

Powerbox launches ECDD DC/DC series for defense and harsh environments

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In modern defense and mobile platforms, system reliability is often determined by how well critical electronics perform under unstable power conditions. Ensuring continuous operation during electrical disturbances is essential for maintaining communication, navigation, and mission-critical functionality in the field.

Voltage drops during engine start, and load changes are a common cause of system reboot and instability in tactical and mobile platforms. Powerbox (PRBX), a Cosel Group company, addresses this challenge with the launch of its ECDD DC/DC power converter series, developed as an extension of its rugged defense power portfolio.

The ECDD series includes 250W (ECD250D) and 350W (ECD350D) models for 12V and 28V systems. Operating down to 11 VDC, the converters maintain continuous operation during voltage dips, preventing system resets and ensuring stable performance in critical applications. The units are designed to support MIL-STD-1275 D/E/F and MIL-STD-461G and are designed to meet CE and UKCA requirements.

Compliance with MIL-STD-1275 ensures reliable operation under vehicle power conditions, including voltage transients and cranking events, while MIL-STD-461G addresses electromagnetic compatibility in complex electronic environments. Together, these standards enable stable and predictable performance in electrically demanding applications.

Fully sealed in IP65-rated enclosures and utilizing baseplate conduction cooling, the ECDD series enables reliable, fanless operation in sealed environments where airflow is not feasible. The design eliminates moving parts, reducing both acoustic noise and failure risk, while delivering low-noise power.

The units are qualified to MIL-STD-810H for shock and vibration and provide low-noise power for sensitive electronics such as RF communication systems, mission displays, and surveillance equipment.

“The ECDD series is engineered to maintain stable output during voltage instability,” says Tetsuya Nagai, Vice President R&D and Products at Powerbox. “Its robust mechanical design makes it suitable for operation in harsh environments.”

While developed for defense applications, the ECDD platform is also well suited for emergency and service vehicles, mobile industrial equipment, autonomous systems, and sealed outdoor electronics where reliability under fluctuating power conditions is critical. The ECDD series is available for evaluation, with application-specific support.



POWERBOX's ECDD DC/DC converters are designed for reliable, fanless operation in defense and harsh environments

Related links:

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

About Powerbox

Powerbox (PRBX), a COSEL Group company, is a leading provider of advanced power conversion solutions for demanding applications. Founded in 1974 and headquartered in Sweden and operations in 15 countries across four continents, the company combines over 50 years of experience with deep engineering expertise in high reliability AC/DC and DC/DC systems.

Powerbox supports customers across defense, medical, industrial, and transportation sectors where performance, robustness, and long lifecycle support are critical. By combining standard platforms with tailored solutions, Powerbox helps engineers solve complex power challenges in harsh and mission-critical environments.

For more information

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