

L7 Drive Announces the World's First One Cell Battery Powertrain System

The New Technology Eliminates the Need for a Battery Management System and a Separate Inverter

Lohja, Finland, 5 October, 2017. L7 Drive Ltd., a Finnish company specialised in developing electric powertrain solutions, announced today a groundbreaking powertrain system for battery electric vehicles. The solution results in significant system level cost savings, increased reliability and better efficiency on partial loads compared to conventional series connected battery systems.

L7 Drive has developed a technology that can employ just one single Li-ion battery cell, or a pack of parallel connected cells, to drive an electric motor in an electric vehicle. The first products announced today are 1,7kW and 5kW units. Avoiding series connections eliminates the need for a Battery Management System (BMS) and the problems associated with cell balancing.

The 1,7kW **D1** model is designed to power anything from small outboard motors to two or three wheeled mopeds (European L1e and L2e class vehicles) or small mobile machinery. It will be available in either 24V or 48V configurations. The **D1** can be connected to a single large format Li-ion cell, or any parallel connected pack, making the powertrain construction extremely simple. Everything needed for controlling the basic functions in a vehicle and the battery is included in one box.

L7 Drive is compatible with all available Li-ion battery types, and the end user can replace the original cell with any type and capacity Li-ion cell available. This feature is especially practical in developing countries, where the possibility to acquire a brand and model specific battery pack is often limited.

The bigger **BD5** model is a complete package including a 6kWh parallel connected battery pack with a 7kW drive system. This system can be installed in slightly larger vehicles or machines, and only requires a motor and a throttle to be ready for the road.

Both units can be equipped with a solar charge option, which makes it possible to connect solar panels directly to the device without any separate inverter. This is possible, because the L7 Drive can accept any input voltage between the device's nominal maximum voltage and the battery's own charging voltage. For conventional charging from a wall socket, any isolating AC-DC converter between those same voltages is usable. L7 Drive controls all the charging procedures, so the battery will always be safe.

Because of the power handling characteristics of the L7 Drive technology, the drive is able to produce the maximum power to the motor independent of the motor speed, provided that the motor is able to receive enough current. It means, that the launch power is always more impressive than in other motor drives with similar power rating. Also, the efficiency of the L7 Drive is at its best on partial loads, just the opposite of the normal inverter drives, which are only very efficient on full power, rarely used in the city traffic.

Company's Chairman Pentti Bruun is enthusiastic about the possibilities of the new products; "We are excited to finally introduce this technology to the world after a long developing process. We believe that the versatility of our technology is especially suitable for OEMs requiring a simple and reliable powertrain solution for applications that will be used in less than ideal environments"

L7 Drive will show their new powertrain system for battery electric drives at the EVS30, Electric Vehicle Symposium & Exhibition, held at Messe Stuttgart from 9 to 11 October.

About L7 Drive Ltd.

L7 Drive Ltd. is a Finnish technology company specialised in developing electric powertrain solutions for global vehicle and mobile machinery markets. The company was founded in 2010. The headquarters of L7 Drive is situated in Lohja, southern Finland. More information: <http://www.L7drive.eu>

L7 Drive Media Contact:

Mika Koskimies, COO

L7 Drive Ltd.

mika.koskimies@L7drive.eu

+358 50 3295 238

Proposed tags:

#EV #ElectricVehicle #Battery #Powertrain