



US Hybrid



Integrated Power Unit "IPU 160"

PRODUCT OVERVIEW:

The Integrated Power Unit integrates three advanced converters in one compact package. Each converter was designed for high efficiency through the use of state of the art semiconductor and magnetic components. Integrated control software enables fast response times and safe operation.

- 160kW Motor drive with hybrid control unit
- 3kW, 12-28V DC/DC converter
- 6.6 kW Charger for Plug-In Hybrid applications or
- Optional 30kVA, 3-Phase export power Converter
- Drive unit for ED160

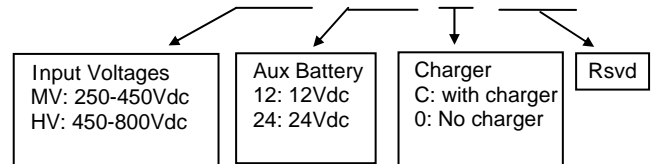


System Features:

- Compact Integrated packaging (L=475mm, W=345mm, H=180mm)
- DC Input Voltage Range: 200-450V DC or 500-800 VDC
- Dual CAN bus, J1939 compatible
- Remote wireless communication and diagnostics.
- Short Circuit, OC, O/U V and OT protection.
- Configuration management via CAN and RS232 interface.

PART NUMBERING:

IPU160 □ □ □ □ □ □



Motor Drive Features:

CAN or analog Interface to ECU, battery management, and driver interface
 Four quadrant motor drive, with torque/speed control, DC bus voltage and current limiting
 Easy interface with battery management system, enabling regenerative braking

Export Power Option Features:

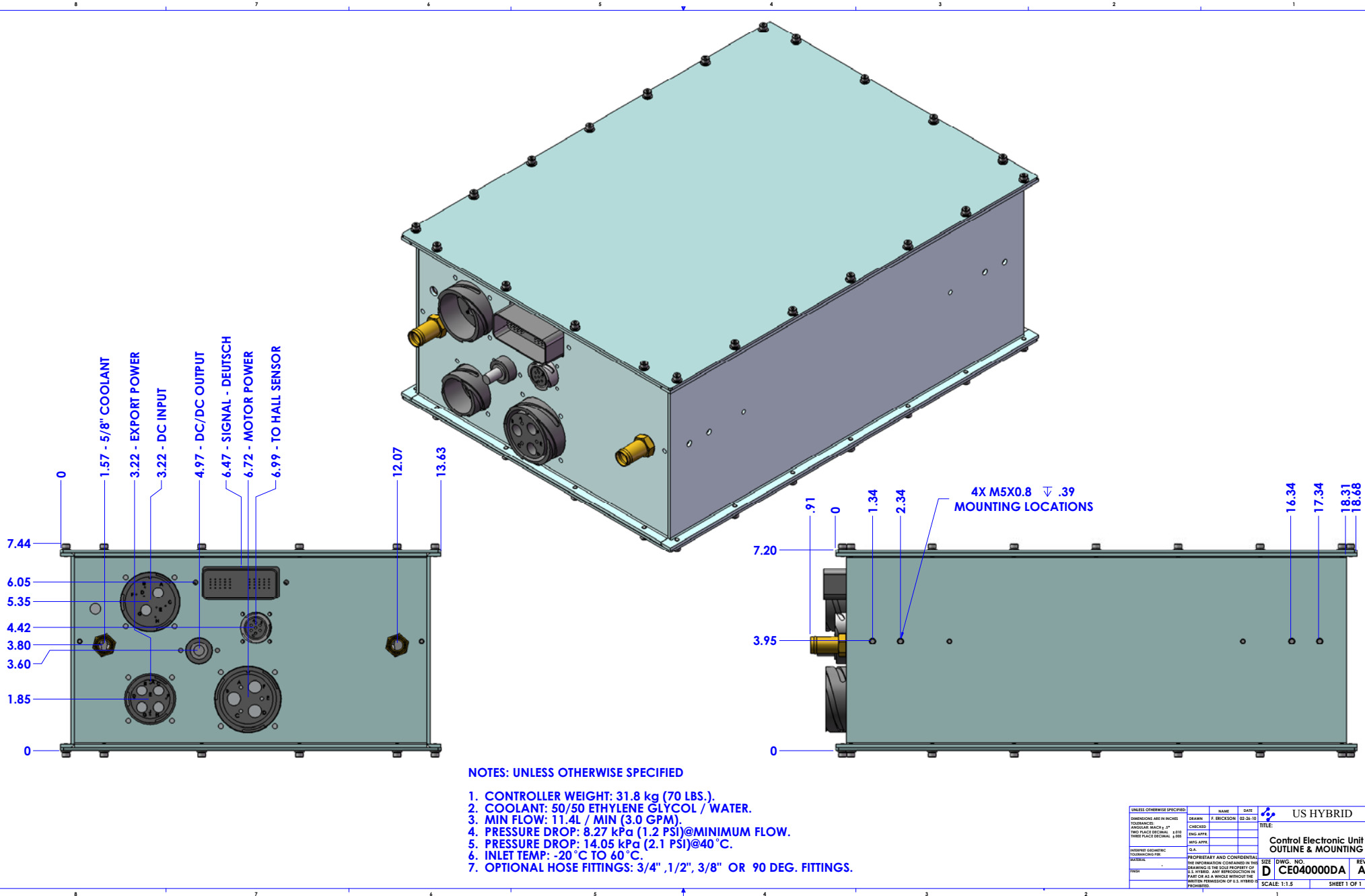
AC output, 3-Phases-4 Wire, 120/208, 50/60Hz.
 Energy source: HV batteries or APU generation from the hybrid system.
 Single or three phase load balanced or unbalanced operation.
 Fast load and line regulation with DC and AC current and power protection/limiting function.

DC/DC Converter Features:

Adjustable DC output voltage via CAN
 High efficiency (>94%) power conversion
 Current and power limiting modes with CAN diagnostics and status reporting.

APPLICATIONS:

Hybrid Vehicle Systems for Commercial, Military and off-road Applications.



NOTES: UNLESS OTHERWISE SPECIFIED

1. CONTROLLER WEIGHT: 31.8 kg (70 LBS.).
2. COOLANT: 50/50 ETHYLENE GLYCOL / WATER.
3. MIN FLOW: 11.4L / MIN (3.0 GPM).
4. PRESSURE DROP: 8.27 kPa (1.2 PSI)@MINIMUM FLOW.
5. PRESSURE DROP: 14.05 kPa (2.1 PSI)@40°C.
6. INLET TEMP: -20°C TO 60°C.
7. OPTIONAL HOSE FITTINGS: 3/4", 1/2", 3/8" OR 90 DEG. FITTINGS.

UNLESS OTHERWISE SPECIFIED		NAME	DATE	
DIMENSIONS ARE IN INCHES		DESIGN	F. ERICSSON	
TOLERANCES:		CHECKED		TITLE Control Electronic Unit OUTLINE & MOUNTING
ANGULAR MACH ± .1°		DATE		
TWO PLACE DECIMAL ± .005		DESIGNED BY		
THREE PLACE DECIMAL ± .000		DATE		SIZE D
INHERENT GEOMETRIC TOLERANCING PER:		DRAWING IS THE SOLE PROPERTY OF U.S. HYBRID. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF U.S. HYBRID IS PROHIBITED.		
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 REV A
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