

2.4 milli-Watt

- Precision Voltage Regulated
- Output Voltages 1.2kV and 2kV
- Ultra-Low Noise, Magnetic Free Design
- Soft-Start for Sensitive Detectors
- Low Ripple, <100uV
- Output Voltage Monitor
- On-board Voltage Reference
- Standard and Extended Operating Temperatures
- Lightweight Shielded Case
- 3 Year Warranty

The P Series of micro-power DC to high voltage DC converters feature extremely low ripple (<100µV) and low EMI/RFI due to a unique magnetic free design. Fully regulated and programmable outputs of 0 to 1200 volts or 0 to 2000 volts are available in positive or negative polarity. A precision on-board voltage reference allows for simple configuration for full scale, fixed or variable output. A high impedance voltage programming input allow for easy system integration. Voltage monitoring is provided at a 1000:1 ratio.

Very low power consumption and light weight, with a case height of less than 0.220 inches, make these PCB mount modules ideal for portable, battery-powered equipment. Soft-start high voltage ramp-rates are designed in to further protect sensitive detectors to support long-term reliability.



Dimensions:

P Series: 1.38 x 0.68 x 0.25" (35.1 x 17.3 x 6.4mm)

Key Applications:

- Portable Toxin Detection
- Electrostatic Applications
- Low Power Biasing
- Piezo Devices
- Battery Powered Equipment

Models & Ratings

Output Voltage	Output Current	Model Number
0 to -1200V	2µA	P12N
0 to +1200V	2µA	P12P
0 to +1200V	2µA	P12P-T
0 to -2000V	1µA	P20N
0 to +2000V	1µA	P20P
0 to +2000V	1µA	P20P-T

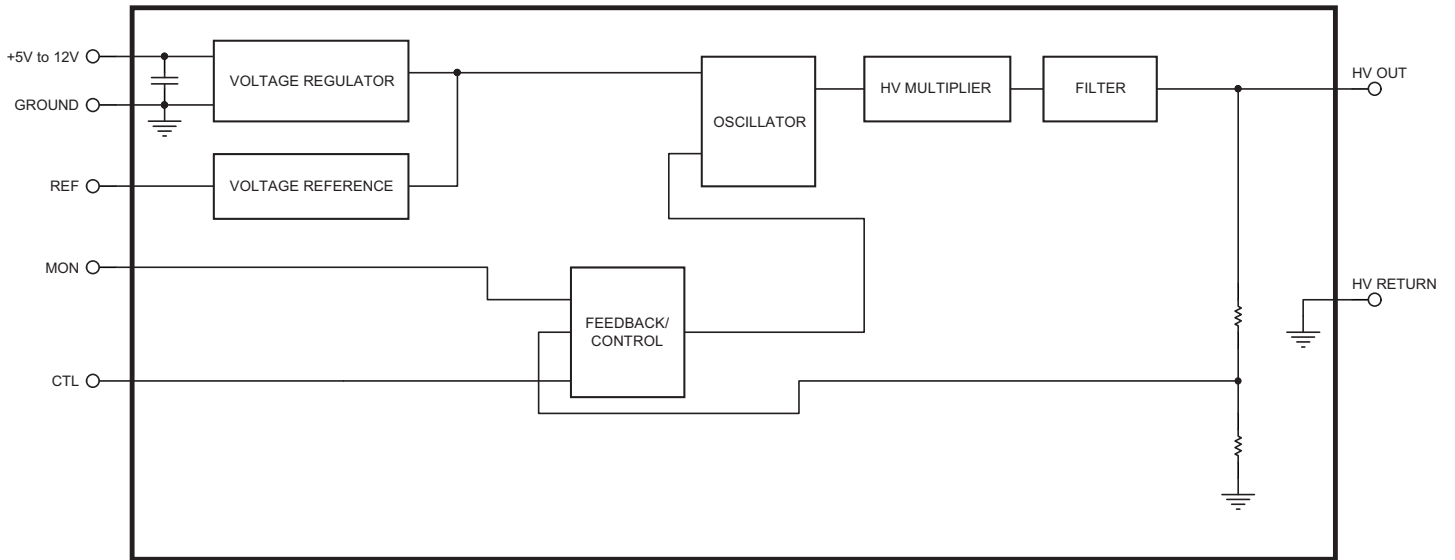
Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Programming			100	%	
Output Voltage Tolerance		±1			For Max Vout
Standby Current	0		300	µA	
Minimum Load	No minimum load required				
Ripple and Noise			100	µV	
Temperature Coefficient		250		ppm/°C	With Voltage Reference Output tied to Voltage Control
Stability			100	ppm/hr	
Voltage Monitor Output		1000:1		Ratio	$V_{MON} = V_{HV} / 1000$
Voltage Reference Output		+4.096		VDC	Fixed output voltage
Start Up Time		10, 15		sec	For 1.2kV, 2kVout, time to output high voltage after applying input
Response Time		900		msec	Response to Control Voltage, after Start Up Time

Notes

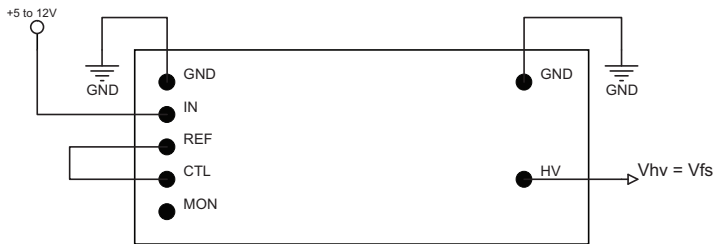
1. Maximum rated output current is available at maximum rated output voltage.

Block Diagram

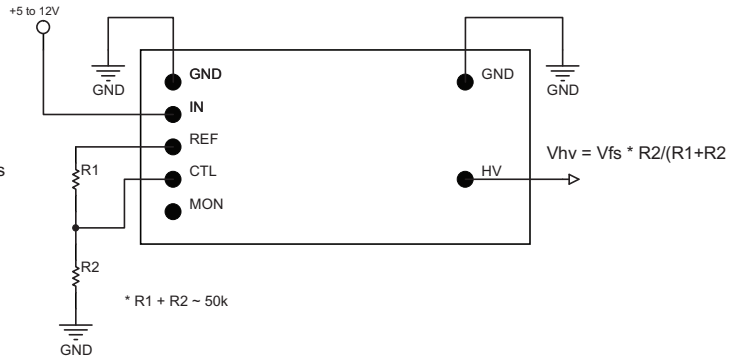


Connection Diagram

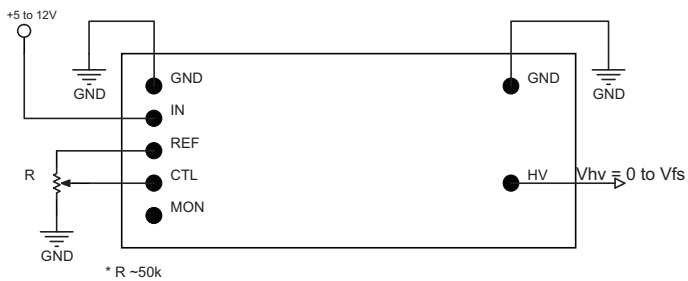
Fixed output (full-scale voltage):



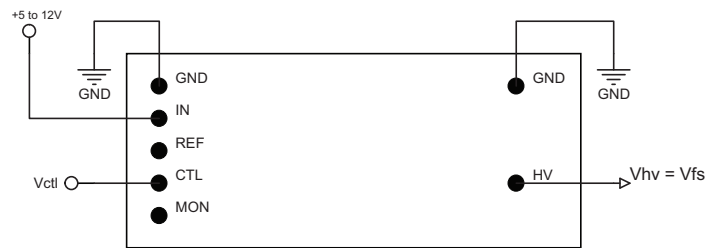
Fixed output (reduced voltage):



Variable output:



Voltage-controlled output:



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