

Low leakage power supplies resuscitating medical technology

Press Release
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Powerbox, one of Europe's largest power supply companies, and for more than four decades a leading force in optimizing power solutions for demanding applications, introduces new products in the medical Medline family. The OFM30 30W extra low leakage power supplies are best in class EMC for medical systems in CF class, and its leading OFM225 225W series suitable for BF class expands with additional voltages.

Designed to meet and exceed new safety standards for medical systems and equipment; and based upon an innovative building practice, reducing leakage current below 10 µA and EMC, the new Powerbox OFM30 series delivers 30W in continuous operation (peak up to 45W) features Class II double isolation and is UL/IEC60601-1 medically approved.

It is like the Holy Grail, trying to achieve low leakage current with low EMC, based on a very innovative design. The OFM30 combines both of them, reaching a leakage current below 10 µA and an EMC Class B average margin of 6dB.

Combining low power loss switching topology and selected components, the OFM30 series has an efficiency up to 88% whilst, fulfilling the Green Mode requirements of IEC60950-1, CEC Level V, EISA and ErP, at zero load. The OFM30 power consumption is below 0.3W thus assuring the family of its green credentials.

The OFM30 output power is rated at 30W continuously, at 50°C and free convection cooling; though it can respond to peak demands for extra power (e.g. pump systems), allowing up to 45W during 10 seconds, with repetition every 100 seconds. In case of over temperature, the OFM30 integrates a unique protection system operating with linearity, reducing the output power down to 50%, securing the payload to proceed to all appropriated processes to avoid treatment disruption.

Addressing applications demands high reliability; the OFM30 exploits the benefits of a switching topology based on a front edge fly-back, optimized to reduce components count down to 65. This lower number of components contributes to higher reliability, resulting in an MTBF over 500,000 hours and a minimum lifetime expectation of 80,000 hours.

The OFM30 series includes three models: OFM305025 delivering 12V / 2.5A (peak 3.75A), the OFM305026 delivering 15V / 2.0A (3A peak) and the OFM305028 delivering 24V / 1.25A (peak 1.875A). In case of a need for redundancy or extra power, all products can be connected in parallel without any additional external components. The product is available in an open frame format of 75.5 x 37.3 x 23 mm (3 x 1.5 x 0.9 inch).

The OFM30 series is safety approved according to IEC 60601-1 ed.3, with CB's by ETL Intertek Semco, and complies with other related IEC 61000 applicable standards and environmental norms RoHS, REACH and WEEE.

"Safety in medical applications is a must, it is particularly important when designing power supplies for Cardiac Floating (CF) applications, when electrically connected to the heart of the Patient, to guarantee the highest level of security" says Martin Fredmark, VP Product Management. "Reducing the leakage current is always an important step forward and we are permanently working on new technologies to improve patient safety."

In addition to the new Medline OFM30, Powerbox expands its market leading Medline OFM225 with two additional voltages, the OFM2255225 delivering 12V / 11.25A (peak 21.66A) and the OFM2255226 delivering 15V / 6.66A (19A).

With a high degree of focus on reliability, using 'One Step Conversion' topology, which integrates a PFC delivering high performance at only 50% load, the OFM225 has the ability to safely operate in low airflow conditions, delivering 225W at 40°C ambient in natural convection and up to 325W continuous at 12 CFM forced air cooling. The unit can also be operated in parallel mode and includes advanced protection for business continuation.

Intended for type BF applications the unit can withstand 4000VAC from input to both output and ground, has a leakage current of <100µA, and meets class B EMC requirements. Amongst many medical applications, the OFM225 performance is ideally suited to powered respiratory and anaesthesia dialysis equipment.

Medline 225 OFM225 series meets, amongst others, safety standards IEC 60601-1 and 60950-1, EMC IEC60601-1-2, IEC61204-3, and EN55011 Class B, including corresponding North American versions. It also meets the environmental norms RoHS, REACH and WEEE.

Founded in 1974, with headquarters in Sweden and local operations in 15 countries on four continents, Powerbox serves customers around the globe. We focus on four major markets - industrial, medical, railway and transportation, and defense - for which the company designs and market premium quality power conversion systems for demanding applications. Our mission is to use our expertise to increase our customers' competitiveness by meeting their entire power needs. Every aspect of our business is focused on that goal, from the design of the advanced components that go into in our products to our customer service. Powerbox is recognized for technical innovations that reduce energy consumption and the company's ability to manage the full product lifecycle, minimizing environmental impacts.

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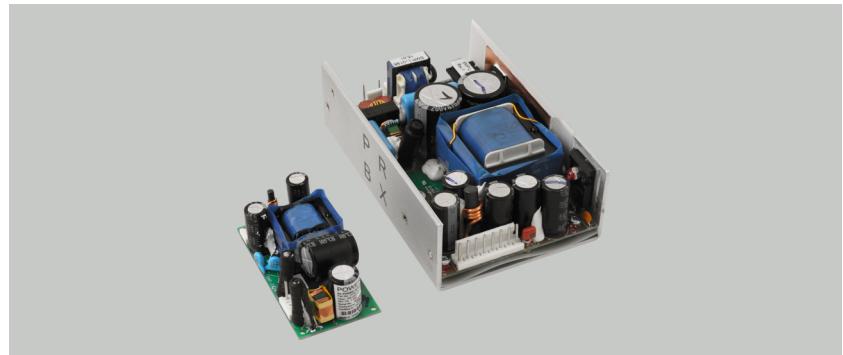
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Medline 30 OFM30 Series

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