# RECOM PCS SD7008 FOR CARBON-NEUTRAL ENERGY

**Project:** this RECOM PCS solution can be equipped with the requested input current tracking and the customer demand of liquid cooling and CAN-Interface.

During the last couple of years, the global interest in methanol or hydrogen as an alternative fuel has drastically increased. Especially in 2021 methanol as a vital element in the global transition towards carbon neutrality has been underlined. Our new customer is succeeding with pushing this carbon-neutral energy generation and the company has created a market leadership. With a focus on high electrical efficiency, reliability, and cost-effectiveness, this company provides fuel cell solutions for mobile and stationary applications for a wide variety of industries around the world

## THE PROBLEM

Charging a battery from a fuel cell with ICT (input current tracking) with requested maximum efficiency and at a power level of around 7000 Watt is challenging. An in-house customer design solution with parallel operation of several PCB-modules did function but the efficiency of around 92% was not satisfying and the layout design to process currents of up to 220A as well as the input current tracking was tricky.

## THE SOLUTION

PCS Model SD7008. This non-isolating converter concept is based on a parallel cascaded, overlapping buck-boost topology that generates an adjustable output voltage which is lower, identical or higher than the wide varying input voltage. Along with the excellent efficiency level of >97% this solution can be equipped with the requested input current tracking and the customer demand of liquid cooling and CAN-Interface.

## WHY RECOM PCS?

Based on the existing switching topology concept, PCS can generate the needed design with improved efficiency by using the latest generation of semiconductors and implementing a liquid cooler in a very short time. The interface will be “upgraded” to a CAN J1939 Standard interface. The modification can be realized within approximately 12-14 Weeks to meet the customer’s time schedule as well as the target price.