DUALSTAGE DC/DC CONVERTER FOR EV / HEV

Today´s electrified vehicles have different voltage level systems, e.g. the conventional 14V and 48V for medium power loads as well as a high voltage battery for the traction system. To save space and weight the lower voltage levels are also supplied from the main HV battery via a safe isolated DC/DC converter.
An optimized solution gives maximum flexibility to the various requirements of different voltage levels by combining 2 similar power stages either in separated 14V/48V power supply or in parallel configuration for increased power supply. Additionally, a bidirectional power flow for short-time support of traction battery is available.

- **Light weight**
- **Super small volume**
- **Maximum flexibility**

Main features

- Two separate safe isolated DC/DC converters for 1 4V (1 .4kW) and 1 2-48V (2.5kW) output, that can be operated in parallel or series connection
- High efficiency LLC topology with synchronous rectifier
- Ultra low weight carbon fiber housing
- Wide input voltage range for easy adaption to different battery packs

Technical Data

Input voltage range	300...450 VDC
Nominal power, output 1	2500 W @12-48V
Max. current, output 1	50 A @12-48V
Nominal power, output 2	1400W @14V
Max. current, output 2	100A@14V
Max. efficiency	>95%
Dimensions	330x220x100 mm
Cooling	water cooled (-40...+75 °C)
Communication	CAN