



Caravan & Leisure

mOLL special Li

– the ideal Battery for your Caravan

Travelling by Caravan gains more and more popularity as it combines the feeling of freedom and independency without renouncing the familiar comforts. Caravans are equipped with an increasing number of electronical devices, such as refrigerator, TV, electric kettle and air-condition, to make travelling as comfortable as possible. For all of these devices a reliable power source is needed.

In order to meet the increased demands on the self-sufficient energy supply in the Caravan, the MOLL Company has expanded the product portfolio by a new development in the field of lithium-ion batteries:

MOLL *special Li* – a battery based on lithium iron phosphate technology (LiFePO₄) that fulfils the technical requirements of the Caravan manufacturers to a high degree.

In comparison to conventional lead batteries, the changeover to lithium technology provides considerable advantages:

The usable capacity of lithium-ion batteries (100%) is unbeaten and twice as high compared to lead batteries (50%). In other words, a 12V 210Ah lead battery can be equivalently replaced by our 12V 105Ah MOLL *special Li* without having to accept losses in usable energy. In combination with the considerably lower weight of a lithium-ion battery, 75% weight can be effectively saved whilst the usable capacity remains unchanged. Even if high currents are discharged, which may occur when demanding electrical consumers, such as coffee machines or hairdryers are used, our MOLL *special Li* supplies consistent capacity on a stable voltage level at the same time.

One further benefit of our MOLL *special Li* is its extremely long cycle life (3500 cycles at 100% depth of discharge), which exceeds the cycle life of conventional lead batteries (up to 550 cycles at 50% depth of discharge*) many times over. In contrast to lead batteries, cyclic deep discharges and longer deep-discharged rest periods have no notable impact on the cycling performance of our battery. In addition to its very low self-discharge, a self-sufficient energy supply over a longer period can therefore be ensured.

Overall, our MOLL *special Li* provides high performance and reliability for all who travel to the remotest places with their Caravans without having to renounce the familiar comforts.

MOLL *special Li*

- Extremely long cycle life
- High discharge current
- Significant weight reduction
- Lower self-discharge
- Highest degree of safety

Technical Data:

MOLL type no.:	10 91 105 01 12
Technology:	Lithium Iron Phosphate (LiFePO ₄)
Voltage:	12.8 V
Capacity:	105 Ah
Length:	353 mm
Width:	175 mm
Height:	190 mm
Weight:	11 kg
BMS:	Yes
Data interface:	CAN 2.0 port
Terminal posts:	M6 threaded terminal
Discharge current, con.:	150 A
Discharge current,max.:	260 A
Cycles:	3500



For any further information, please request the technical data sheet.

* at deeper discharge less than 550 cycles will be reached

Benefits of the MOLL special Li

• High discharge currents:

The MOLL *special Li* is particularly suitable for high discharge currents (up to 260A short-time load) without notable loss of capacity. During the whole discharge process the voltage remains on a stable level.

• Longer cycle life:

Even at 100% depth of discharge, lithium-ion batteries have, in comparison to lead batteries, a much longer cycle life.

• Weight reduction:

Our MOLL *special Li* weighs about half as much as a lead battery with equivalent nominal capacity. Since its usable capacity is twice as much as a lead battery's capacity, the total weight reduction amounts to 75% whilst the usable energy remains unchanged.

• Lower self-discharge:

Due to lower self-discharge, lithium-ion batteries can be stored much longer than lead batteries without any need for recharge.

• Highest degree of safety:

The integrated battery management system (BMS) monitors all cell parameters (current, voltage, temperature) and ensures the highest degree of safety as well as an effective protection against overcharging and deep discharge. In case of a malfunction, the BMS interrupts the electrical connection to respective consumer or charger.

• Modern communication:

By means of the modern CAN bus communication interface the BMS can be read out anytime and the data can be processed externally. The battery can therefore be integrated into an intelligent device network.

105 Ah Li Battery vs. 95 Ah AGM battery*:

Usable capacity



Cycling performance at maximum recommended depth of discharge



Maximum possible Ah throughput



Weight



*average customary AGM lead battery

Further application areas for MOLL special Li

Besides the use of LiFePO₄ batteries in Caravans the MOLL *special Li* can be used for several further leisure applications: E.g. for yachts and pleasure crafts, where several electrical devices are in use to ensure familiar comforts. With its characteristics, the MOLL *special Li* perfectly meets the requirements on offshore boat touring.



Caravan



Boat



Busses



Golf Cart

The perfect charger:

The chargers ML07 PRO and ML10 PRO are particularly suitable for charging and maintaining of batteries in the leisure segment. They provide specially adapted charging characteristics for wet, AGM, Gel and start/stop batteries with AGM or EFB technology. They additionally provide an extra Lithium charging characteristic for the optimal charging of Lithium (LiFePO₄) batteries.

Fully automatic multistage charging system

- Recovery mode for deep-discharged batteries
- Detection of defective batteries
- Overvoltage and overcharging protection

