

Advanced Energy Introduces First Fully Integrated, Intelligent Configurable Capacitor Charger for Surgical and Aesthetic Laser Applications

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Medically approved power supply delivers high voltage capacitor charging and multiple output low voltage AC-DC power from a single unit

DENVER--(BUSINESS WIRE)-- Advanced Energy Industries, Inc. (Nasdaq: AEIS) – a global leader in highly engineered, precision power conversion, measurement and control solutions – today introduced the Excelsys™ FC1500, the industry’s first fully integrated capacitor charger and multiple output power supply. The FC1500 delivers constant charge power and eliminates the need for multiple power supplies in medical laser and Intense Pulsed Light (IPL) therapy equipment.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20221115005755/en/>



Medically approved power supply delivers high voltage capacitor charging and multiple output low voltage AC-DC power from a single unit. (Photo: Business Wire)

Conventional laser and IPL systems rely on capacitors that are charged to high voltages and then

discharged to generate high-current pulses. By delivering 1500 W constant power over all charge voltages from 200 V to 1000 V, the FC1500 enables faster charging of capacitors when used at lower voltages in mixed technology systems. This helps reduce treatment times. Conventional systems also require multiple power supplies to provide high voltage inputs for capacitor charging and low voltage AC-DC conversion for system electronics such as touch panels, pumps, cooling elements and other treatments. A fully integrated capacitor charging and AC-DC power supply, the FC1500 addresses these power demands with a single unit.

“By combining a capacitor charger, AC-DC power and intelligent control, the FC1500 offers new ways for medical OEMs to design their laser and IPL systems,” said Conor Duffy, vice president of marketing, medical power products at Advanced Energy. “This unique solution provides many benefits including a 30% reduction in size, reduced weight, improved reliability, lower EMI and simplified safety certification and compliance. In addition, high levels of configurability ensure optimum solutions for any given design.”

For capacitor charging, the FC1500 can operate with large capacitance and low capacitance loads, and deliver up to 1500 W constant power (1500J/sec) with programmable charge voltages from 0 to 1000 VDC. Pulse-to-pulse stability with a repeatability of +/-0.2% is achieved through adaptive control of every pulse, while a programmable power limit enables the system to maximize the current drawn for the wall socket. A current sense signal enhances reliability by allowing the stress on the system capacitors to be accurately calculated.

For system power, the FC1500 offers a maximum power rating of 800 W and up to 10 isolated DC outputs. Field-configurable outputs provide a ‘plug-and-play’ approach to address specific application requirements. The option to connect outputs in series and parallel allows designers to support higher voltages and currents.

The FC1500 incorporates intelligent analog and digital control via the PMBus with ‘set and forget’ features and storage capabilities that enable faster time-to-market for medical OEMs. Compliant with IEC60601-1 (3rd edition) and IEC60601-1-2 (4th edition), the internal fan-cooled power supply is rated for Level 4 input surge protection, safety approved to an altitude of 3000 m and has an MTBF of over 900,000 hours.

For detailed product information and technical specifications, visit [our website](#).

About Advanced Energy

Advanced Energy Industries, Inc. (Nasdaq: AEIS) is a global leader in the design and manufacture of highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes. Advanced Energy’s power solutions enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial production, medical and life sciences, data center computing, networking and telecommunications. With engineering know-how and responsive service and support for customers around the globe, the company builds collaborative partnerships to meet technology advances, propels growth of its customers and innovates the future of power. Advanced Energy has devoted four decades to perfecting power. It is headquartered in Denver, Colorado, USA.

For more information, visit www.advancedenergy.com.

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