

- 604-896 to 605-347

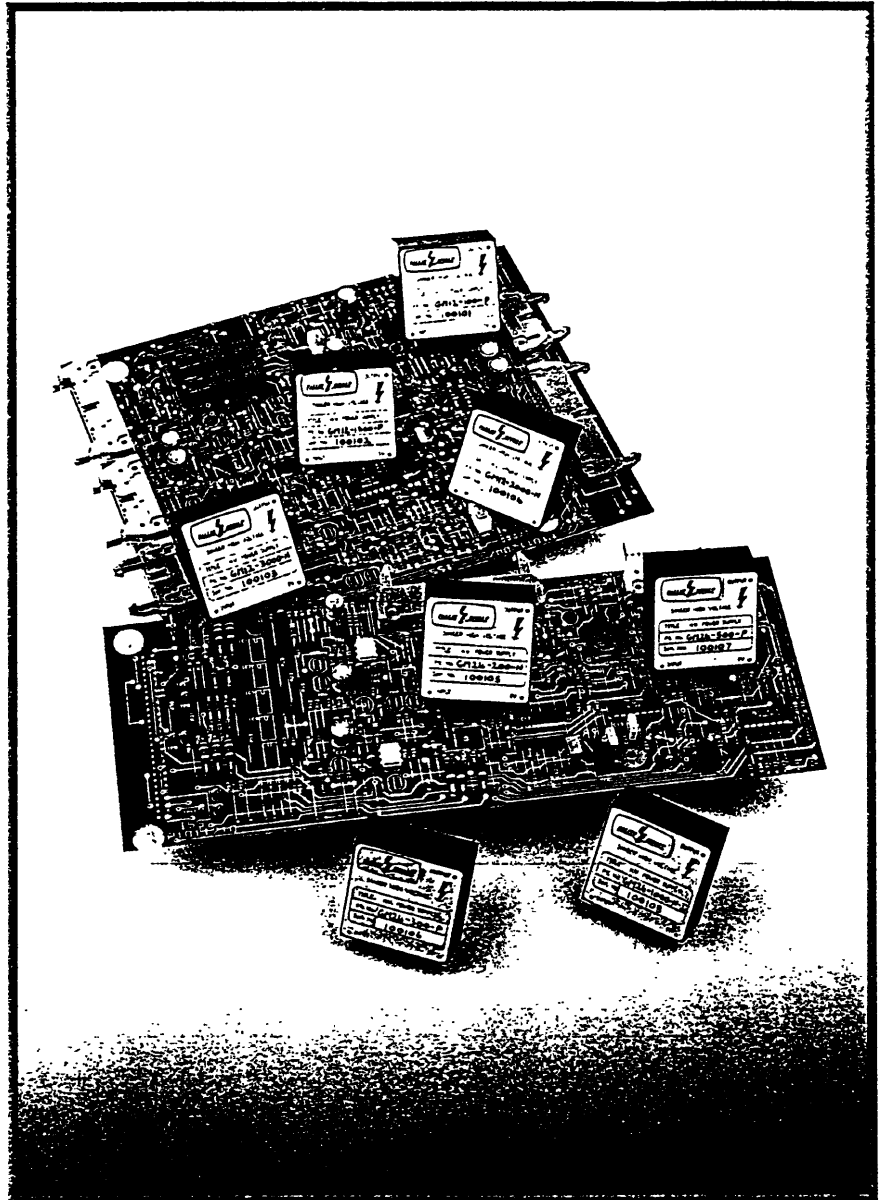
## Miniature High Voltage DC-DC Converters Series GM


### Features

- PCB Mounting
- Small size
- Outputs up to 3kV
- 1.5 Watt continuous
- Positive or negative outputs
- Output proportional to input
- No minimum load requirements

### Applications

- Ink jet printing
- Electrostatic precipitation
- Geiger-Muller tubes
- Photomultiplier tubes
- Electron beam deflection and focussing
- General purpose



**WALLIS**  **HIVOLT**

# Miniature High Voltage DC-DC Converters Series GM

## Description

### Operation:

The Series GM is a unique range of low cost, general-purpose high voltage d.c. to d.c. converters. Output voltages are available in the range 100V to 3kV depending on model.

All units are configured for direct PCB mounting, thus enabling them to be "designed in" to customers' equipment as a component.

A 10kV version, model GMH10, is available in a different case style. This is described fully in a separate datasheet.

The unregulated output is proportional to the input voltage. Alternatively external feedback control loops can be added to provide regulated outputs. The converters are vacuum encapsulated in an ABS case to ensure maximum reliability and safety.

Standard GM models are three pin devices which provide a common OV for input and output. Isolated and screened case versions are also available to special order.

All models are available with a range of input and output voltages, with either positive or negative outputs.

### Special Versions:

Customers with particular requirements that are not satisfied by the standard range of GM d.c. to d.c. converters, are invited to discuss their applications with our technical sales team, who will be pleased to discuss the possibility of adapting a model from the standard range, or alternatively a custom design to meet your specific needs.

### Safety:

The high voltage power supplies described in this datasheet generate voltages which can be lethal. They should only be installed and used by personnel who have received the appropriate training and who are fully aware of the hazards that exist.

## Specification

**Input Voltage:**

12V or 24V d.c.

**Max Output Power:**

1.5W continuous (3W peak) averaged over 30 secs

**Rated Output Voltages:**

100V to 3kV nominal

**Output Polarity:**

Positive or negative to order.

**Load Regulation:**

Typically less than 10% (for a zero to 1.5W Load Change) maximum 20%

**Line Regulation:**

Output is proportional to input over a 10% to 100% input range, with a variation of  $\pm 10\%$  of rated output voltage.

**Ripple:**

1% peak to peak (0.1% Screened case version)

**Efficiency:**

Better than 50% at 1.5W load.

**Oscillator Frequency:**

25kHz to 200kHz depending on model.

**Overload:**

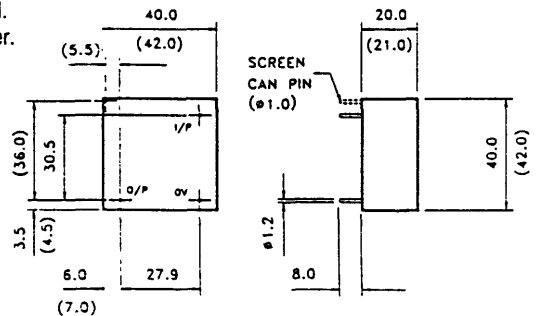
Protected against intermittent flashover.

**Mechanical Specification:**

All dimensions in mm.

### NOTE:

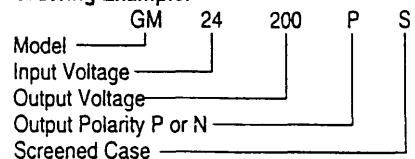
DIMENSIONS ( )  
- SCREENED VERSION



60g (2 oz) approx.

Model	Output Voltage
GM 100	100V
GM 200	200V
GM 300	300V
GM 500	500V
GM 1K	1kV
GM 1K5	1.5kV
GM 2K	2kV
GM 3K	3kV

### Ordering Example:



Design developments may result in specification changes.



A Farnell Electronics Company

UK: Wallis Hivolt Limited Durban Road South Bersted Bognor Regis West Sussex PO22 9RL  
Telephone 0243 841888 Telex 86420 Fax 0243 824698

USA: Wallis Hivolt Limited/Farnell Advance Power Inc  
Unit 3 building 2 32111 Aurora Road Solon Ohio 44139  
Telephone (216) 3490755 Fax (216) 3490142

5/92/3M