The DC07 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 featuring secondary analog controller and high frequency magnetics utilizing advanced ZVS/ZCS switching to achieve high power density and efficiency. DC07 products are FCC Class A compliant. MIL-STD-1275 option available.

DC07 DC-DC Converter (Isolated) for Hybrid Electric & Fuel Cell Systems

**OVERVIEW**

Electric, hybrid and fuel cell vehicles, light rail, off-road equipment and battery charging systems. DC07 can be customized to meet your most stringent applications requirements.

**PRODUCT FEATURES**

- DC Input Voltage Range: 250-900V_{dc}
- DC Output Range: 12-30V_{dc}
- Efficiency: 95% Rated, > 94% from 40% to 100% Load
- Output Current: 200A at 27.8V_{dc}, 6 kW, or 300A at 13.6V
- Short Circuit, Over Current, Over/Under Voltage & Over Temperature Protection
- Output voltage 12 to 30 V_{dc} (42-57V_{dc} Optional), Programmable Via CAN
- Input & Output Voltage, Current, Power & Temperature Reporting
- CAN Command, Control & Diagnostics (Output Voltage Can Be Regulated Via CAN)
- Can Be Used in Parallel Configurations
- High Efficiency ZVS/ZCS Architecture
- FCC Class A EMI/EMC Compliance (MIL-STD-1275 Optional)
- IP65 Rated (IP67 Optional)

**APPLICATIONS**

- **Line Regulation (±10%)** | ±1 %
- **Load Regulation** | ±2%
- **Ripple** | < ±1% + 100 mVp-p
- **Load Transient (10-90%)** | < 5% 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** | 9 kg
- **Environmental Rating** | IP65 (IP67 Optional)
- **EMI/EMC** | FCC Class A

**PART NUMBERING**

DC07

Input Voltages
MV: 250-450V_{dc}
HV: 550-750V_{dc}
UV: 700-900V_{dc}

V-output: 12: 12V_{dc}
24: 24V_{dc}
48: 48V_{dc}

Control Rsvd: CAN 0: Fixed

Rev'd