

DC-DC CONVERTER

Product Description

High voltage, high power 3 kW DC-DC converter from Kalyani Powertrain is designed to convert high voltage power supplied from the traction battery into low voltage suitable to power low voltage auxiliary systems in the vehicle. High Volumetric and Gravimetric Power Density allows easy installation and mounting while liquid cooled system confirms reliable operation in widely varied environmental conditions.

Applications

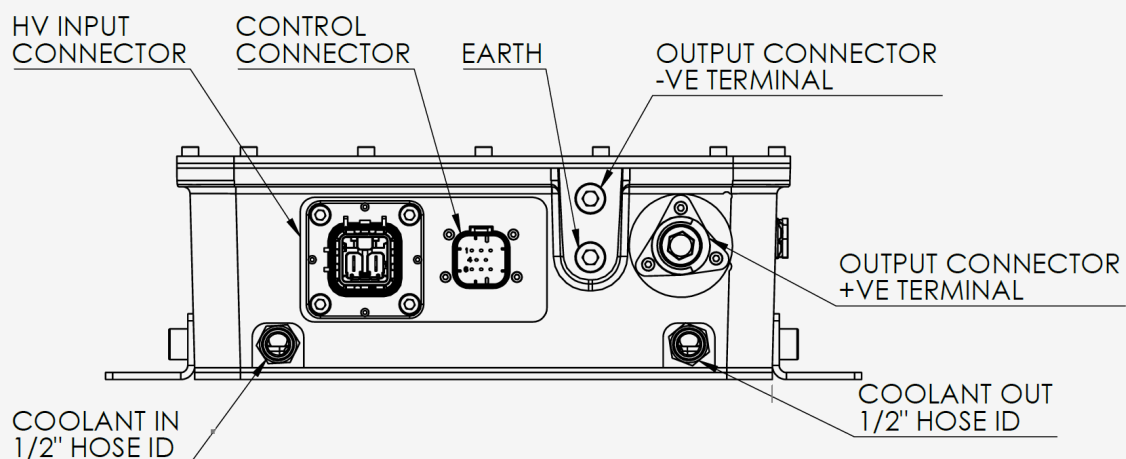
Commercial vehicles (Battery - operated and Hybrid Trucks and Buses) and Off-highway vehicles.

Product Features

- Power up to **3 kW**
- AEC grade components
- Input Voltage Range : **450V - 800V**
- Output Voltage : **28V DC**
- Adjustable Voltage Output
- Device efficiency 92%
- CAN Bus Interface
- Galvanic Isolation between Input & Output
- Protection against overvoltage
- Protection against overcurrent
- Protection class IP 67



Connectors, Pin configuration with cable gauges:



Product Specifications

Parameter	Description	Min	Nominal	Max
Input Specifications				
Input Voltage		450 V	650 V	800 V
Input Current				<7.3 A
Input Capacitance			20 uF	
Efficiency		92%		
Power Consumption @24Vdc				8 W
Output Specifications				
Output Current	(@ 28Vdc)			110 A
Output Power	Continuous 3kW; Peak 3.5kW (for 10 Seconds)			3 kW
Output Voltage Set Point		27.8V	28V	28.06V
Turn-On Delay	From start to Nominal Voltage			60 Sec
Turn-Off Timing	PS WAKEUP delay; (monotonic Vo fall)			100 ms
Output Volt Ripple				2% of Vout
Output Volt Noise				2% of Vout
Environmental Specifications				
	Operating: 62 kPa absolute pressure		3,600	
Operating Temp (Deg C)	Coolant temp with no derating	-40°C	65°C	
	Ambient temp @ full load, with no power derating	-40°C	80°C	

*Specifications are for the standard product and subjected to change as it is under development

Protection against Over-Current, Over-Voltage, Over-Temperature, High Input Voltage and Input fuse

Mechanical Specifications

Parameter	Description
Type of Cooling	Liquid
Dimensions (L x W x H), mm	389 mm x 261 mm x 99 mm
Weight	9.31 kg
Enclosure	IP 67
Mounting holes	8 holes, M8 x 1.25 x 12 Deep

