

# Inductive fast charging system with CAN

**The contactless energy solution Etalink3000 enables the “in process charging” of driverless transport vehicles, mobile robots, and forklift trucks. It uses a CAN network for real-time data collection.**

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Etalink3000: Contactless “in process charging” of driverless transport vehicles; 1. Wallbox 2. Charging pad 3. Receiver coil (Source: Blue Inductive)

The Freiburg-based (Germany) company’s patented technology not only supports the automation and flexibility of logistics processes, but also trailblazes a 100-percent autonomous AGV (automated guided vehicles) operation.

The charging system is suitable for a variety of applications in production and logistics. The system consists of a stationary transmitter and, on the side of the vehicle, a receiving device. For energy transmission, the Etalink technology developed and patented by Blue Inductive uses the principle of magnetic induction. After successful field tests, series production started in 2018.

The charging systems have a power of 3 kW with a maximum charging current of 60 A and can be integrated into different logistics and production facilities according to the plug & play principle. Due to the very short initialization time from < 1 second to reaching full power, the product enables the so-called “in process charging” of industrial vehicles, mobile robots, and forklift trucks. For example, the towing vehicle of a route train can be loaded during a stopover at a supermarket. The process-integrated store minimizes store breaks and thus increases fleet efficiency and utilization. The charging stations can be used by a variety of vehicles, whether driverless transport systems, forklift vehicles, or smaller electric vehicles. An important factor in the automation of entire fleets.

By eliminating plug and grinding contacts in combination with lithium-based batteries, Etalink3000 offers increased safety compared to previous charging systems and is maintenance-free. The charging systems can be seamlessly integrated into predictive maintenance concepts.

To do this, the charging system has real-time data collection. It monitors operating conditions and the ageing behavior of batteries and transmits indicators of possible disturbances via the CAN network to fleet management. Unexpected vehicle failures with possible gridlock of an entire production fleet and the associated devastating follow-up costs can be avoided. Increased vehicle availability can reduce fleet size by up to 30 percent.

Following the start of the 3-kW system, Blue Inductive engineers are already working on the development of a 12-kW system, the launch of which is planned for the end of 2019.

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