



# CCPF充电电容电源

性能  
合作  
价值

Power Factor Correction  
Compact Design  
Low Leakage for  
Medical Applications



CCPF电容器充电电源系列利用电子技术的最新创新为脉冲激光应用提供清洁高效的电源。

大功率谐振逆变器可确保在所有工作模式下的可靠性。软开关功率因数电路可确保接近统一的功率因数，并且具有低EMI。CCPF模型可以驱动PF负载和油箱充电电路。

泄漏电流小于300uA，功率因数大于0.99，并且传导发射符合严格的欧洲法规。无需额外的线路滤波器即可满足EN EN55011的发射要求。

CCPF系列的设计时以高度配合高功率脉冲激光器的高压环境为标准。

New Source Technology, LLC (NST) 是位于加利福尼亚的有限责任公司。NST专门从事关键激光组件的设计，制造，销售和/或分销，特别着重于光学谐振器，PFN组件，冷却组件，泵腔，激光棒，闪光灯，电容器充电电源，封装的二极管，光学和激光二极管驱动器。

**NEW SOURCE  
TECHNOLOGY** LLC

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# CCPF Capacitor Charging Power Supplies

Shoebox Style	P <sub>out</sub> Max	V <sub>out</sub> Max	Input Voltage	Input Current	Size (L x W x H)	Wt.
CCPF-500-XX	500J/sec	500V to 4kV	90-264VAC	5.5A @115VAC	9.13" x 6" x 3.7" 23.2 x 15.2 x 9.4 cm	4.5 lbs
CCPF-1500-XX	1500J/sec	500V to 4kV	90-264VAC	15A @115VAC	12.7" x 5.75" x 4.1" 32.3 x 14.6 x 10.4 cm	8 lbs
CCPF-2000-XX	2000J/sec	500V to 4kV	180-264VAC	11A @220VAC	12.7" x 5.75" x 4.1" 32.2 x 14.6 x 10.4 cm	8 lbs
CCPF-3500-XX	4000J/sec	500V to 4kV	180-264VAC	20A @220VAC	14.2" x 5.5" x 6" 36 x 13.4 x 15.2 cm	15 lbs
CCPF-1500-XX-SYS*	1500J/sec	500V to 4KV	180-264VAC	15A@220VAC	12.7" x 5.75" x 4.1" 32.3 x 14.6 x 10.4 cm	8 lbs

\* Includes internal 150mA simmer supply and +24 auxiliary output

Chassis Style	P <sub>out</sub> Max	V <sub>out</sub> Max	Input Voltage	Input Current	Size (L x W x H)	Wt.
CCPF-2000-XX	2000J/sec	500V to 15kV	180-264VAC	11A @220VAC	16.5" x 17.3" x 3.7" 41.9 x 43.9 x 9.4 cm	20 lbs
CCPF-6000-XX	6000J/sec	500V to 4kV	180-264VAC3	6A @220VAC	16.5" x 17.3" x 3.7" 41.9 x 43.9 x 9.4 cm	25 lbs

## INPUT

Voltage: See table above  
 Current: See table above  
 Power Factor: >.98

## OUTPUT

Power: See table above  
 Output Voltage: Configurable from 500V to 15kV.  
 Output Current: 2 \* Poutmax/Voutmax  
 Polarity: Positive or Negative  
 Efficiency: >80% at full output  
 Regulation: 0.5% @100Hz

## REGULATORY

Leakage Current: <300uA  
 Isolation: 4000VAC/5700VDC  
 EMI: EN55011  
 (depending upon Model)

## INTERFACE

Connector: 15 Pin "D" Sub Female  
 Voltage Program: 0-10V for 0-Max Voltage  
 Voltage Monitor: 0-10V for 0-Max Voltage  
 Inhibit/Reset  
 End of Charge Indication  
 Temperature Fault  
 Over-voltage Indication

## ENVIRONMENT

Operating Temp: 0 to 40°C  
 Storage: -20 to 85°C  
 Humidity: 0 to 90% non-condensing  
 Cooling: Forced air



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## CCPF-Interface

Connector Type: 15 pin D-Sub Female

CCPF Series Pin Assignment					
Pin#	500/4pin	500/15pin	1500/2000	3500	6000
1	Inhibit				
2	GND	N/C		HV On	N/C
3	V Program	N/C	Overtemp		
4	N/C	GND	N/C		
5	N/C	VProgram			
6	N/C	N/C	Overvoltage		
7	N/C	V Peak Hold			
8	N/C	VMonitor			
9	N/C	+15V			
10	N/C	N/C			
11	N/C	N/C	+15V		
12	N/C	N/C			+15V
13	N/C	End Of Charge			
14, 15	N/C	GND			

In most cases interface configurations can be modified to conform to older capacitor charger models. Contact customer service if you are trying to replace RCS, CCS, LCS, LS, 5XX, 1XX, 57XX, 78XX or other models up to 8kj/sec.

Note: Non connected (N/C) pins should not be used or grounded.

### INHIBIT/FAULT RESET- (INPUT)

This pin is the basic ON/OFF control pin for the power supply. Grounding this pin enables charging operation if all faults are clear. Applying +15V prevents the inverter from operating. Leaving Pin open will inhibit operation.(opposite option available)

### FAULT WARNING - (OUTPUT)

When either the over-voltage fault pin, or the OVER-TEMP FAULT indicates a fault status, pin is pulled to GND through the collector of an NPN transistor. This transistor is rated at 30V, 100mA. When no fault is present, the output of this pin is connected to +15V through a 4.99K resistor. This fault can be cleared by applying +15V to INHIBIT/FAULT RESET function.

### OVER-TEMP FAULT - (OUTPUT)

Indicates internal high temperature on main heat sink. When thermal switch closes due to excessive internal heat sink temperature this pin is pulled to GND through the collector of an NPN transistor. This transistor is rated at 30V, 100mA. When OVER-TEMP WARNING is tripped, unit will stop charging and will not begin charging again until the internal temperature drops to a safe value. When the unit is operating within safe temperatures, the output of this pin is connected to +15V through a 4.99K resistor. This fault can be cleared by applying +15V to INHIBIT/FAULT RESET function.

### VOLTAGE PROGRAM- (INPUT)

Output is programmed externally with a 0 to +10V signal for 0 to 100% of rated output.

### OVERVOLTAGE STATUS INDICATOR- (OUTPUT)

If the load becomes open circuited, the power supply will detect the fault and shut down instantaneously, protecting itself and other equipment from over-voltages. If this occurs the pin is pulled to GND through the collector of an NPN transistor. This transistor is rated at 30V, 100mA. To restart, a capacitor load must be connected to the output and AC power must be turned OFF and ON again. When an appropriate load is connected to the output, the output of this pin is connected to +15V through a 4.99K resistor. This fault can be cleared by applying +15V to INHIBIT/FAULT RESET function.

### VOU T PEAK HOLD- (OUTPUT)

Monitors output voltage with a peak hold circuit. The time constant of the peak hold circuit is approximately 5 seconds. 0 to +10V for 0 to 100% of rated output voltage.

### VOU T MONITOR- (OUTPUT)

Monitors output voltage. 0 to +10V for 0 to 100% of rated output voltage.

### +15V (OUTPUT)

Maximum output current is 100mA.

### END OF CHARGE STATUS INDICATOR-(OUTPUT)

When the load capacitor reaches the programmed voltage this pin is pulled to GND through the collector of an NPN transistor. This transistor is rated at 30V, 100mA. While the load capacitor is being charged to the programmed voltage, the output of this pin is +15V through a 10kΩ resistor. Pin will oscillate from high to low as the power supply replaces charge that is bled through the feedback network.

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## Outline Drawings

