



CBE, innovation is on the move

Having completed integration within the AL-KO Group, the company based in Italy is consolidating its core business and turning with interest to the LCV sector as well. Impressive products dedicated to connectivity which will renew and reinvigorate the RV market are on the way. The new switching lithium battery chargers are already available for OEMs.

Words Andrea Cattaneo



Paolo Moiola

CBE, European leading manufacturer and distributor of electronic components and wiring systems, joined DexKo Global, leading manufacturer of suspension technology, chassis construction and correlated components, in September 2018. Seven months after the acquisition, we spoke with the two CEOs Paolo Moiola and Dorian Sosi to learn more and hear about new products. Including the CL-BUS, a system which, after a long development, is now ready to be launched on the market and will be the subject of a specific article in the next issue of Aboutcamp BtoB. We asked Paolo Moiola more about the

integration process of CBE in AL-KO and DexKo Global. Here is what he told us: "CBE has joined a global group that has access to a wealth of knowledge and relationships, 360-degree strategies and an internal growth plan that, once the integration with the AL-KO Group has been completed in terms of quality and operations, is perfectly in line with the timeframe set in our plans. In CBE, we have achieved the operational level of a major industry required when becoming part of a global company. The current development plan also envisages strengthening our personnel, in terms of numbers and skills, with the aim of consolidating our core business. With the help of AL-KO, we intend on expanding into sectors in which the group already operates. The size of our new family will allow us to penetrate markets that so far were difficult to reach for CBE as medium-size player. The platforms already up and running in the AL-KO world will allow the development of innovative products for

us and the market. The general renovation of our offering to the RV sector has been consolidated and accelerated on design and technical-functional levels. We expect that over the next two to three years, 90% of our products, excluding wiring harnesses, will be replaced by products that today are still not for sale". Paolo Moiola told us that testing on the new CL-BUS system is being completed and that it will be launched next season. CL-BUS (CBE LIN BUS) will be the protocol for the next-generation CBE systems which will soon replace those currently installed on European RVs (it is estimated that the new CBE systems will be installed on at least 30% of all RVs made in Europe). This project will allow CBE to adapt the offering in terms of connectivity and digitalisation, providing an optional interface capable of interfacing with external equipment and systems implementing one or more serial digital communication buses, i.e. LIN-BUS, CI-BUS and CAN-BUS protocols.



CBE introduces the new CB522-LT battery charger for lithium batteries

The new CB522-LT switching battery charger expressly dedicated to lithium batteries will be added to the CBE catalogue in September 2019. The product will already be available for OEMs starting from June and for after-market customers later on. The CB522-LT is an evolution of the CB500 series and designed for RV users seeking a high-performance system expressly dedicated to this innovative type of batteries. It has a single charging line specifically for lithium batteries with charging times and values optimised for this technology. In order to obtain an algorithm that maintains charging performance across different types of lithium batteries on the market, CBE has conducted extensive research and studied the systems made by major European manufacturers.

"The use of lithium batteries is still limited, but the new CB522-LT battery charger fills a niche so far not covered and actually more and more on demand by motorhome manufacturers", said Dorian Sosi, the other CEO of CBE. *"However, although our new battery charger offers an ideal recharging line for this type of product, I must emphasise that traditional CBE battery chargers are also suited for use with lithium batteries".*

The new system complements the range which includes the recent CB516/3 and CB522/3 presented at the past Caravan Salon in Düsseldorf. The latter two are newly designed devices that respectively offer 16A and 22A of maximum deliverable current, as well as more efficient charging of lead-acid, lead-gel batteries, AGM and also lithium batteries.

"The CB522/3 is also suitable for lithium batteries using the charging line that is closest to the voltage values indicated by the bat-



tery manufacturer from the available three", added Dorian Sosi. *"If a user invests a non-negligible sum of money for a battery which, among other advantages, has very fast recharging times, it is right to develop a dedicated product for them. Capitalising on many decades of experience with our customers and the most recent studies of our Research & Development Department, we have identified a new charging line. Then we have optimised CB522-LT studying specifications along with the manufacturers of lithium batteries and taking advantage also of the collaboration of an outside partner specialised in technical tests".*

The CB522-LT features overheating protection, plus the 12V outputs are protected against short circuits and polarity inversion. Automatic charging system takes place in four phases.

- Phase 1: Bulk - The battery is charged with maximum current until the end-of-charge voltage is reached.
- Phase 2: Absorption - Battery charging is completed with constant end-of-charge voltage for a maximum time of 1h (or 30 minutes with I<5A).
- Phase 3: Float - Maintenance charging at a constant voltage of 13.5V for a maximum time of 240 hours. The cycle is resumed from the bulk phase if battery voltage drops below 12.7V after a high load has been switched on.
- Phase 4: Refresh - The battery is charged to the voltage of 14.5V for a maximum time of 30 minutes (or up to I<5A). Afterwards, the charge restarts from the float phase.

Technical specifications

INPUT TECHNICAL DATA

Rated voltage	230V ~ ±10%
Frequency	50÷60 Hz
Max. power	320 W
Protective fuse	T 3.15A (glass 5x20)
Safety switch	230V ~ luminous

OUTPUT TECHNICAL DATA

Bulk voltage	14,5V
Float voltage	13,5V
Maximum output current	22A
Charging line	IUoU
Short-circuit and polarity reversal protection	30A (car type)
Thermal protection	Yes
Signal AC power supply (S)	12V; 50 mA

GENERAL TECHNICAL DATA

Efficiency	86%
Room temperature	0 - +40 °C
Ventilation	Gradual automatic regulation
Low voltage directive	2014/35/UE
EMC directive	2014/30/UE
Connection to network	3-pole "Mate-N-Lock" connector / Schuko plug
Connection to battery	Screw M6
Network signal connection	Faston type 6,3
Temperature sensor	Yes, included
Dimensions	180 x 190 x 85 (mm)
Weight	1,2 kg

Whale, also the new LIN-BUS panel is CBE

Whale has successfully and satisfactorily been using a CBE control panel for space heaters and water heaters for many years in the camper and caravan sector. They asked CBE to develop a specific product for their next-generation products operating with LIN-BUS technology. The control panel has the same design appreciated for time by customers but implements all-new hardware and software to operate the new space heaters and water heaters with LIN-BUS technology. The project was completed at the end of 2018 and the first products were supplied in the early months of 2019.

