

HCP SERIES

High Voltage Power System



The HCP Series of high-voltage rack mount and bench-top power systems is a fully-featured chassis that enables users to reach higher levels of power, up to 15kW. The broad range of voltage and power levels make the HCP Series suitable for a broad range of industries and applications. Users will also benefit from the high performance of the system, which includes low ripple, excellent regulation, and a low stored energy.

- Voltage ranges from 0 to 3.5kV through 300kV
- Output power from 0 to 12W up to 15kW
- ½19" rack mount, 19" rack mount, or bench-top case

Applications for the HCP Series include photomultipliers, particle accelerators, ion implantation, ion sources, ion pumps, electrostatics, test equipment and more.

- Efficiency at 90%
- Fully programmable by 10-turn potentiometer
- Voltage and current monitors on all models
- Multiple computer interfaces available

PARAMETER	CONDITIONS	MODELS		UNITS				
INPUT		12W to 1200W		2000W to 15kW				
Voltage Range	Full Power	Single phase 115 or 230		Three phase 400 (360-440)				
Frequency	All Modes	47 to 63		Hz				
OUTPUT (3500V-6500V)		3500V		6500V				
Voltage Range	Nominal Input	0 to 3500		0 to 6500				
Power	Nominal Input, Max Eout	12 30 120 300 600 1200	2400 5000 10,000 15,000	12 30 120 300 600 1200 2400 5000 10,000 15,000				
Current	out Entire Output Voltage Range	4 10 40 100 200 400	800 1500 3000 4500	2 5 20 50 100 200 400 750 1500 2300				
Weight		3 4 6 7 11 13	25 40 75 110	3 4 6 7 11 13 25 40 75 110				
OUTPUT (12,500V-20,000V)		12,500V		20,000V				
Voltage Range	Nominal Input	0 to 12,500		0 to 20,000				
Power	Nominal Input, Max Eout	12 30 120 300 600 1200	2400 5000 10,000 15,000	12 30 120 300 600 1200 2400 4000				
Current	out Entire Output Voltage Range	1 2.5 10 25 50 100	200 400 800 1200	0.6 1.5 6 15 30 60 120 200				
Weight		4 5 7 11 16 21	35 40 75 110	4 5 7 11 16 21 35 45				
OUTPUT (35,000V-300,000V)		35,000V		65,000V	100,000V	150,000V	200,000V	300,000V
Voltage Range	Nominal Input	0 to 35,000		0 to 65,000	0 to 100,000	0 to 150,000	0 to 200,000	0 to 300,000
Power	Nominal Input, Max Eout	30 120 300 600 1200 2400 4000	30 120 300 600 1200 2400	100 300 600 1200	75 300 600 1200	120 300 600 1200	75 300 600 1200	75 300 600 1200
Current	out Entire Output Voltage Range	1 4 10 20 40 80 120	0.5 2 5 10 20 40	1 3 6 12	0.5 2 4 8	0.75 1.5 3 6	0.3 1 2 4	
Weight		10 12 17 20 25 45 50	17 21 45 55 70 80	50 55 73 90	110 130 140 160	160 180 200 220	180 200 220 250	
OUTPUT		ALL TYPES						
Ripple	Full Load, Max Eout	100ppm + 50						
Programming Accuracy	0.1% to 100% Output Voltage	0.01%						
Dynamic Load Regulation	½ to Full Load, Max Eout	200						
Line Regulation	Nom. Input, Max Eout, Full Power	10						
Static Load Regulation	No Load to Full Load, Max Eout	100						
Stability	30 Min. warmup, per 8 hr/ per day	150						
PROGRAMMING & CONTROLS		ALL TYPES						
Output Control & Monitoring		Front panel and/or optional Analog 0 to +10 standard & isolated / Digital 12 bit: RS-232, RS-422, Ethernet, USB, LAN						
ENVIRONMENTAL		ALL TYPES						
Operating	Full Load, Max Eout, Case Temp.	0 to +40						
Storage	Non-Operating, Case Temp.	-20 to +60						
Humidity	All Conditions, Standard Package	80% @ 30C; 50% @ 40C						
Shock	Mil-Std-810, Method 516.5, Proc. IV	< 20						
Vibration	Mil-Std-810, Method 514.5, Fig.514.5C-3	TBD						

Specifications subject to change without notice.



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CONSTRUCTION

TBD

TOLERANCE

TBD

NOTES

For 6.5kV/2400W, models will be 2U higher with polarity reversal switch. For 3.5kV/2400W and 65kV (all power levels), models will be 2U higher and 100mm deeper with the polarity reversal switch. For outline drawings of the HCP Series chassis, please contact the factory.

SIZE

	3.5kV	6.5kV	12.5kV	20kV	35kV	65kV	100kV	150kV	200kV	300kV
12W	3U-A	3U-A	3U-A	3U-A						
30W	3U-A	3U-A	3U-A	3U-A	3U-D	3U-D				
75W								10U		29U
100W							5U			
120W	3U-A	3U-A	3U-A	3U-A	3U-D	3U-D			12U-B	
300W	3U-B	3U-B	3U-D	3U-D	3U-D	6U-A	5U	10U	29U	38U-A
600W	3U-C	3U-C	3U-E	3U-E	3U-E	8U	8U	10U	38U-B	38U-B
1.2kW	3U-D	3U-D	3U-F	3U-F	3U-F	9U-A	9U-A	12U-B	38U-B	38U-B
2.4kW	3U-E	3U-F	6U-B	6U-C	6U-C	9U-A				
4kW				6U-C	7U					
5kW	6U-C	6U-C	6U-C							
10kW	9U-B	9U-B	9U-B							
15kW	12U-A	12U-A								

3U-A	½ 19" [222mm] x 3U [133mm] x 13.78" [350mm]	3U-B	½ 19" [222mm] x 3U [133mm] x 17.72" [450mm]	3U-C	19" [443mm] x 3U [133mm] x 13.78" [350mm]
3U-D	19" [443mm] x 3U [133mm] x 17.72" [450mm]	3U-E	19" [443mm] x 3U [133mm] x 21.65" [550mm]	3U-F	19" [443mm] x 3U [133mm] x 25.59" [650mm]
5U	19" [443mm] x 5U [221mm] x 21.65" [550mm]				
6U-A	19" [443mm] x 6U [266mm] x 17.72" [450mm]	6U-B	19" [443mm] x 6U [266mm] x 21.65" [550mm]	6U-C	19" [443mm] x 6U [266mm] x 25.59" [650mm]
7U	19" [443mm] x 7U [310mm] x 25.59" [650mm]				
8U	19" [443mm] x 8U [355mm] x 21.65" [550mm]				
9U-A	19" [443mm] x 9U [399mm] x 21.65" [550mm]	9U-B	19" [443mm] x 9U [399mm] x 25.59" [650mm]		
10U	19" [443mm] x 10U [433mm] x 29.53" [750mm]				
12U-A	19" [443mm] x 12U [535mm] x 25.59" [650mm]	12U-B	19" [443mm] x 12U [535mm] x 29.53" [750mm]		
29U	23.62" [600mm] x 29U [1500mm] x 29.53" [750mm]				
38U-A	23.62" [600mm] x 38U [2000mm] x 23.62" [600mm]	38U-B	23.62" [600mm] x 38U [2000mm] x 31.50" [800mm]		



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1800 Ocean Avenue, Ronkonkoma, NY 11779
Phone: 1-631-471-4444 Fax: 1-631-471-4696 www.ultravolt.com

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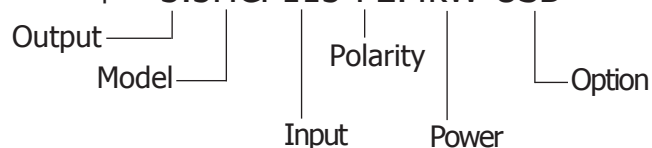
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ORDERING INFORMATION

Output	0 to 3.5kV Output	3.5
	0 to 6.5kV Output	6.5
	0 to 12.5kV Output	12.5
	0 to 20kV Output	20
	0 to 35kV Output	35
	0 to 65kV Output	65
	0 to 100kV Output	100
	0 to 150kV Output	150
	0 to 200kV Output	200
	0 to 300kV Output	300
Model	Series Name	HCP
Input	115V (12W to 1200W models only)	115
	230V (12W to 1200W models only)	230
	400V 3 Phase(2000W to 15kW models only)	400
Polarity	Positive Output	-P
	Negative Output	-N
Power	0 to 12W Output (3.5kV to 20kV models only)	12
	0 to 30W Output (3.5kV to 65kV models only)	30
	0 to 75W Output (150kV & 300kV models only)	75
	0 to 100W Output (100kV models only)	100
	0 to 120W Output (3.5kV to 65kV, 200kV models only)	120
	0 to 300W Output	300
	0 to 600W Output	600
	0 to 1.2kW Output	1.2kW
	0 to 2.4kW Output (3.5kV to 65kV models only)	2.4kW
	0 to 4kW Output (20kV & 30kV models only)	4kW
	0 to 5kW Output (3.5kV to 12.5kV models only)	5kW
	0 to 10kW Output (3.5kV to 12.5kV models only)	10kW
0 to 15kW Output (3.5kV to 12.5kV models only)	15kW	
Options	Rear panel RS232 interface	-RS232
	Rear panel RS422 interface	-RS422
	Rear panel Ethernet interface	-ETH
	Rear panel USB interface	-USB
	Rear panel LAN interface	-LAN
	Fine adjust potentiometer	-FA
	Analog interface 0 to 10VDC control & monitors	-I10
	Floating analog interface 0 to 10VDC control & monitors	-I10I
	Floating HV Retrun ±300	-FL
	Lower ripple	-F
	Higher stability	-10PPM
	Low stored energy	-LSE
	Power limit	-CP
	Rackmount	-RACK

High resolution meters available. Contact the factory for more information.

Example: **3.5HCP115-P2.4kW-USB**



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*The HCP Series is not available in all territories. Please contact an UltraVolt Applications Engineer for details concerning sales in your area.



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1800 Ocean Avenue, Ronkonkoma, NY 11779
Phone: 1-631-471-4444 Fax: 1-631-471-4696 www.ultravolt.com