Output Voltage	BHTR-19		1900		VDC
	BHTR-25		2500		VDC
Output Current	BHTR-19			75	uA
	BHTR-25			125	uA
Output Ripple:	Full Load		350	850	mVpp
Line Regulation:	Full Load		0.1%	0.2%	
Load Regulation:	No Load to Full Load	0.1 %	0.2 %	0.3 %	$V_{NL}/V_L$
	Half Load to Full Load	0.1 %	0.1 %	0.2 %	$V_{NL}/V_L$
Temperature Drift:	No Load			125	ppm/DegC
	Full Load			125	ppm/Deg C



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## Physical Characteristics

(at 25 degrees C unless otherwise specified)

Parameter	Conditions	Value	Units
Dimensions	English	See Outline Drawing (page 1)	inches
Weight:	MKS	120	grams
	English	4.3	oz
Packaging:	Black/Gray anodized Aluminum epoxy encapsulation		
Terminations:	Input:	Teflon Terminals	
	Output:	Teflon Terminals	

## Environmental Characteristics

(at 25 degrees C unless otherwise specified)

Parameter	Conditions	Value	Units
Temperature Range	case temperature	-25 degrees to + 200 degrees	Celsius
	case temperature	-13 degrees to + 392 degrees	Fahrenheit
Shock:	½ Sine, 5 msec Duration	200 g's	
Vibrations:	250 Hz Random	25G	
Pressure		0 to 500PSIG	

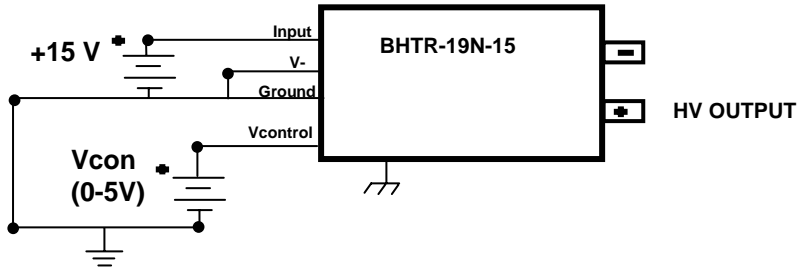


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## BHTR Series Application Notes

Figure 1 shows the connection of BHTR-19N-15.

The output voltage response to the control voltage is approximately  
 $I_{HVI} = 400V_{control}$  (for 1900V model)  
 $= 500V_{control}$  (for 2500V model)



BHTR-19N-15 shown

*\*Note: Chassis must be bonded to the system earth\**

Figure 1: Voltage program

### Ordering Information:

**BHTR- XXY - Z**

XX = Output voltage range: 19 = 1900VDC, 25 = 2500VDC  
 Y = polarity P = positive, N = negative  
 Z = Input voltage 15, 24, 30

**Example:**

BHTR-19N-15: Maximum output = 1,900 VDC negative polarity 15 VDC input  
 BHTR-25P-24: Maximum output = 2,500 VDC positive polarity 24 VDC input