

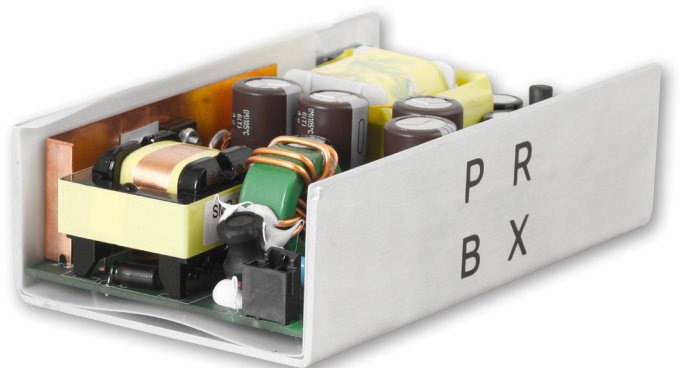
P R  
B X

POWERBOX  
OFM250AD24/24



## Supporting surgical LED luminaires in operating theatres

Electromagnetic compatibility (EMC) is a very important factor when powering virtually any equipment, but it is even more important when supplying power for medical applications operated in professional healthcare environments such as a surgery theater. Low EMI is very important when the power supply coexists with low power sensors in order to eliminate the risk of artifacts in the monitoring feedback loop. But also and importantly, to reduce the level of audible noise, thus heralding the exclusion of fan-cooling to enhance convection and conduction cooling. To provide medical equipment designers with a power solution to meet their demands, Powerbox has developed new technologies to reduce electromagnetic interference (EMI) to an absolute minimum level and to guarantee the highest performance levels in such demanding applications. This is the basis of Powerbox's OFM series.



Requiring both low EMI and audible noise, surgery and examination rooms' lighting equipment must also comply with international safety regulations such as harmless low voltage distribution. Depending on the region and the system adopted by the hospital, the internal low voltage network could be 24 VAC or 24 VDC. In many older installations, 24 VAC was very common to power low voltage halogen lighting, which requires some attention when modernizing the lighting equipment and implementing LED technology that is not instantly compatible with AC supplies.

Taking into consideration the different voltages in different regions and installations, medical lighting manufacturers require a power supply that embraces both AC and DC voltages and is able to deliver a stable 24 VDC with high isolation, meeting the 2xMOPP as specified in the IEC 60601-1 3rd edition, making it possible for them to supply equipment that is compliant with any hospital low voltage network.

To provide equipment manufacturers with the most optimized power solution for modern lighting in surgeries and examination rooms, Powerbox designed the high efficiency OFM250AD24/24. Packaged in a 3.2x5.6x1.6 inches (81x142x41mm) U type chassis, the OFM250AD24/24 is designed for convection cooling and can be powered with either 24 VAC or 24 VDC using the same connector. To ensure the lowest level of harmonic current and high power factor index, the unit includes a discrete power factor corrector (PFC).

Based on Powerbox's flyback topology and 'Always ON' platform, the OFM250AD24/24 delivers high performance levels in any operating condition, including in the case of overload.

#### Features

- Providing 2 MOPP isolation, primary-secondary
- Unique Over temperature protection
- Discrete PFC solution
- UL recognized, IEC 60601-1 :2005+A1:2012.
- EMC according to IEC 60601-1-2:2014

#### Input

- 24 VAC,  $\pm 10\%$
- 24 VDC,  $\pm 15\%$
- Max 250 VA input power

#### Output

- 24 VDC
- 8.33 A
- 200 W

#### Environmental

- +10° to +50° convection cooling

#### About the Powerbox's flyback topology and 'Always ON'

Although the flyback platform originates from the 1960s, continuous research and platform evolution has resulted in competitive and technically advanced solutions being delivered quickly and efficiently to customers worldwide. The Powerbox flyback topology and 'Always ON' platform has successfully been implemented in multiple PRBX designs throughout the years, and combined with a low component count and best practice design has contributed to delivering high reliability power solutions to demanding applications requiring peak loads and always ON operation even in the case of overloads.

#### 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.

#### For more information

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