

# Capacitor Charging Power Supplies

## For Laser Medical Applications 500-6000W



### Capacitor charger power supplies

Capacitor charger power supplies are designed to meet the unique exacting requirements of medical, medical aesthetic, and industrial pulsed energy systems. The modular design of these highly efficient and flexible devices provide lower cost, high reliability, and quick delivery time for a wide variety of customized applications

#### Features

- Ideal for OEM Laser applications
- EN55011 Class A, no external filter as needed
- IEC 60601-1 3rd edition and cTUVus approval.
- High efficiency, 88% typical.
- Fast response and low noise
- Fully isolated input to output, allowing connection directly to an AC line
- Load fault watchdog timer can be modified upon customer request.
- Customized voltage and power output up to 1KV and up to 6000W
- Power factor correction 0.99

#### Application

- Medical (Surgery) lasers
- Laser aesthetic systems
- Flash lamp pumped lasers
- Pulsed UV curing systems
- Sterilization systems
- Other products that deliver bursts of pulsed energy

Standard Series of Capacitor Chargers					
Model	Size	Pout	Vout	Input Voltage	Input Current
LCH500-XXX	A	500W	500V to 1KV	90-264VAC	5.2A @ 115VAC
LCH750-XXX	A	750W	500V to 1KV	90-264VAC	7.8A @ 115VAC
LCH1000-XXX	A	1000W	500V to 1KV	90-264VAC	10.5A @ 115VAC
LCH1250-XXX	A	1250W	500V to 1KV	180-264VAC	6.5A @ 220VAC
LCH1500-XXX	A	1500W	500V to 1KV	180-264VAC	8.2A @ 220VAC
LCH1510-XXX	B	1500W	500V to 1KV	90-264VAC	16.1A @ 115VAC
LCH2000-XXX	B	2000W	500V to 1KV	180-264VAC	11A @ 220VAC
LCH3000-XXX	E	3000W	500V to 1KV	180-264VAC	16.5A @ 220VAC
LCH4000-XXX	E	4000W	500V to 1KV	180-264VAC	20A @ 220VAC
LCH6000-XXX	E	6000W	500V to 1KV	180-264VAC	35A @ 220VAC

XXX- indicates the max. Output voltage  
 For example 050=500V, 075=750V, 100=1000V

### Specifications

Input		
Input voltage	90-264Vac 47-63Hz for up to 1500J/Sec 180-264Vac 47-63Hz for over 2000J/Sec	
Power factor	0.99 typical	
Inrush current	<25A @ 220Vac	
Output		
Output voltage	Configurable from 50Vdc to Vmax	
Output power range	500W to 6KW	
Polarity	Positive	
Efficiency	Typically 88% at maximum load	
Interface		
Connector	Molex 4 pin / 15 pin D-type	
Voltage program	0-10V for 0 to Max. Voltage	
Voltage monitor	0-10V for 0 to Max. Voltage	
Inhibit ON / OFF	0-0.6V or short- output ON 2-15V or open- output OFF	
End of charge status	Active LOW when the output voltage is within 5% of the programmed voltage level	
Over voltage / Temperature	Latch shut down	
Environment		
Operating Temperature	0°C to +50°C / 32°F to 122°F	
Storage	- 20°C to +85°C / -4°F to 185°F	
Humidity	Operating 10-90%RH, Storage 10-95%RH	
Cooling	Internal fan	
Safety	EN60601-1 3rd edition, CE Mark	
MTBF	50,000 hours @ 30°C	
Mechanical		
Size A	AC input connector	2 position Phoenix connectors DMKDS2.5
	Interface Connector	4 pins Molex 70553-003
	HV Output*	Coax Cable RG58A/U 50Ω ended with terminal ring PV14-14R-C.
	AC Earth	10-32 GND stud
Size B, E	AC Input Connector	Terminal Block
	Interface Connector	DType 15pin
	HV Output*	Coax Cable RG58A/U 50Ω ended with terminal ring PV14-14R-C.
	AC Earth	10-32 GND stud

\*instead coax cable we can provide coaxial connector like KING 1707-1 or eqv.

#### A Size Pin Assignment - Molex 70553-003 4Pin

Pin #	Signal Name	Remarks
1	Inhibit (ON/OFF)	Turn the output to ON and OFF
2	Chassis GND	Connected to all output returns and tied to the chassis
3*	Voltage Program	Output voltage programming: 0 to 10V for 0 to 100% off rated output voltage
4	N/C	N/C

\*can be modified upon customer request

#### B, E Size Pin Assignment- D type 15pin

Pin #	Signal Name	Remarks
1	Inhibit (ON/OFF)	Turn the output to ON and OFF
2	Fault Warning	Open collector, 10K pull-up resistor, Active Low
3	Sum Fault	Open collector, 10K pull-up resistor, Active Low when internal fault is present.
4	HVON	Open collector, 10K pull-up resistor, Active Low
5	Voltage Program	Output is programmed externally with a 0 to +10V signal for 0 to 100% of rated output voltage
6	Fault Indication	Open collector, 10K pull-up resistor, Active Low when the output under 80% of its output rate
7	Voltage Monitor - Peak	Monitor output voltage peak, 0 to 10V for 0 - Vout max
8	Voltage Monitor	Monitor output voltage 0 to 10V for 0 - Vout max.
9,11,12	15V Reference	Provide +15V 50mA output
10	Not Connected	N.C
13	End of Charge	Open Collector "LOW" indication output voltage is within 5% of the programmed voltage level
14,15	Chassis GND	Connected to all output returns and tied to chassis

LCH Family - Outline Drawing

Size	Outline Drawing	Dimensions	Wight
A		<p>9.13" x 6" x 3.7"                      23.2x15.2x9.4cm</p>	<p>5.5lb                      2.5kg</p>
B		<p>12.7"x5.75"x4.1"                      32.2x14.6x10.4</p>	<p>6.6lb                      3kg</p>
E		<p>16.5"x17.3"x3.7"                      41.9x43.9x9.4cm</p>	<p>22lb                      10kg</p>