

## Powerbox's COTS/MOTS 1200W power supplies ideal for defense and harsh environments

Press Release  
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**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 the release of its new ruggedized 1200W AC/DC power supply for ground based defense applications and harsh industrial environments. In metal chassis format with a baseplate for conduction cooling, the OFD1200A series can be used with a baseplate operating temperature range of -40 up to +95 degrees C. For extremely demanding applications the OFD1200A features a conformal coating and is mechanically ruggedized according to the MIL-STD810H standard. The product is as electrically well ruggedized to withstand harsh transients and meet demanding EMC performance levels as required with most common defense and the more demanding industrial applications, according to the MIL-STD- 461 CE-102 and also meeting the MIL-STD-1399-300. The power supply operates with a wide universal input range from 85 to 305VAC with power factor correction (PFC). Covering a large range of applications, its output voltage and current can be adjusted from near zero to the maximum allowed for each model. Designed for high availability, short time-to-market and to meet commercial and military off-the-shelf (COTS/MOTS) business models, the OFD1200A is available in four output voltages of 12V, 28V, 48V and 65V and can be connected in parallel up to nine units delivering an impressive total power level of up to 9,720W.**

A number of defense applications require power supplies to operate with limited or no ventilation cooling. In this respect, those operating in harsh environments where electronic equipment is installed in a sealed box, radio communication systems subject to adverse weather conditions, outdoor surveillance and access control, and indoor equipment with very strict audible noise restrictions. In addition to environmental requirements, reliability and cost of maintenance are motivating systems designers not to use fans and blowers, privileging conduction cooling.

Conduction cooling requires very specific building practices and the PRBX OFD1200A has been designed to guarantee optimal heat transfer from the dissipating components to the baseplate, delivering a high level of performance within an operating temperature of -40 to +95 degrees centigrade at baseplate. Depending on the assembly method and the overall cooling conditions, a derating may apply as specified in the technical documentation.

To cover a large range of applications, the OFD1200A operates with a wide universal input range from 85 to 305VAC (Nominal 100 to 277VAC). The unit includes a PFC with a coefficient of 0.98/0.95 (110VAC/230VAC).

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The OFD1200A is available in four versions of single output DC voltage, 12V/84A ; 28V/43A ; 48V/25A and 65V/18.5A. Using a high efficiency topology, typical efficiency for the 48V output unit at 230VAC input is an excellent 92%.

From defense to demanding industrial, the addressable range of applications requiring ruggedized power solutions is extremely large. Accordingly, Powerbox's OFD1200A series has been designed to meet higher levels of shock and vibration, it has harsh transient protection and additional EMC filtering such as specified by MIL-STD 461E CE102, MIL-STD 1399-300A and MIL-STD 810H.

Defense applications such as battery chargers require the power supply to deliver constant current, and this must be easily adjustable. Often such equipments are operated in environments requiring the electronics to be enclosed and protected from hazards. This necessitates the power supply to offer an external control to adjust the output voltage and/or current from the maximum allowed to near zero.

To make it possible for customers to precisely adjust the voltage and current to suit their application the OFD1200A offers two analog inputs, VTRM and ITRM. Using those functions, the output voltage and current can be adjusted from near zero up to the maximum specified per model. For example, the 28V output can be adjusted from near zero volts up to 33.6V, and the output current from near zero amps up to 43A. The output voltage can also be adjusted using the provided onboard potentiometer.

The extended trimming and control function simplifies the utilization of the power supply in constant voltage (CV) or constant current (CC) mode, without adding external circuitry.

For applications requiring redundancy or higher power it is possible to connect up to nine units in parallel, delivering an impressive total power level of up to 9,720W in conduction cooling mode. To maintain the highest level of efficiency when operated in parallel or in redundancy-mode, optional active ORing circuitry deploying high performance FET technology (Option-O) is available on the OFD1200A28 and OFD1200A48.

For safety, the OFD1200A has an IN/OUT isolation of 3,000VAC and IN/FG of 2,000VAC. Output isolation to FG is 500VAC. The power supply includes over current protection with auto recovery, over voltage and over temperature protection.

The OFD1200A board includes easy access to auxiliary functions via on board connectors, namely: Remote Control, Output Voltage Sensing, Power Good, VTRM, ITRM.

The OFD1200A has passed shock and vibration testing as specified in MIL-STD-810H. In that respect the products have been tested to levels far above normal operating conditions and are designed to sustain high, 20G level shocks.

In its enclosed format, the OFD1200A measures 142 x 40 x 340mm (5.59 x 1.57 x 13.38 inches) and weighs 1.8kg max.

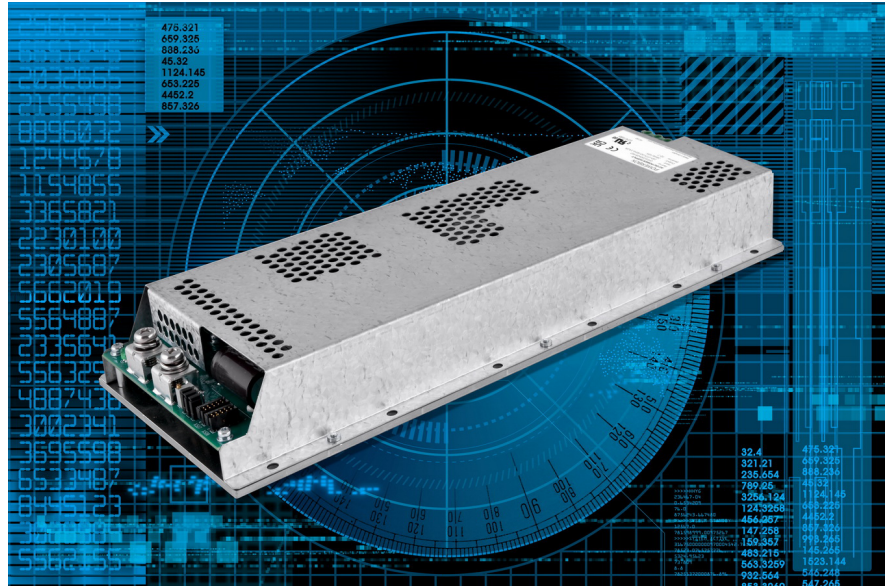
Benefiting from a design optimized for conduction cooling, the OFD1200A is suitable for applications requiring a silent power solution such as in a control room. Equally, it is suitable for industrial applications where forced air ventilation is not possible due to environmental constraints. Attached to a chassis or cold plate, the OFD1200A can deliver impressive power levels with a very high level of reliability.

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The OFD1200A is certified in accordance with UL62368-1 3rd edition, cUL (equivalent to CAN/CSA-C22.2 No.62368-1).

The OFD1200A series has a full three-year warranty and conforms to the European RoHS, REACH and Low Voltage Directives. The product carries the CE, UKCA and cURus markings.



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Related links:

<https://www.prbx.com/product/ofd1200a/>

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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.*

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