GAMMA

MINIATURE DC/DC HIGH VOLTAGE POWER SUPPLIES

SERIES MC

10 Models covering the range of 50VDC to 500VDC to 2KV to 20kVDC

FEATURES:

- **Low Cost**
- **Output Proportional to Input**
- **Input/Output Floating**
- **High Input/Output Isolation**
- **Short Circuit And Reverse Polarity Protected**
- **Compact (2.8 cu. in.)**
- **Fully Encapsulated**

MC Series

APPLICATIONS:

MODEL GUIDE

MODEL	OUTPUT VOLTAGE RANGE	OUTPUT POLARITY	OUTPUT CURRENT
MC5	50V to 500 VDC	Reversible	6mA
MC15	150V to 1.5KVDC	Reversible	2mA
MC30	300V to 3KVDC	Reversible	1mA
MC50	500V to 5KVDC	Reversible	200µA
MC100P	1KV to 10KVDC	Positive	200µA
MC100N	1KV to 10KVDC	Negative	200µA
MC150P	1.5KV to 15KVDC	Positive	160µA
MC150N	1.5KV to 15KVDC	Negative	160µA
MC200P	2KV to 20KVDC	Positive	150µA
MC200N	2KV to 20KVDC	Negative	150µA

DESCRIPTION:

The **Gamma "MC"** Series provides a high voltage source in a miniature package. Output voltage is proportional to the input, and is linear from approximately 10% to maximum output voltage. This series incorporates high frequency power supply techniques allowing 5KV at 3 watts to be achieved in 2.8 cubic inches. 10KV, 15KV and 20KV size is 5.6 cubic inches.

Maximum input voltage required is 12VDC* having a positive or negative polarity. Input/output isolation allows the user to select an output of either polarity on Models up to 5KV. **15 VDC input is required for output voltage of 15KVDC, 24VDC input is required for output voltage of 20KVDC.*

10KV, 15KV and 20KV units have a fixed polarity, either Positive or Negative.

The compact size of the **GAMMA "MC"** Series facilitates PC Board mounting. All units are overload, short circuit and reverse polarity protected.

GAMMA HIGH VOLTAGE RESEARCH INC.

Designers/Manufacturers-High Voltage Power Supplie

1096N US Highway 1, ORMOND BEACH, FL 32164 * TEL. 386-677-7070, url: gammahighvoltage.com

GAMMA HIGH VOLTAGE

SERIES MC

10 Models Covering the Range of 50 VDC to 20 KVDC

ELECTRICAL CHARACTERISTICS

Input Voltage:	1.75V to 12VDC (UP TO 10KVDC) 1.75V to 15VDC (15KVDC Model) 3.5V to 24VDC (20KVDC Model)
Input Current:	400mA (Models up to 10KV) 300mA (15KV Model) 375mA (20KV Model)
Output Voltage:	Proportional to Input (see Model Guide)
Output Current:	3 Watts maximum (see Model Guide)
Load Regulation:	5% (½ to full load)
Ripple:	1% P/P (typical)

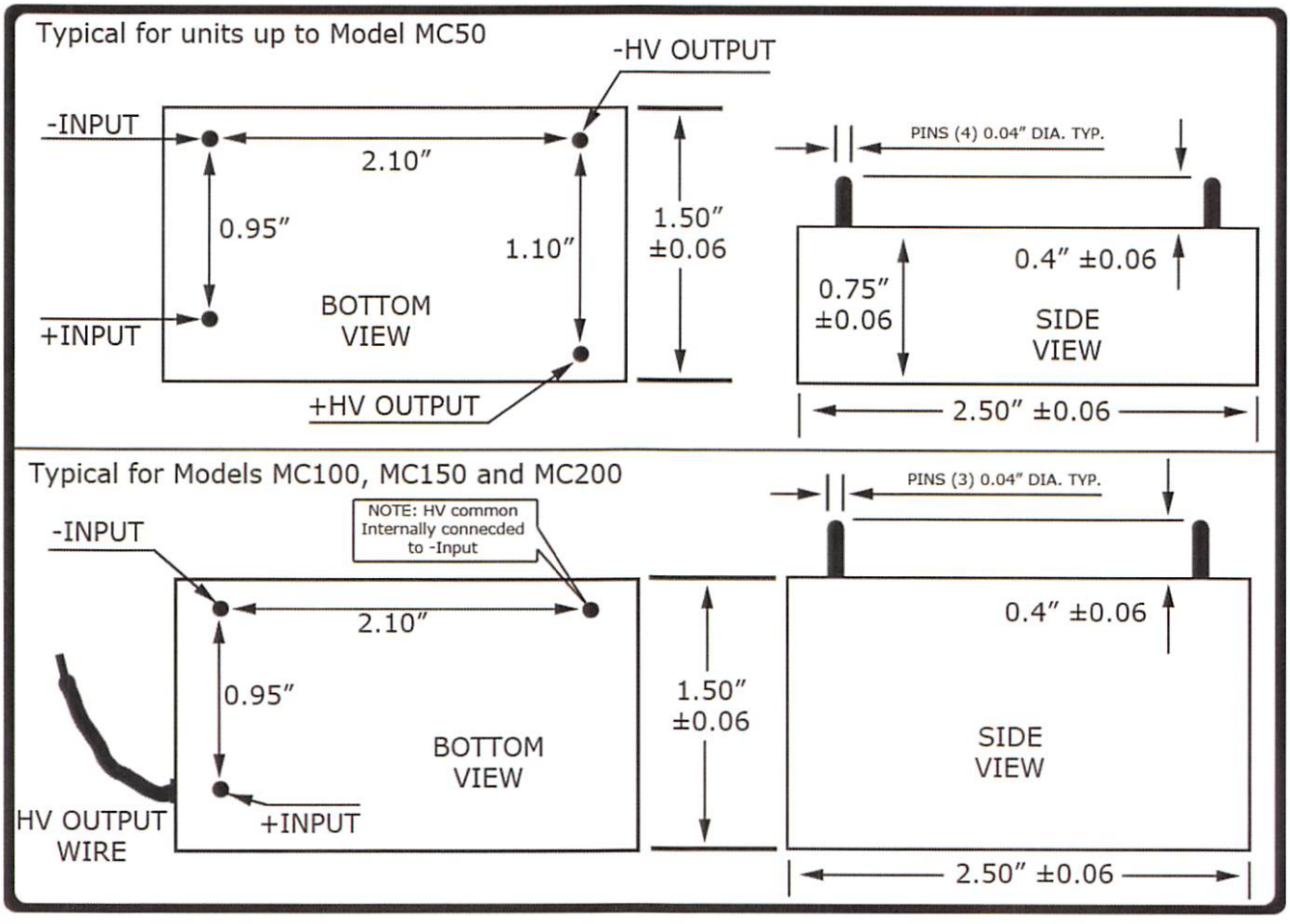
PHYSICAL CHARACTERISTICS

Dimensions:	1.5" x 2.5" x . 75" (up to 5KV) 1.5" x 2.5" x 1.5" (10,15 & 20KV)
Volume:	2.8 cu. in. (up to 5KV) 5.6 cu. in (10, 15 and 20KV)
Weight:	4oz (up to 5KV) 7oz (10, 15 and 20KV)
Packaging:	Solid Encapsulation
Terminations:	4PC Pins (.043 dia holes) (up to 5KV) 3 PC Pins (0.43 dia holes)(10,15 & 20KV)

ENVIRONMENTAL CHARACTERISTICS

Temperature Range: -20° to +60° C

PC BOARD MOUNTING



GAMMA

REGULATED DC/DC HIGH VOLTAGE POWER SUPPLIES

SERIES RC

7 Models Covering the range of 0-3 KV to 0-30 KV at up to 10 Watts

FEATURES:

- Voltage Programmable
- Excellent Dynamic Regulation
- Arc-Over Protected
- Compact/Fully Encapsulated

APPLICATIONS:

- CRT Displays
- Photomultipliers
- X-Ray Tubes

RC10-15P & RC10-30P

MODEL GUIDE

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT
RC5-3	0 to 3KV	1.5mA
RC5-5	0 to 5KV	1mA
RC5-10	0 to 10KV	0.5mA
RC5-15	0 to 15KV	0.33mA
RC5-20	0 to 20KV	0.25mA
RC5-25	0 to 25KV	0.2mA
RC5-30	0 to 30KV	0.16mA
RC10-3	0 to 3KV	3.3mA
RC10-5	0 to 5KV	2mA
RC10-10	0 to 10KV	1mA
RC10-15	0 to 15KV	660uA
RC10-20	0 to 20KV	500uA
RC10-25	0 to 25KV	400uA
RC10-30	0 to 30KV	333uA

All units are available in Positive or Negative polarity. Add P or N as suffix to Model number to indicate polarity desired.

DESCRIPTION:

The **GAMMA "RC"** series of high voltage power supplies provides a compact well regulated high voltage source. Utilization of a self-excited ultra-sonic power oscillator insures low RFI and low stored energy.

All models include current limiting circuitry augmented by surge limiting resistors to limit the output current to 20% above maximum rated value under arc-overs, short circuits and overloads.

Output voltage may be programmed from 0 to maximum voltage from either an external 5K ohm potentiometer or a 0 to +10V low voltage ground referenced source.

All high voltage components are vacuum encapsulated to insure corona free, reliable operation.

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Designers/Manufacturers-High Voltage Power Supplies

1096 NORTH U.S. #1, ORMOND BEACH, FL 32174 * TEL. 386-677-7070, FAX 386-677-3039

GAMMA

SERIES RC

ELECTRICAL CHARACTERISTICS:

Input Voltage: +28VDC ±10% *

**24VDC available - specify when ordering*

Output Voltage Programmable from zero to maximum rated voltage from either and external 5K potentiometer or a zero to +10Volt low voltage ground referenced source

Output Current: 5 or 10 watts Maximum(according to model)

Regulation: Line: 0.01% Maximum
Load: 0.01%

Ripple: 0.05% Maximum

Temp. Coefficient: 0.01% per °C

Stability: 0.01% per 8 hours.

Monitor Outputs: 1) Voltage Monitor (Optional)
2) Current Monitor (Optional)

Programming:

Method 1: Resistance External 5K ohm potentiometer
Method 2: Voltage: Zero to +10 Volts

PHYSICAL CHARACTERISTICS:

Dimensions: 3 1/2" x 5 1/8" x 1 9/16" (up to 15KV)
3 3/4" x 6" x 2 3/4" (20 & 30KV)

Weight: 2.5 lbs (up to 15KV)
3.5 lbs (20 & 20KV)

Input Connector: Terminal Strip
See Outline Drawing

Output Termination: 12" Flying Lead

ENVIRONMENTAL CHARACTERISTICS

Temperature Range: 0 to 50°c

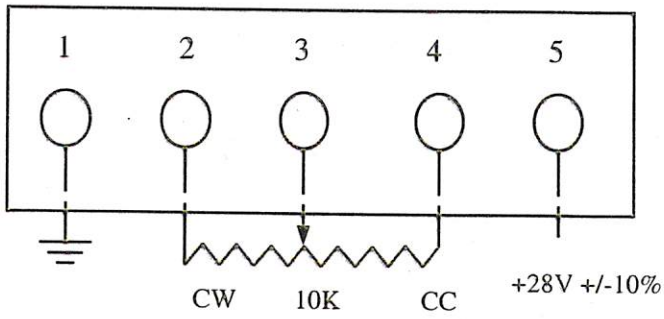
INSTALLATION:

A. Four #6-32 x 1/4 screws are provided for mounting purposes . If screws are replaced, the depth into the inserts should not exceed 1/4".
B. Solder two 16 gauge leads to the (+) and (-) input terminals for connection to the external power supply source.
C. Solder the programming potentiometer to the appropriate terminals.
D. Ground the (-) input either at the source supply or at the module terminal.

Programming :

Method 1: Connect Potenttiometer per drawing below
Method 2: Via External Voltage Source, Apply 0 to 10V between terminals 4(-) and 3 (+).
Note: Program source may be either floated or grounded.

Program Interface



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