



AMERICAN HIGH VOLTAGE
POWER SUPPLIES FOR THE WORLD

BHTC Series

High Temperature HVPS Series

200° C High Voltage Power Supply

General Description

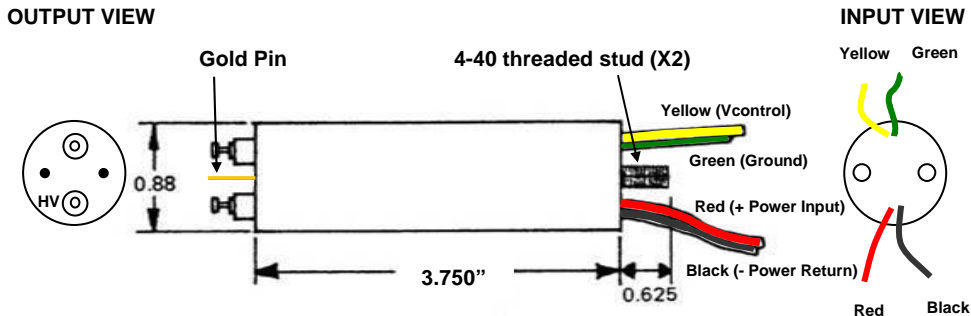
The BHTC Series high voltage power supplies are designed to operate at extreme temperatures and in harsh environments especially for the oil well logging industry. The BHTC units provide regulated output, with either positive or negative polarity.

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





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Electrical Characteristics
(at 25 degrees C unless otherwise specified)

Parameter	Conditions	Value			Units
		Min	Typical	Max	
Supply Voltage*:	BHTC (15V Input)	13.5	15	16.5	VDC
Input Current:	Full Load (15V input):		50	80	mA
Output Voltage	BHTC-19		1900		VDC
	BHTC-25		2500		VDC
Output Current	BHTC-19			75	uA
	BHTC-25			125	uA
Output Ripple:	Full Load		500	1000	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

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Parameter	Conditions	Value	Units
Dimensions	English	See Outline Drawing (page 1)	inches
Weight:	MKS	105	grams
	English	3.70	oz
Packaging:	Brass Tubing with solid epoxy encapsulation		
Terminations:	Input:	Flying Teflon Leads	
	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	

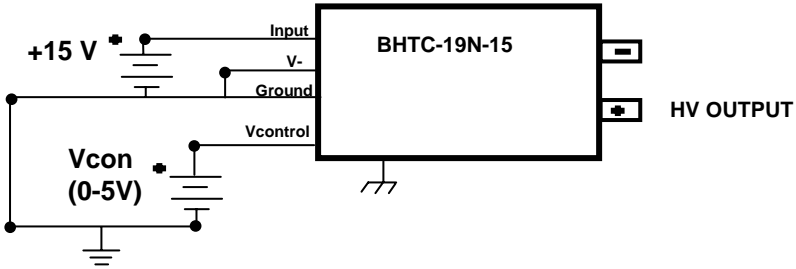


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BHTC Series Application Notes

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

The output voltage response to the control voltage is approximately
 $I_{HV1} = 400V_{con}$ (for 1900V model)
 $= 500V_{con}$ (for 2500V model)



BHTC-19N-15 shown

Note: Chassis must be bonded to the system earth

Figure 1: Voltage program

Ordering Information:

BHTC- XXY - Z

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

Example:

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