

LCH Series Capacitor Charging Power Supplies

500W to 1,000W

The LCH Series is designed to meet the unique requirements of medical, aesthetic and industrial pulsed energy systems. The modular design of these highly efficient and flexible devices leads to lower cost, high reliability and shorter lead times.

For years capacitor chargers have relied on resonant inverter topology to deliver constant current to the load. The design of the inverter section requires carefully matched precision components that add to the complexity and testing of the power supply.

The LCH capacitor chargers use a simpler Quasi Constant Power (QCP) design that drastically reduces parts count and eliminates the need for costly matched components. This results in much better long term reliability and smaller size at a lower cost.

For more information on the QCP design <https://www.advicepower.com/choosing-capacitor-charger>

Features:

- Standard output voltages to 800V
- Output power from 500W to 1,000W
- Universal input voltage
- Power Factor Correction 0.99
- High efficiency, typically 88%
- Robust protection against faults
- MTBF 50,000 hours
- Advice offers a complete line of capacitor chargers from 500W to 9,000W

Applications:

- Medical laser systems
- Intense pulsed light "IPL" devices
- Flash lamp pumped lasers
- UV curing systems
- Sterilization systems
- Systems that require pulsed energy



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Input	
Input voltage	90–264Vac 47-63Hz for up to 1,000J/Sec
Power factor	0.99 typical @110Vac for all models, 0.98@220Vac for 750W, 1,000W, 0.96 for 500W
Inrush Current	<25A @220Vac
Leakage Current	<300µA
Output	
Output Voltage	Available maximum output voltages from 400V to 800V
Output Power Range	500W and 1,000W
Polarity	Positive. Negative return is internally shorted to Protective Ground
Efficiency	Typically 88% (full Load)
Fault Protection	Over Temp, Over Voltage Open Circuit, Load Short, Over Current
Environmental	
Operating Temperature	0°C to +50°C
Storage	- 20°C to +85°C
Humidity (Operating)	10 to 90%RH
Humidity (Storage)	10 to 95%RH
Cooling	Internal Fans
Safety	EN60601-1 3rd Edition CE Marked
MTBF	50,000 Hours @30°C
Mechanical	
AC Input Connector	2 position Phoenix connector DMKDS2.5
Interface Connector	4 pins Molex 70553-003
HV Output	Coax Cable RG58A/U 50Ω See Drawing
AC Earth	10-32 GND Stud
Dimensions	234 x 153 x 95mm 9.21" x 6.0" x 3.74"
Weight	2.5kg, 5.5lb

Part #	Output	Input	Input Current
LCH500-XXX	500W	90-264VAC	5.2A @ 115VAC
LCH750-XXX	750W		7.8A @ 115VAC
LCH1000-XXX	1000W		10.5A @ 115VAC

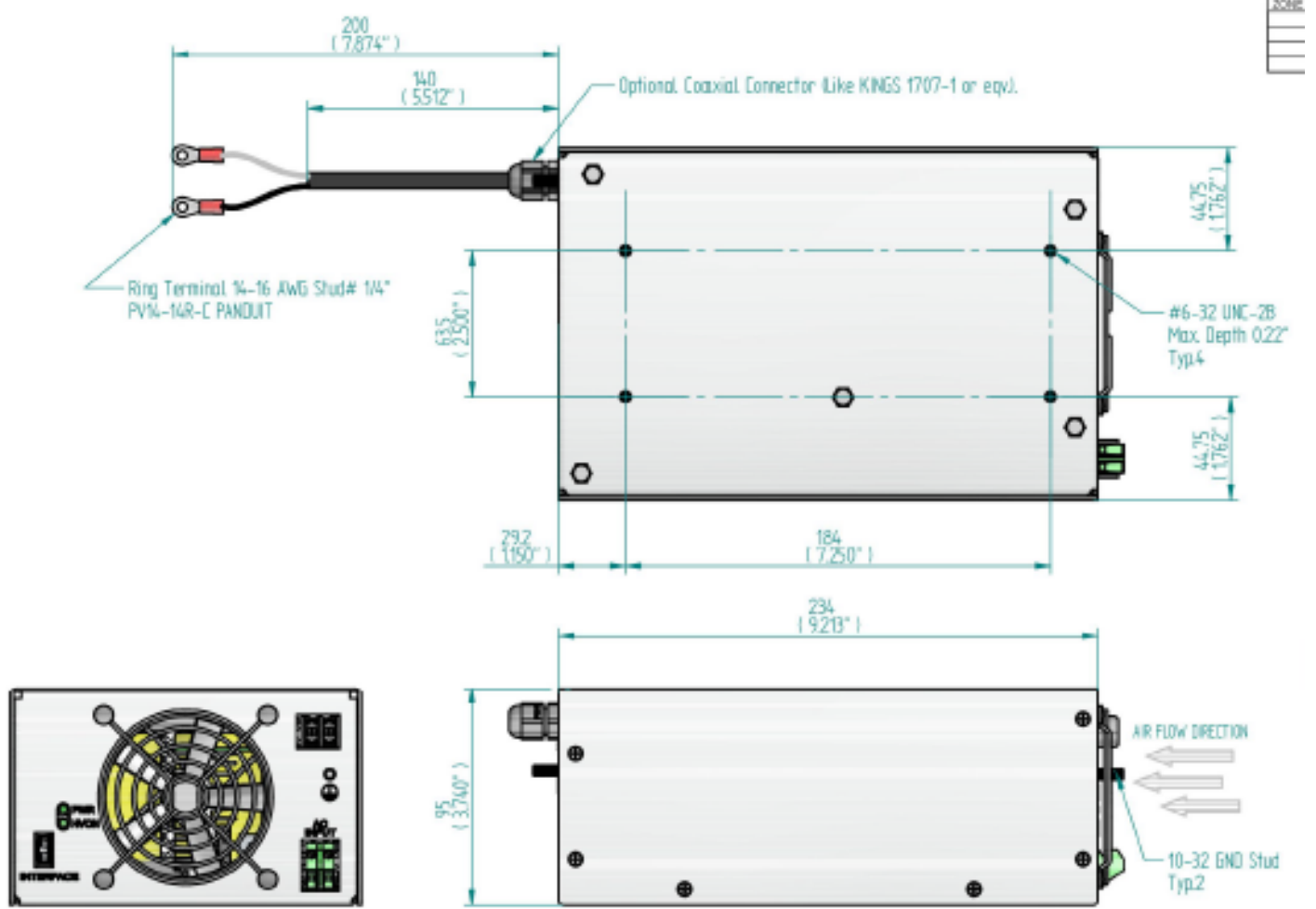
XXX indicates the maximum output voltage/10 Example: 050=500V, 075=750V, Custom output voltages upon request 80-800V

Pin #	Signal Name	Description
1	Inhibit 1	Turn High Voltage ON/OFF
2	Chassis GND	Connected to all output returns
3	V program ²	0 to 10V = 0 to V max
4	N/C	Pulled Low when the unit is enabled and there is no internal fault, otherwise at logic High.

Note:

1. Default: Pull down to ground (internal 10 KOhm pull-up to 15V) enables HV. High enable available.
2. Standard program voltage can be modified. Example (0 to 5V = 0 to Vmax.)

Outline Drawing (A size Chassis)



Quasi-Constant Power (QCP)

The LCH series capacitor chargers utilize Quasi-Constant Power Topology to deliver more power to the load while reducing input current and stress on the power supply. This results in more power in a smaller package and increased reliability at a reduced cost.

