

DC07

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

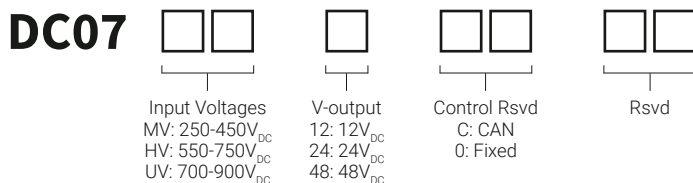
OVERVIEW

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.

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)

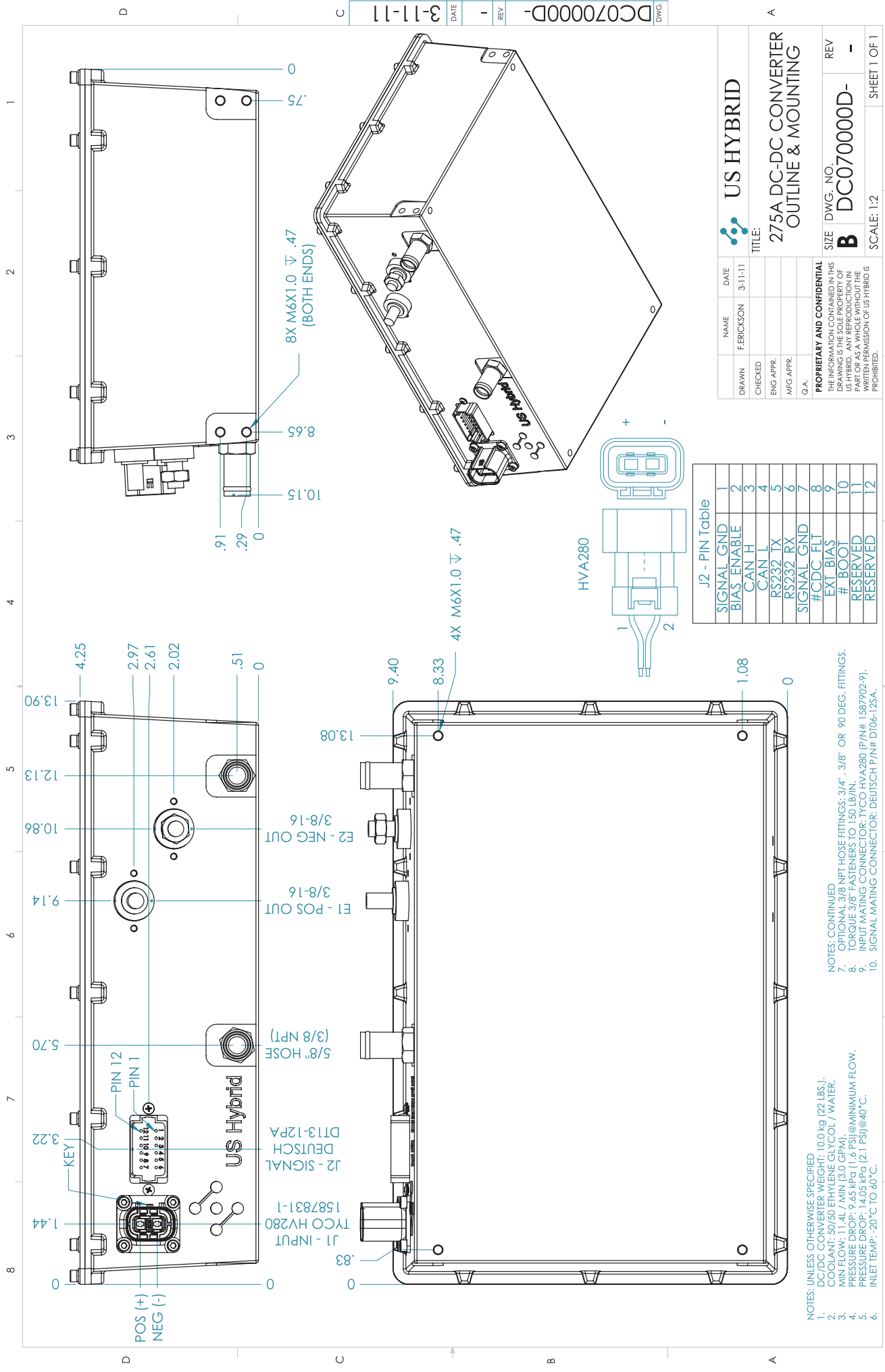
PART NUMBERING



APPLICATIONS

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.

- **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



US HYBRID

TITLE: 275A DC-DC CONVERTER OUTLINE & MOUNTING

NAME: FERICKSON
DATE: 3-11-11

DRAWN:
CHECKED:
ENG. APPR.:
MFG. APPR.:
O.A.:

SIZE: DWG. NO. **DC070000D-** REV **-**

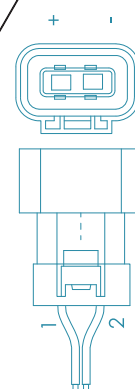
SCALE: 1:2

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SHEET 1 OF 1

J2 - PIN Table

1	SIGNAL GND
2	BIAS ENABLE
3	CAN H
4	CAN L
5	RS232 TX
6	RS232 RX
7	SIGNAL GND
8	#CDC FLT
9	EXT BIAS
10	# BOOT
11	RESERVED
12	RESERVED



- NOTES:** UNLESS OTHERWISE SPECIFIED
- DC/DC CONVERTER WEIGHT: 10.0 kg (22 LBS.).
 - COOLANT: 50/50 ETHYLENE GLYCOL / WATER.
 - MIN FLOW: 11.4L / MIN (3.0 GPM).
 - PRESSURE DROP: 9.45 kPa (1.4 PSI) @ MINIMUM FLOW.
 - PRESSURE DROP: 14.05 kPa (2.1 PSI) @ 40°C.
 - INLET TEMP: -20°C TO 40°C.
- NOTES: CONTINUED**
- OPTIONAL 3/8" NPT HOSE FITTINGS: 3/4" - 3/8" OR 90 DEG. FITTINGS.
 - TORQUE 3/8" FASTENERS TO 150 LB/IN.
 - INPUT MATING CONNECTOR: TYCO HVA280 (P/N# 1587902-9).
 - SIGNAL MATING CONNECTOR: DEUTSCH P/N# DT04-12SA.