

## 15 Watt

- Voltage Regulated
- Output Voltages from 300V to 6kV
- 0 to 100% Programmable Output
- Potentiometer for Calibration
- Short Circuit, Arc, and Reverse Polarity Protection
- Operating Temperature -10°C to +50°C
- 3 Year Warranty



The H Series is a line of compact, high-reliability, regulated high voltage power supplies capable of delivering 15W of continuous power at maximum output voltages ranging from 300V up to 6kV. They are programmable from 0 to 100% of rated output voltage via a 0 to 5 volt DAC-compatible high impedance input programming pin. A 0 to 5 volt output voltage monitor is provided.

Standard protection features include input reverse-polarity protection, output short-circuit and arc protection. An aluminum enclosure aids in EMI/RFI reduction. An externally accessible potentiometer provides adjustable gain trim allowing for individual calibration of units. A proprietary encapsulation process and custom high performance potting compound are used to achieve excellent high voltage and thermal properties.

## Dimensions:

H Series: 3.0 x 3.0 x 0.9" (76.2 x 76.2 x 22.9mm)

## Key Applications:

- HV op amp rails
- Ultrasonic transducers
- Lamp ignition & drive
- Electrophoresis
- Capacitor charging
- Lasers & Q Switches
- General lab use

## Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Programming	0		100	%	Vpgm input, or via internal potentiometer connection
Line Regulation			0.2	%	100% Vpgm, Full Load
Setpoint Accuracy <sup>4</sup>		+/- 0.5		%	
Gain Adjust <sup>5</sup>	5		15	%	
Linearity <sup>6</sup>			1	%	15 to 100% Vout
Temperature Coefficient			200	ppm/°C	
Voltage Monitor Output, Vmon	0		5	VDC	Polarity matches output voltage for 0 to 100% Vout
Input Voltage, Vin	+23.5	+24	+24.5	VDC	
Input Current, No Load			0.5	A	
Input Current, Full Load			1.5	A	
Programming Voltage Input, Vpgm	0		+5	VDC	<100µA
Isolation	N/A – Input ground is connected to output ground				
Construction	Case material is black anodized aluminum. UL 94 V-0 rated solid vacuum encapsulation				
Mean Time Before Failure	390			kHrs	Per Bellcore TR 332 GB +25°C
Operating Temperature	-10		+60	°C	
Storage Temperature	-20		+90	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection

## Notes

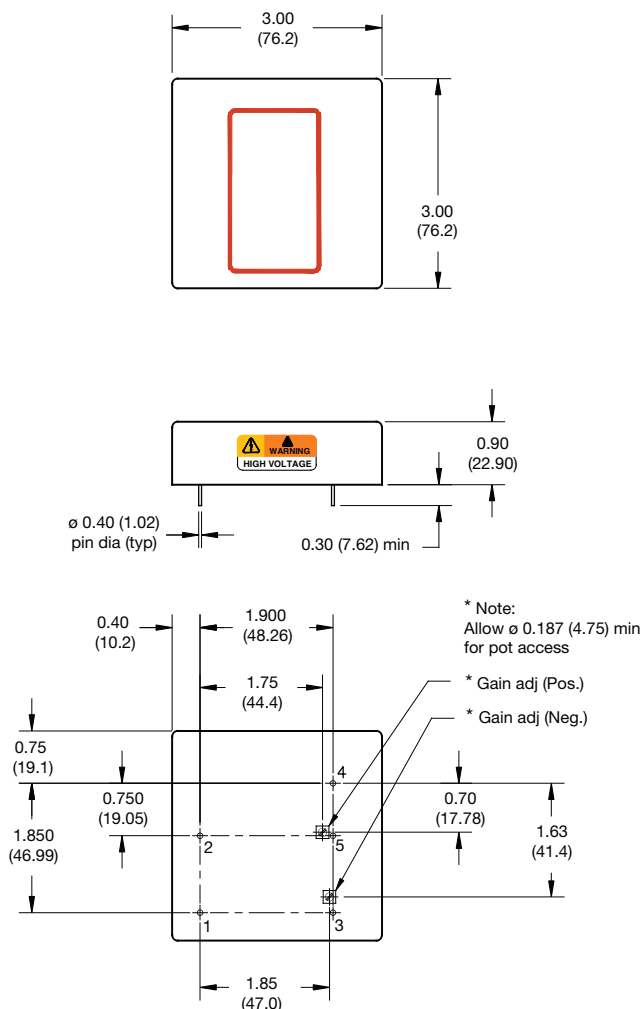
1. Maximum rated output current is available at maximum rated output voltage.
2. Specifications after 1 hour warm-up, full load, 25°C unless otherwise indicated.
3. Proper thermal management techniques are required to maintain safe case temperature.
4. SET POINT ACCURACY refers to the ability of the unit to accurately deliver the programmed voltage.

5. GAIN ADJUST refers to the ability to alter the gain of the circuit to allow for set-point accuracy error.
6. LINEARITY refers to how much the transfer function can deviate from a straight line in the absence of any set-point error.

## Models & Ratings

Output Voltage	Output Current <sup>(1)</sup>	Ripple	Load Regulation	Frequency	Model Number
0 to -300 V	50 mA	<1.0%	<0.75%	80 - 140 kHz	H03N
0 to +300 V	50 mA	<1.0%	<0.75%	80 - 140 kHz	H03P
0 to -500 V	30 mA	<0.5%	<0.20%	70 - 100 kHz	H05N
0 to +500 V	30 mA	<0.5%	<0.20%	70 - 100 kHz	H05P
0 to -1000 V	15 mA	<0.2%	<0.20%	80 - 140 kHz	H10N
0 to +1000 V	15 mA	<0.2%	<0.20%	80 - 140 kHz	H10P
0 to -3000 V	5 mA	<1.0%	<0.20%	60 - 90 kHz	H30N
0 to +3000 V	5 mA	<0.75%	<0.20%	60 - 90 kHz	H30P
0 to -4000 V	3.75 mA	<0.75%	<0.20%	70 - 100 kHz	H40NR
0 to -5000 V	3 mA	<0.75%	<0.20%	60 - 90 kHz	H50N

## Mechanical Details



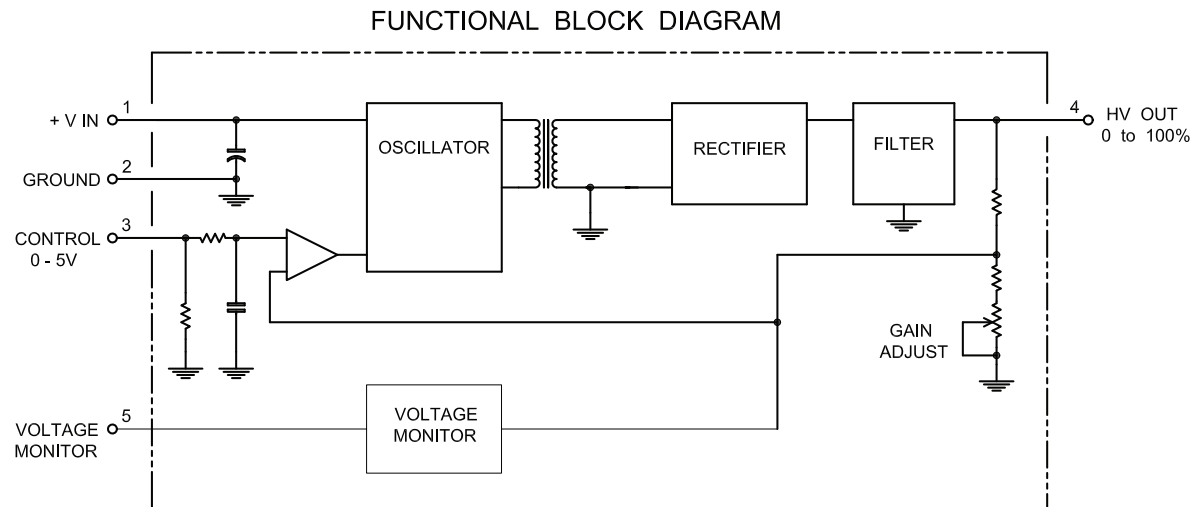
Pin	Function	Description
1	VIN	Input Voltage +24V
2	GRND	Ground
3	VPGM	Voltage Programming Input, 0 to +5V
4	HV OUT	High Voltage Output
5	VMON	Voltage Monitor Output

## Notes

1. All dimensions are in inches (mm)
2. Weight: 10oz (283.5g)

3. Tolerance:  $X.XX \pm 0.02$  (0.51)  
4. Pin Tolerance:  $\pm 0.005$  (0.127)

### Block Diagram



### Connection Diagram

