DC-DC Converter (Isolated) for Hybrid Electric and Fuel Cell Systems

PRODUCT OVERVIEW:
The DC12 Series of converters has been designed for medium and heavy duty electric, hybrid and fuel cell commercial vehicles. It uses advanced digital control with J1939 communications and diagnostics with secondary analog controller and high frequency magnetics with advanced ZVS/ZCS switching to achieve high power density and efficiency. MIL-STD-1275 option available.

FEATURES:
- DC Input Voltage Range: 250-900V<sub>DC</sub>
- DC output range: 12-30V<sub>DC</sub>
- Efficiency: 95% rated, > 94% from 40% to 100% load.
- Output Current: 100A at 27.8V<sub>DC</sub>, 3 kW, or 200A at 13.6V<sub>DC</sub>. Can be paralleled externally.
- Short Circuit, Over Current, Over/Under Voltage and Over Temp protection.
- Output voltage 12 to 30V<sub>DC</sub>, (42-57V<sub>DC</sub> optional) programmable via CAN.
- Input and output voltages, currents, power and temperature reporting.
- CAN command, control and diagnostics. Output voltage can be regulated via CAN.
- High Efficiency ZVS/ZCS architecture.
- MIL-STD-1275 optional
- IP65 Rated, (IP67 optional)

APPLICATIONS:
Electric, Hybrid and Fuel Cell Vehicles, Light Rail, Off-road equipment and Battery charging systems. DC12 can be customized to meet your most stringent applications requirements.

Signal Connector DEUTSCH DT15-12PA

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HV Connector: Tyco LV Output: 3/8” stud

Line regulation (±10%) ±1 %
Load regulation ±2 %
Ripple <±1% + 100 mVp-p
Load transient (10-90%) <3% typical
Response time 50 ms typical
Turn-on rise time Soft start, 450 ms typical
Output protection Overload and short circuit
Cooling Liquid cooled < 60°C, 12 Lpm
Operating temperature -20°C to +70°C
Load de-rating 2.5% /°C from 60°C liquid
Storage temperature -40°C to +105°C
Efficiency 95%
Isolation resistance > 1 MΩ at 700Vdc
Weight 8 kg.
Environmental Rating IP65 (IP67 Optional)

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