

DC-DC Boost Converter for Fuel Cell and Alternative Energy Systems



US Hybrid



PRODUCT OVERVIEW:

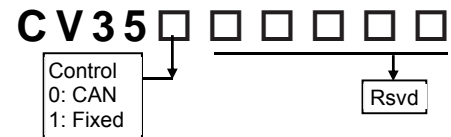
DC-DC converters utilizes advanced Digital Power Processing with high frequency magnetic design to provide efficient and high bandwidth dynamic response for voltage and current regulations with input and output voltage and current and power limits protections. The cost effective high frequency proven magnetic design with robust redundant control provides fast response, flexibility, reliability, light weight and volume product for Fuel Cell and alternative energy industry. Extensive diagnostics via CAN-J1939 and RS232.

FEATURES:

- DC-DC Boost Converter, Input Voltage: 60-120V_{DC}.
- Input Current: 500A max.
- DC output range: 200V_{DC} - 420V_{DC}
- Power: 35kW continuous rated.
- Ground voltage isolation detection and protection.
- Optically isolated CAN and Power is isolated from chassis.
- Efficiency: 93%
- Short Circuit, OC, O/U V and OT protection.
- Parallelable with fault tolerance operation.
- CAN command, control and diagnostics. Output voltage can be regulated via CAN command. Input and output voltages, currents, power and temperature reporting.
- Environmental rating IP65 (IP67 Option)



MODEL NUMBER:



APPLICATIONS:

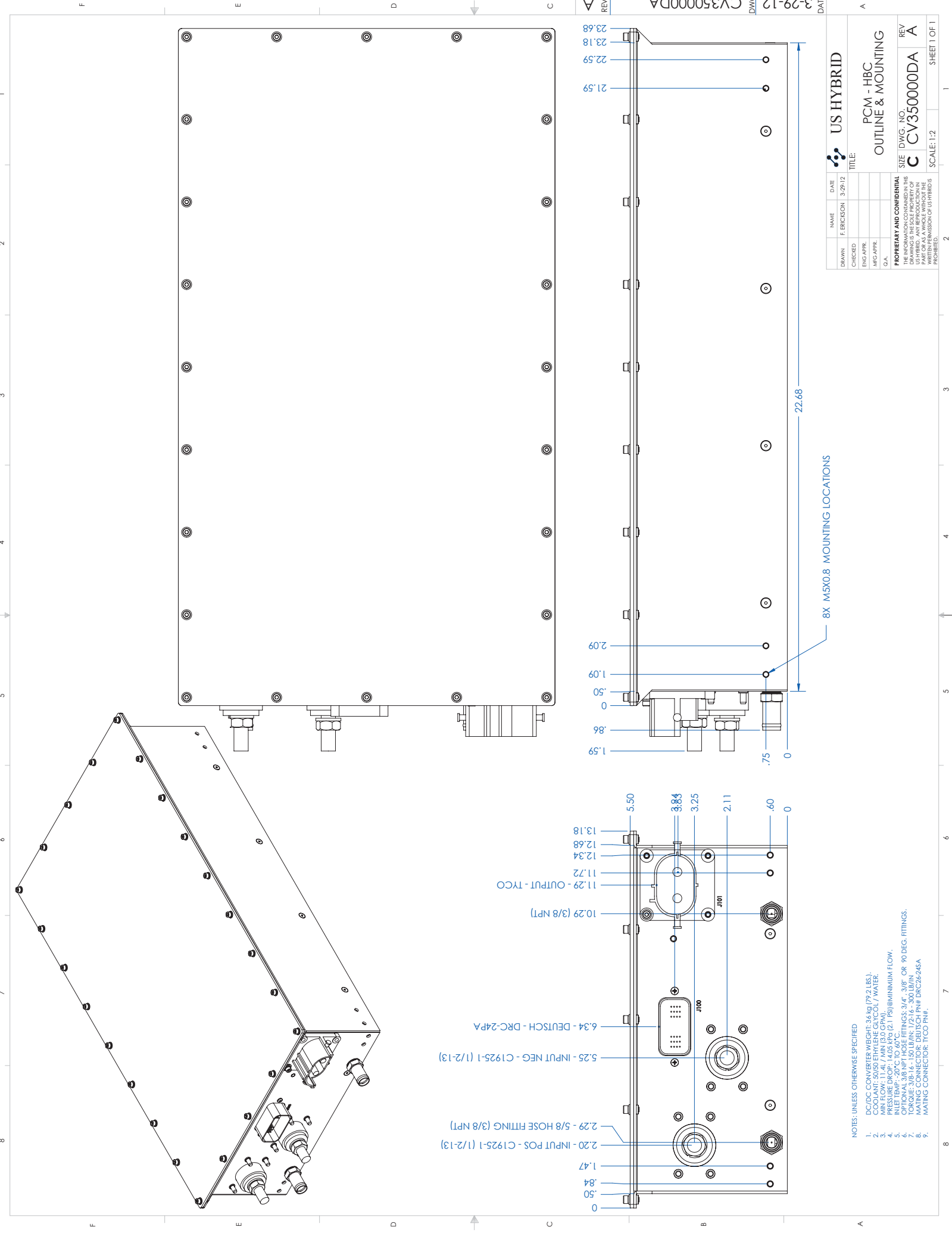
Fuel Cell, Battery/Ultra-Cap UPS, battery charger, Smart Grid and renewable energy systems.

Signal Connector DEUTSCH DRC26-24SA				Line regulation (±10%)	±2 %
1	CAN_L	13	RS232_TX	Load regulation	±2%
2	CAN_H	14	#MAIN1_RTN	Ripple	< ±1% + 100 mVp-p
3	12V_POS	15	BIAS_ENABLE	Load transient (10-90%)	< 5% typical
4	CAN_SHIELD	16	#FLT	Response time	150 ms typical
5	#FAN_RTN	17	n/a	Turn-on rise time	Soft-start, 450 ms typical
6	#PUMP_RTN	18	INTLK_SEND	Output protection	Overload and short circuit
7	12V_RTN	19	RS232_RX	Cooling	WEG < 60°C 12 Lpm
8	VOUT_CMD	20	#PRC1_RTN	Operating temperature	-20°C to +85°C
9	ANALOG_RTN	21	BOOT_SCI	Load de-rating	2.5% /°C from 60°C cooling
10	#MAIN2_RTN	22	INTLK_RCV	Storage temperature	-40°C to +105°C
11	#PRC2_RTN	23	PWR_ENABLE	Efficiency	> 93%
12	HEARTBEAT	24	SHIELD	Isolation resistance	> 1 MΩ at 700Vdc
Input Power: ½” Lugs Output: ITT or Tyco.				Weight	29 kg.

DATA SHEET REV: 1302, Specifications subject to change.

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Integrated Components Solutions for Clean Mobility & Energy Conservation

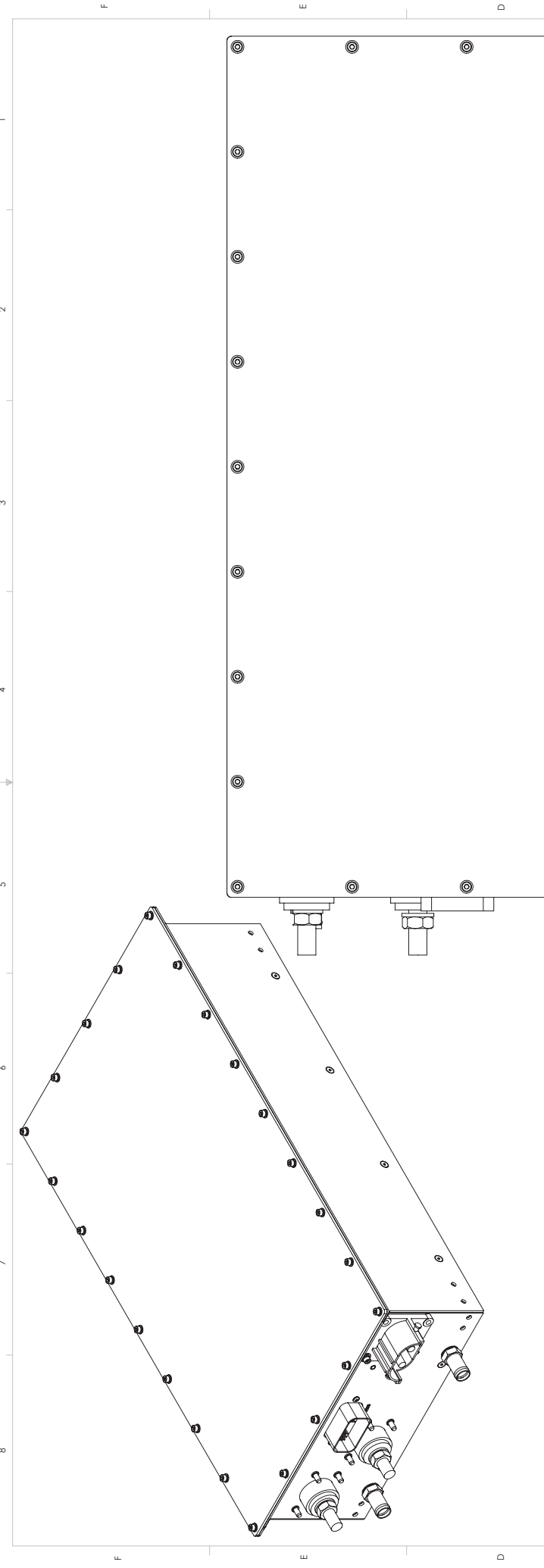
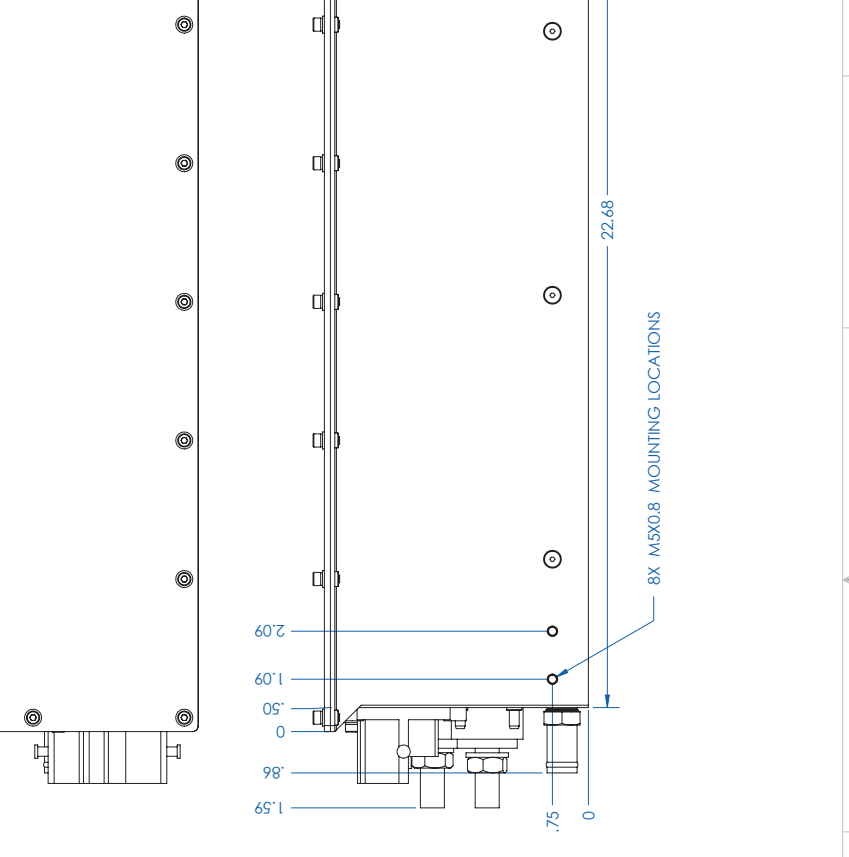
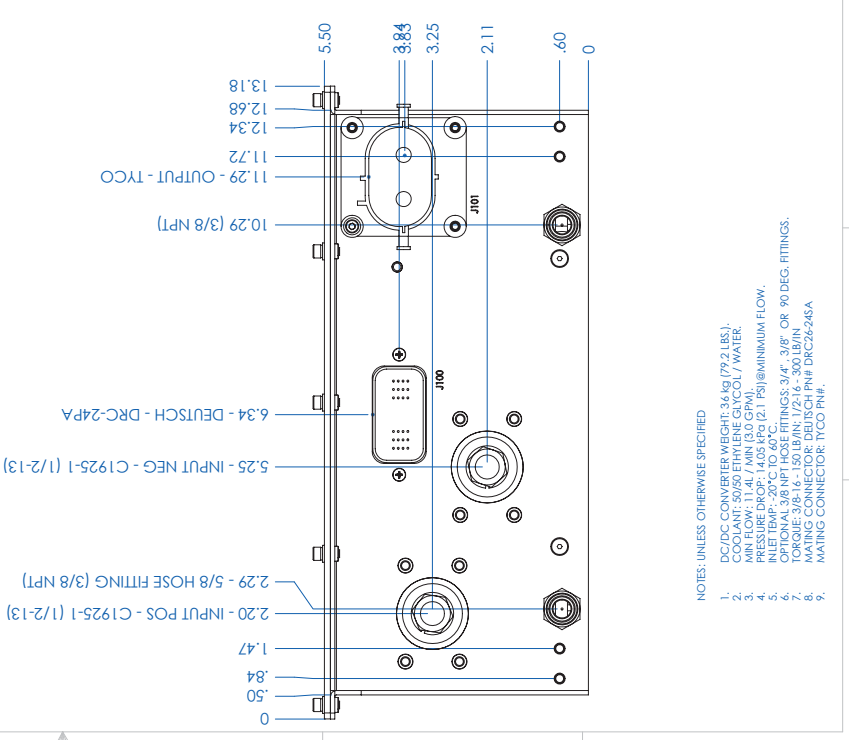


NAME	DATE	TITLE
DRAWN: F. ERICSON	3-29-12	PCM - HBC OUTLINE & MOUNTING
CHECKED:		
ENG. APPR.:		
MFG. APPR.:		
O.A.:		

US HYBRID
 TITLE: PCM - HBC OUTLINE & MOUNTING
 SCALE: 1:2
 SHEET 1 OF 1

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REV: A
 DWG. NO.: CV350000DA



- NOTES: UNLESS OTHERWISE SPECIFIED
- DC/DC CONVERTER WEIGHT: 3.2 kg (7.2 LBS).
 - COOLING: AIR FLOW: 100 CFM (2.83 M³/MIN) / WATER.
 - MIN FLOW: 11.4L / MIN (3.0 GPM).
 - PRESSURE DROP: 1405 KPa (2.1 PSI) @ MINIMUM FLOW.
 - OPTIONAL: 3/8 NPT HOSE FITTINGS: 9/16", 3/8" OR 90 DEG. FITTINGS.
 - TORQUE: 3/8-16 - 150 LB/IN; 1/2-16 - 300 LB/IN.
 - MATING CONNECTOR: DEUTSCH PHF DRC24-24A.
 - MATING CONNECTOR: TYCO PHF.