

Low profile – DC/DC converters with high power density to power IoT in automotive applications with ultra-high efficiency

**Press Release
May 31, 2016**

Powerbox, one of Europe's largest power supply companies and a leading force in optimizing power solutions for demanding applications, announces the launch of a new series of power supplies for automotive applications and on-board Internet of Things (IoT). Based on a highly integrated components platform and low-profile planar magnetics the new series ENA100 (100W) and ENA200 (200W) are packaged in a plastic enclosure, which is IP21 and the boards are conformal coated to withstand high humidity, complying with the challenging environments found in the automotive industry. To guarantee the highest levels of efficiency and reliability, the ENA100 and ENA 200 power stage uses specific components selected for robustness and high-reliability data and operated within a safe-band area. The series comes with galvanic isolation of 500VDC and built-in protections and filtering, making products ready to use without additional components.

The automotive industry comprises of a large segment of varying applications, requiring flexible power solutions which deliver stable voltages, immune from line disturbances, to a growing number of connected devices and Internet of Things applications. From geo localisation systems installed in a fleet of vehicles, to latest generation of busses equipped with video-on-demand per seat and high speed internet connections, the automotive industry is requiring new generations of power supply technology, simple to install, operate and in a standardised packaging.

As members of the Powerbox Automotive Line, the ENA100 and ENA200 units have been designed in response to the automotive electronics equipment manufacturer's demand for standardised DC/DC converters built-in low profile packaging, lower than 20 mm (0.8 "), isolated cases with an IP-class of 21, galvanic isolation, low conducted and radiated EMI and sustaining 2kV surges along with a requirement for simple installation and the ability to upgrade when more power is required, if new equipment is added.

"Emergency vehicles and new long-range bus fleets are requiring very flexible and reliable power sources to supply local voltages to demanding applications such as radio localisation and on-board video systems" said Patrick Le Fevre, Powerbox Marketing Director, "The new ENA100 and ENA200 series have been designed with ease of use and reliability in mind, making these class leading products."

Packaged in a 116 x 88 x 18 mm (4.57 x 3.46 x 0.70 inches) polycarbonate housing, the ENA100 and ENA200 baseplate includes four mounting holes for

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mechanical attachment to a vehicle chassis or assembly plate. The low weight, less than 500 grams, contributes to excellent performances in vibration testing (5-50 Hz, acceleration $\pm 7,35\text{m/s}^2$).

Input and outputs of the products are equipped with 6.3 mm industry standard connectors, along with an integrated LED, indicating the state of the output voltage.

The ENA100 and ENA200 series cover a large range of applications requirements from 10VDC input up to 120 VDC (10V to 18V – 18V to 32V – 36V to 75V and 55V to 120V). Four output voltages, 12.5V, 14.5V, 24.5V and 28V will be available and, depending on the output voltage, in a range of output currents of 8A to 16A. The ENA100 and ENA200 have industry leading efficiencies of up to 96%.

Ready to use products, the ENA100 and ENA200 series incorporate efficient input filtering, short circuit protection with constant current limit set at ~110%, temperature protection with automatic recovery and intelligent power control, guaranteeing safe-gap operation. Designed for conduction cooling, the ENA100 and ENA200 series can be operated from -20°C to +50°C ambient and up to 70°C baseplate.

Meeting road vehicle EMC and transient protection the ENA100 and ENA200 series comply with the standards EN61000-6-2 ; 4-2/3/4/5/6 and EMI EN55022B conducted and radiated. The ENA100 and ENA200 also comply with ISO7637-2 and EN12895:2000 immunity

Easy to use and quick to interchange when upgrading systems, the ENA100 and ENA200 series are the ideal power solutions for a large range of applications in the automotive segment, including specific fork lifter, cleaning machines, assisted seats, surveillance and monitoring mobile equipment.

The ENA100 and ENA200 are the first two series' of a new family, which will eventually include 400W models, non-isolated step-down converters and battery chargers. The ENA100-400 will complement the Powerbox Automotive line, which already includes the ENA20 to ENA60.

The ENA100 and ENA200 products are RoHS II and REACH compliant.

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About Powerbox

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.

For more information

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PRBX Automotive Line: ENA100 – ENA200

ENA100

<https://www.prbx.com/product/ena100-series/>

ENA200

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