

CP SERIES

Constant Power High Voltage Supply

The CP series of high-voltage regulated DC-DC converters is optimized for “tri-mode” operation in bias applications, charging applications, and pulsed power applications and provides excellent line and load regulation, dynamic response, and stability. The CP Series operates in constant-voltage, constant-current, or constant-power modes and features buffered current, voltage, and power monitors. Typical applications for these modules include strike-and-run, plasma, and electrophoresis.



- 6 models from 0 to 1kV through 0 to 15kV
- 10W maximum output power level
- 0 to +10V remote programming for all modes
- +10V compensated reference
- Tight line and load regulation
- Operates in constant-voltage, constant-current, or constant-power modes

PARAMETER	CONDITIONS	MODELS						UNITS
INPUT		ALL TYPES						
Voltage Range	Full Power	+24 ± 10%						VDC
Current	Standby / Disable	< 70						mA
Current	Full Load, Max Eout	< 925						mA
Current	No Load, Max Eout	< 375						mA
AC Ripple Current	Nominal Input, Full Load	< 30						mA p-p
OUTPUT		1CP	2CP	4CP	6CP	10CP	15CP	
Voltage Range		0 to 1,000	0 to 2,000	0 to 4,000	0 to 6,000	0 to 10,000	0 to 15,000	VDC
Power	Nominal Input, Max Eout	10						W
Current	Iout Max	100	50	25	16.7	10	6.7	mA
Ripple	Full load, Max Vout	TBD	TBD	TBD	TBD	50	55	V p-p
Ripple	Full load, Max Iout	TBD	TBD	TBD	TBD	60	55	V p-p
Line Regulation	Vin Min to Vin Max, Max Eout	< 0.01 %						VDC
Load Regulation	No Load to Full Load, Max Eout	< 0.01%						VDC
PROGRAMMING & CONTROLS		ALL TYPES						
Input Impedance	Normal Operating Conditions, All Inputs	10						MΩ
Enable/Disable		0 to +2 Disable, +3 to 10 Enable (Default = Enable)						VDC
Output Voltage	T=+25°C, Initial Value	10.5 ± 0.2%						VDC
Output Impedance	T=+25°C	Buffered, low impedance, 3mA max						-
Stability	Over Full Temperature	5						PPM/°C
ENVIRONMENTAL		ALL TYPES						
Operating	Full Load, Max Eout, Case Temp.	-40 to +65						°C
Coefficient	Over the Specified Temperature	±100						PPM/°C
Thermal Shock	Mil-Std 810, Method 503-4, Proc. II	-40 to +65						°C
Storage	Non-Operating, Case Temp.	-55 to +105						°C
Humidity	All Conditions, Standard Package	0 to 95% non-condensing						-
Altitude	Standard Package, All Conditions	Sea Level through Vacuum						-
Shock	Mil-Std-810, Method 516.5, Proc. IV	20						G's
Vibration	Mil-Std-810, Method 514.5, Fig.14.5C-3	10						G's

Specifications subject to change without notice.



Making High Voltage Easier!®

Higher Service, Higher Performance, Higher Reliability

©2011, UltraVolt Inc. All rights reserved..

Constant Power High Voltage Supply

Epoxy-filled Aluminum Alloy Box,
Anodized Gold

Volume 17.5in³ (286.77 cc)
Weight 1.4lb (0.64kg)

Overall $\pm 0.050"$ (1.27)
Pin to Pin $\pm 0.015"$ (0.38)
Mounting hole location $\pm 0.025"$ (0.64)

Downloadable drawings (complete with mounting & pin information) and 3D models are available online.



Non-RoHS compliant units are available. Please contact the factory for more information.

CP SERIES P I N ASSIGNMENTS AND FUNCTIONS		
P I N	FUNCTION	DESCRIPTION
1	Power Ground	Input Power Return
2	Input Power	Input Power (+24V \pm 10%)
3	Current Monitor	0 to 10V is equal to 0 to full rated output current
4	Enable	High to enable, low to disable, default or open is enabled
5	Signal Ground	Monitor and Programming Return, return the monitor and programming circuitry to this pin
6	Voltage Programming	0 to 10V programs 0 to full rated output voltage
7	Reference Voltage	10.5V precision voltage reference
8	Power Ground	Input Power Return
9	Input Power	Input Power (+24V \pm 10%)
10	N/C	
11	Current Mode Indicator	Open drain indicator, active (pulled low) when unit is in current regulation
12	Voltage Mode Indicator	Open drain indicator, active (pulled low) when unit is in voltage regulation
13	Current Programming	0 to 10V programs 0 to full rated output current
14	Voltage Monitor	0 to 10V is equal to 0 to full rated output voltage
15, 16, 17, & 18	N/C	
19	Power Mode Indicator	Open drain indicator, active (pulled low) when unit is in power regulation
20	Power Monitor	0 to 10V is equal to 0 to full rated power
21	Power Programming	0 to 10V programs 0 to full rated output power

ORDERING INFORMATION		
Type	0 to 1,000 VDC Output	1CP
	0 to 2,000 VDC Output	2CP
	0 to 4,000 VDC Output	4CP
	0 to 6,000 VDC Output	6CP
	0 to 10,000 VDC Output	10CP
	0 to 15,000 VDC Output	15CP
Input	24VDC Nominal	24
Polarity	Positive Output	-P
	Negative Output	-N
Power	10 Watt Output	10

Example: 1CP24-P10

Type — Voltage — Model — Power — Polarity — Input

Popular accessories ordered with this product include CONN-KIT-CP and our full range of high voltage output connectors (see Accessories & Connectors datasheet).