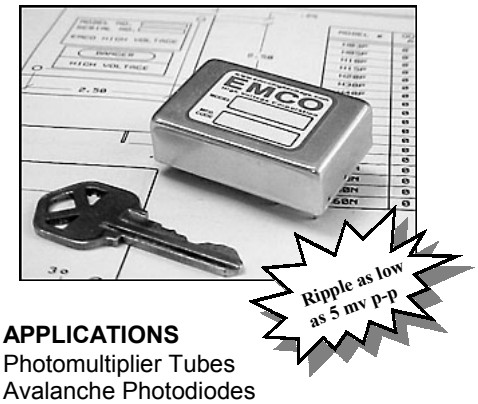
New, Precision Regulated, Low Ripple, High Voltage Power Supplies

0 to +/-200V thru 0 to +/-2000V @ 1 Watt
CA SERIES

www.emcohighvoltage.com
EMCO High Voltage Corporation



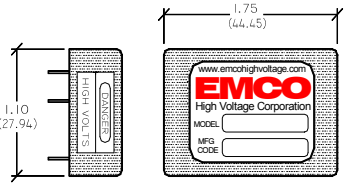
The new CA Series of high performance, precision regulated, high voltage power supplies offers improved performance and added features. Improvements in stability and ripple, along with an on board precision reference, a voltage monitor and increased protection, enable these modules to replace much larger, more expensive power supplies in many applications. Each model is programmed from 0 to 100% of rated output via a 0 to +5 volt DAC compatible high impedance programming input. A voltage monitor is provided and is internally buffered to provide a low impedance (up to 1 mA) signal to external circuitry. The precision, on board reference can be used in conjunction with an external potentiometer or voltage divider to program the high voltage output. Each unit has an accessible potentiometer allowing for individual calibration after installation. A quasi-sinewave oscillator, internal transformer shielding, and an isolated steel case reduce EMI/RFI radiation to very low levels. Suitable for photomultiplier tubes, avalanche photodiodes, precision EO lenses, piezo devices and other applications requiring precision, low noise, high voltage in a miniature, pc mountable, cost effective package.

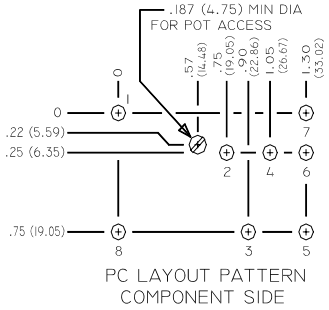
APPLICATIONS
Photomultiplier Tubes
Avalanche Photodiodes
Solid State Detectors
EO Lenses
Piezo Devices

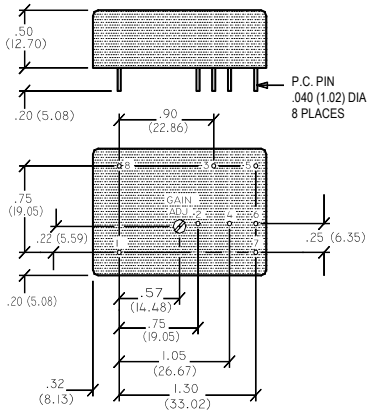
FEATURES
Very Low Ripple, as low as 5mv p-p
Precision Regulated
Miniature Shielded Case, 1 cubic inch
0 to 100% Programmable
Voltage Monitor
High Stability, <25ppm/°C
Wide Input Voltage Range
Arc, Overload & Short Circuit Protected
Very Low EMI/RFI
External Voltage or Potentiometer Programming
PC Mountable
On board Reference
Accessible Calibration Adjustment
Sealed To Withstand Immersion Cleaning Processes
High Performance, Cost Effective

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	REGULATION[3]		RIPPLE[3] (FULL LOAD ,P-P)
			LINE	LOAD	
CA02P	0 to +200V	0 to 5mA	<0.01%	<0.01%	<0.01%
CA02N	0 to -200V	0 to 5mA	<0.01%	<0.01%	<0.01%
CA05P	0 to +500V	0 to 2mA	<0.01%	<0.01%	<0.01%
CA05N	0 to -500V	0 to 2mA	<0.01%	<0.01%	<0.01%
CA10P	0 to +1000V	0 to 1mA	<0.001%	<0.005%	<0.001%
CA10N	0 to -1000V	0 to 1mA	<0.001%	<0.005%	<0.001%
CA12P	0 to +1250V	0 to .8mA	<0.001%	<0.005%	<0.0005%
CA12N	0 to -1250V	0 to .8mA	<0.001%	<0.005%	<0.0005%
CA20P	0 to +2000V	0 to .5mA	<0.01%	<0.01%	<0.001%
CA20N	0 to -2000V	0 to .5mA	<0.01%	<0.01%	<0.001%

PIN #	FUNCTION
1	Output Voltage
2	Programming: 0 to +5V
3	Ground
4	Voltage Reference +5V
5	Case Ground
6	+ Input: 11.5 to 15.5V
7	Voltage Monitor: 0 to +5V
8	Output Return







Dimensions are in inches
Dimensional Tolerances: ± .03 (.76mm)
(Metric equivalents in parenthesis)

ELECTRICAL SPECIFICATIONS
INPUT VOLTAGE: 11.5 to 15.5 Volts
INPUT CURRENT: <80mA no load / <220mA full load
PROGRAMMING VOLTAGE: 0 to 5 Volts, <150 µA
VOLTAGE MONITOR: 0 to 5V = 0 to 100% output[2]
REFERENCE OUTPUT: 5.0V+/-1%, up to 1mA
STABILITY: <0.005%/hr[3]
LINEARITY: <0.5% (15% to 100% Vout)[3]
% TRIM: >0.5%[3]
TEMPERATURE COEFFICIENT: <25ppm/°C[3]
OPERATING TEMP: -10° to +50° C
STORAGE TEMP: -25°C to +95°C

PHYSICAL CHARACTERISTICS
SIZE: 1.75 x 1.10 x .50 (44.45 x 27.94 x 12.70)
WEIGHT: 1.4 oz. (40.0 Grams)
PACKAGING: Epoxy Encapsulated
CASE MATERIAL: Zinc Plated Steel
PINS: 0.04 (1.02) Diameter, 0.20 (5.08) Long

Note 1: Specifications after 1 hour warm-up, full load, +25°C unless otherwise noted.
2: On negative output models, voltage monitor output is a buffered representation of the programming voltage.
3: Typical performance.
4: All grounds internally connected, except case.

e-mail sales@emcohighvoltage.com
Web site www.emcohighvoltage.com

Phone (209) 223-3626 Fax (209) 223-2779
11126 Ridge Road, Sutter Creek CA 95685