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POWERBOX  
OFI600A-12

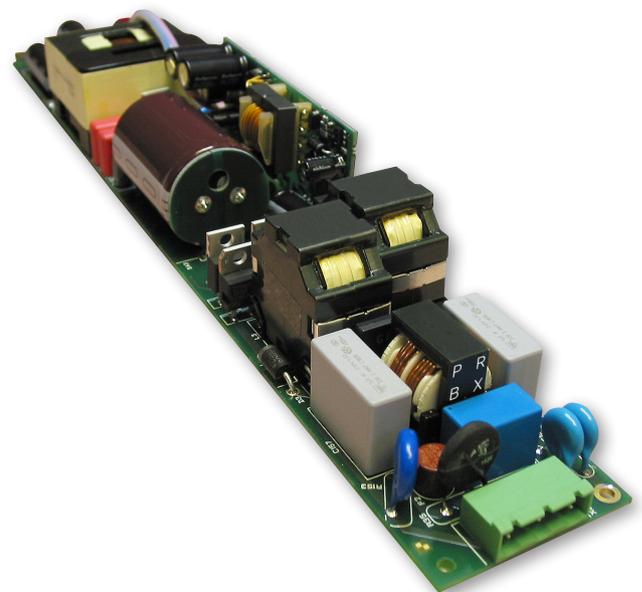


## Powering immersed electronics with safety

The concept of immersed data-centers emerged in 2005, and following a number of successful trials and experiments it has now become a market reality. The technology requires special caution when selecting switching power components, although manufacturing practices are very similar to those required by the marine industry in terms of robustness and the ability to endure operation in high levels of humidity or salty environments.

With the increased concern for the environment and energy optimization, immersed data centers are becoming widespread and a number of industrial embedded applications have adopted immersed computers requiring compliant power supplies designed, tested and certified to work safely when immersed in a cooling fluid.

Within the power industry it is quite common to use transformers immersed in oil for isolation and



homogeneous heat distribution purposes, but usually there are no electronics circuits such as computers in the same container. Despite that, lots of quality data collected from more than 100 years of installations has been analyzed by datacenter designers when considering immersing routers in different types of fluids.

Calling on years of experience and expertise in developing power supplies for the marine industry, Powerbox designers have transposed best practice for ruggedized design to immersed electronics. Beside requiring a new mechanical approach to facilitate fluid circulation through and around the power supply, designers had to investigate every single component for compatibility with cooling fluids to guarantee they will maintain their mechanical and electrical performances when immersed, e.g. risk of corrosion. The development process also included a thorough risk analysis to verify that when immersed the final product operates with the highest level of safety for users and equipment.

The OFI600A-12 is the result of two years of research and development and has been validated by Powerbox R&D and Quality teams as a certified platform for a new generation of power supplies for immersed applications.

### **Features**

- High reliability
- Efficiency up to 93%
- Compact size
- Remote On/Off
- Remote reset
- Conformal coating
- Custom features by microcontroller

### **Input**

- 187-265VAC

### **Output**

- 12VDC/600W
- 5VDC/10W

### **Environmental**

- 0-60°C, immersed in liquid

### **General**

- Fulfil safety and EMC regulatory.
- Over current protection
- Over voltage protection

### **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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