



Hybrid



Electric

Explore our Technologies

High Voltage Low Power Inverter

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A new range of low power AC motor controllers/inverters designed primarily for ancillary control of pumps and fans on hybrid and electric buses, agricultural implements, tractors and other high voltage vehicles. There are two models in the range, which cover both liquid cooled and air cooled designs.

Features

- Advanced Field Oriented Control
- AC Permanent Magnet Synchronous motor control, including salient, non-salient and BLDC motors
- AC induction motor control without speed sensor
- Operation without a position sensor for PMSM motors supported for custom applications
- 200 V to 800 VDC battery voltage
- Up to 53 A peak current (HVLP-20)
- Up to 33 A continuous current (HVLP-20)
- CAN communications bus allows for easy interconnection of controllers and devices such as Battery Management Systems, displays and VCUs
- CANopen and J1939 protocols
- Configurable as a vehicle control master (including pump and generator control) or as a motor control slave
- High Voltage Interlock (HVIL)
- 12 V or 24 V nominal supply
- Highly configurable

Integrated I/O

HVLP includes a fully-integrated set of inputs and outputs (I/O) designed to handle a wide range of requirements. This reduces the need for additional external I/O modules or vehicle controllers and connectors.

- All I/O protected to 40V
- 4 analogue inputs 0 - 10 V
- 4 digital inputs
- 2 power supplies 5 - 10V (100 mA & 200 mA)
- 2 digital outputs
- Motor temperature sensor input
- Motor encoders supported include Resolver (programmable gain), UVW hall effect sensors, Sin/Cos sensors and incremental AB encoders

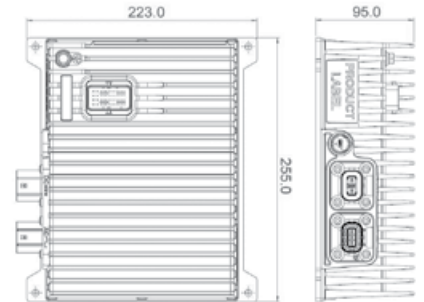
Key Parameters

HVLP-10 (air cooled)

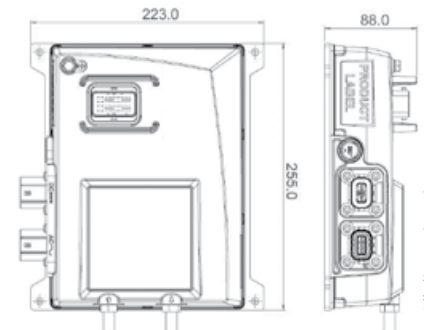
- Operating voltage range at full current 200 V to 800 V
- Output motor phase current:
 - 24 A rms (1 min)
 - 19 A rms (Continuous)
- Ambient -40 °C up to +45 °C full operation
- Weight: 3.7 kg

HVLP-20 (liquid cooled)

- Operating voltage range at full current 200 V to 800 V
- Output motor phase current:
 - 53 A rms (1 min)
 - 33 A rms (Continuous)
- Water/Glycol coolant
 - Full operation up to 70 °C inlet temperature and at 6/l min flow
- Weight: 2.3 kg (dry)



Air Cooled HVLP-10



All dimensions in mm.

Liquid Cooled HVLP-20

Common Parameters

- Safety:
 - HVIL (High Voltage Interlock H/W & S/W)
 - Designed to meet the electrical isolation of electrically propelled vehicles ISO 6469
- Environmental:
 - IP6k9k and IP67 protection

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