Low Power Consumption DC to HV DC Converters

0 to ±100 through 0 to ±6,000 VDC @ 1 Watt
GP Series

www.emcohighvoltage.com
EMCO
High Voltage Corporation

The GP Series is a line of miniature, DC to HV DC converters providing 100VDC to 6,000VDC, positive or negative, in a compact PC mount package. This line features low power consumption, making it ideal for portable, battery powered applications. The isolated output is proportional to the input, and is linear from approximately 0.7 volts in. A low noise quasi-sinewave oscillator and shielded transformer provide clean, reliable DC to HV DC conversion with low EMI and RFI.The isolated output allows for user selectable output polarity. No minimum load is required. Contact our Applications Department for immediate technical assistance.

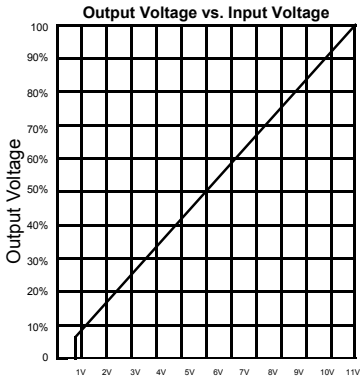
MODEL	INPUT CURRENT (NO LOAD)	INPUT CURRENT (FULL LOAD)	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE
GP01	<45mA	<150mA	0 to 100V	10mA	<0.75%
GP02	<45mA	<150mA	0 to 200V	5mA	<1.75%
GP03	<45mA	<125mA	0 to 300V	3mA	<0.50%
GP05	<15mA	<125mA	0 to 500V	2mA	<0.50%
GP06	<15mA	<125mA	0 to 600V	1.66mA	<0.50%
GP08	<15mA	<125mA	0 to 800V	1.25mA	<0.75%
GP10	<15mA	<125mA	0 to 1,000V	1mA	<0.75%
GP12	<15mA	<125mA	0 to 1,200V	840uA	<0.75%
GP15	<20mA	<125mA	0 to 1,500V	660uA	<0.75%
GP20	<30mA	<130mA	0 to 2,000V	500uA	<0.75%
GP25	<30mA	<130mA	0 to 2,500V	400uA	<1.00%
GP30	<40mA	<130mA	0 to 3,000V	340uA	<1.00%
GP40	<50mA	<130mA	0 to 4,000V	250uA	<1.00%
GP50	<70mA	<150mA	0 to 5,000V	200uA	<1.5%
GP60	<85mA	<175mA	0 to 6,000V	166uA	<1.00%

FEATURES
Low Power Consumption
Small Case Size
Light Weight
Short Circuit Protection
Low EMI/RFI
Isolated Output
User-Selectable Output Polarity
Low Cost/High Performance

APPLICATIONS
Portable, Battery Powered Applications
Sustaining Ion Pumps
Vacuum Gauges
Photomultiplier Tubes
Spectrometry
Electrostatic Chucks
Lamp Ignition
Displays (see AC series)
Non-impact Printers
Electrostatic Field Generation
Avalanche Photodiodes
Piezo Devices
Electrophoresis

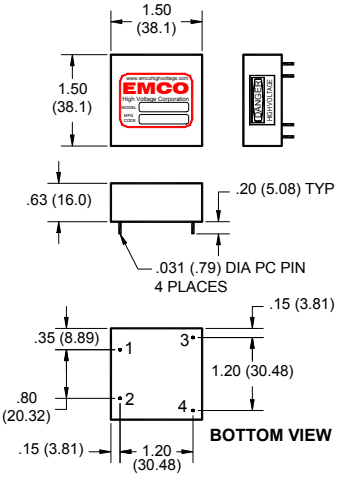
PHYSICAL CHARACTERISTICS
SIZE: 1.5 x 1.5 x 0.63 (38 x 38 x 16)
WEIGHT: 1.4 Ounces (40 GRAMS)
PACKAGING: Fully Encapsulated
CASE MATERIAL: Glass-filled Epoxy
PINS: 0.031 (.79) Diameter, 0.2 (5.1) Long

ELECTRICAL SPECIFICATIONS
INPUT VOLTAGE: 0 to 12 Volts
TYPICAL TURN-0N VOLTAGE: 0.7 Volts
OUTPUT VOLTAGE TOLERANCE,
(FULL LOAD, 12V in, +25°C):+1%,-3%
TEMPERATURE :
OPERATING: -20° to +70°C
STORAGE: -20° to +105°C
LOAD REGULATION: <10% (No Load to Full Load)
ISOLATION: 3,500 Volts +Vout



Pin #	Function
1	(+) Input
2	(-) Input
3	(+) Output
4	(-) Output

Dimensions are in inches. Tolerances are ± .03 (± .76) (METRIC EQUIVALENTS IN PARENTHESIS)



Design Tips:
1) Select a higher voltage model and bias it at a lower input voltage to get the desired output voltage. Power consumption will be substantially lower.
2) Ripple can be futher reduced by connecting a capacitor across the output.

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