

Powerbox's high peak load power supply for medical laser applications named as finalist in prestigious Electronics Industry Awards

Press Release
September 28, 2021

Powerbox, one of Europe's largest power supply companies and a leading force for four decades in optimizing power solutions for demanding applications, has announced that its new SMM3000A80024C high peak load power supply for medical laser applications has been selected by the Electronics Industry Awards voting panel as a finalist in the highly contested Power Product of the Year category.

Laser equipment is widely used in medical applications and from cosmetic through to general surgery they all require power supplies able to deliver very high peak energy levels to the laser or discharge tubes. However, high peak energy and the repetition thereof generates electromagnetic radiation and line disturbance. This is a challenge for power designers who need power solutions that are able to deliver the required amount of power without generating line disturbances, whilst also guaranteeing patient and operator safety when high voltages and energy levels are involved during the process.

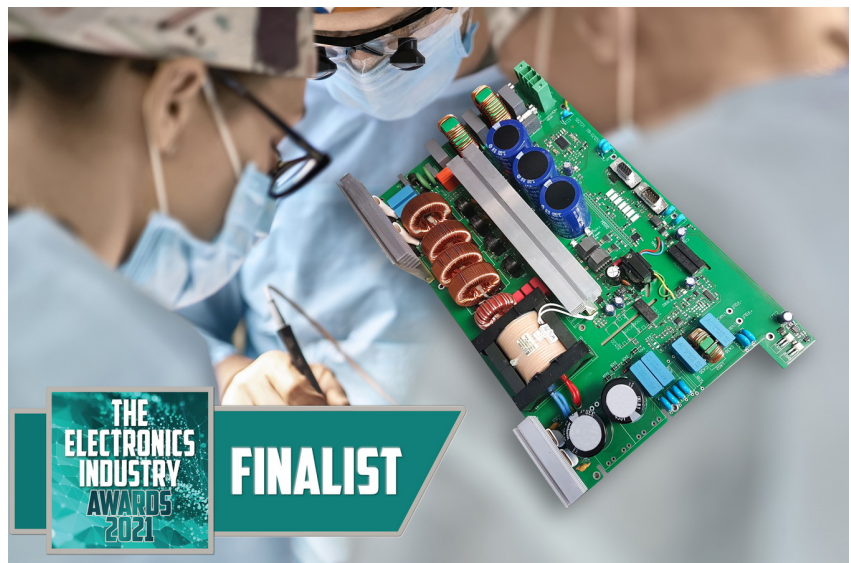
CO₂ (carbon dioxide) lasers or Erbium YAG are commonly used in medical applications, though the energy released during the pulse related to the specific task can vary by large amounts. There are different types of pulsing for CO₂ lasers. In the cosmetic word, there is a newer technology called UltraPulse (a very short pulse duration with high pulse power and very high influence), that is even faster than SuperPulse (medium pulse duration with medium pulse power).

"Powerbox's SMM3000A80024C high peak load power supply for medical laser applications being chosen as a finalist in the Power Product of the Year category is testimony not only to its high level of innovation but particularly, it is a measure of the forward thinking of Powerbox in developing and driving power systems to new levels of safety and reliability. Said Patrick Le Fèvre, Powerbox (PRBX) Chief Marketing and Communication officer.

The power supply provides a level of protection, primary to secondary main output of 2xMOOP, and 2xMOPP to auxiliary output. To accommodate different capacitor banks and applications, the output voltage can be adjusted from zero to 800VDC (600VDC nominal) with an output current of 5.5A at nominal. An automatic current controller guarantees that the power envelope is always within safe limits, reducing capacitor aging and overstressing of components, thus contributing to a longer lifetime. The SMM3000A80024C has a built-in microprocessor constantly monitoring the charging status, reporting end of charge and discharge level, as well as all protection warnings due to abnormal operation such as over-temperature, over-voltage and current.

To reduce line disturbances the SMM3000A80024C includes a very high efficiency power factor corrector (PFC), soft-start circuitry, filtering and is housed in a six-sided shielded case. To limit audible noise to a minimum, the SMM3000A80024C's fans are thermo-controlled, regulating their speed to the minimum required for normal, safe operation.

The SMM3000A80024C also delivers an auxiliary output voltage of 24VDC, reducing the need for an additional power supply to power laser controller and interfaces. For additional power, the SMM3000A80024C can be connected in parallel.

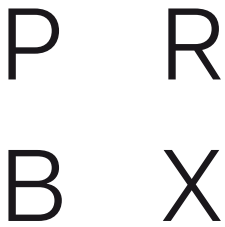


Picture: Picture source: PRBX / mydegage / Shutterstock
PRBX SMM3000A80024C high peak load power supply for medical laser applications

Related links:

PRBX SMM3000A80024C

<https://www.prbx.com/product/smm3000a80024-c/>



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About Powerbox

Founded in 1974, with headquarters in Sweden and operations in 15 countries across four continents, Powerbox serves customers all around the globe. The company focuses on four major markets - industrial, medical, transportation/railway and defense - for which it designs and markets premium quality power conversion systems for demanding applications. Powerbox's mission is to use its expertise to increase customers' competitiveness by meeting all of their power needs. Every aspect of the company's business is focused on that goal, from the design of advanced components that go into products, through to high levels of customer service. Powerbox is recognized for technical innovations that reduce energy consumption and its ability to manage full product lifecycles while minimizing environmental impact. Powerbox is a Cosel Group Company.

About The Electronics Industry Awards

The Electronics Industry Awards is a premier event that recognizes outstanding people, products and business practices from across the electronics sector. The Awards are organized by Datateam Business Media, in association with CIE Magazine. The Electronics Industry Awards ceremony will take place on Thursday 21 October 2021 at The Tower Hotel in London.

<https://electronicsindustryawards.co.uk/>

For more information

Visit www.prbx.com

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