traction™

rEA8003-6.5U-040

Power Without Compromise: Peak Performance Across Every Route

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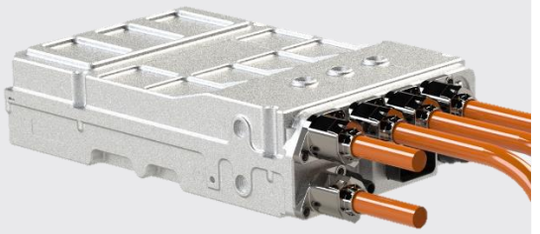

A8003

rEV Motor

4:1 Gearbox

Inverter Features

- ASIL D certified triple core microcontroller @300MHz
- Redundancy functions through a CPLD device for safety-critical application
- Over current, over voltage and over temperature self-protection features
- Customizable control algorithms for each application
- Torque, Speed and Id/Iq Control
- 2x CAN communication channels

Gearbox Features

Feature	Detail
Gear Ratio	3.939:1
Oil	1 litre of 75W-90
Differential	Not included
Mounting	Two side mounting on gearbox and rear motor mounting

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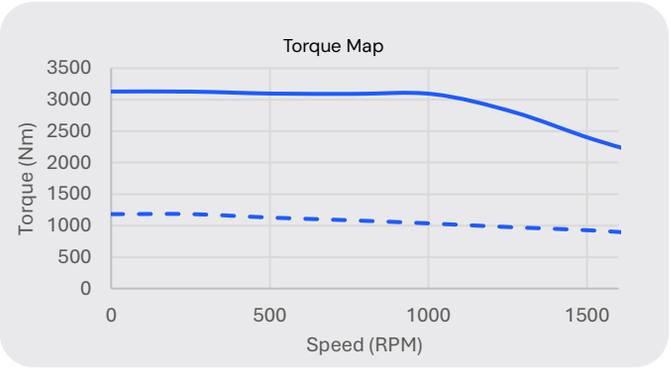
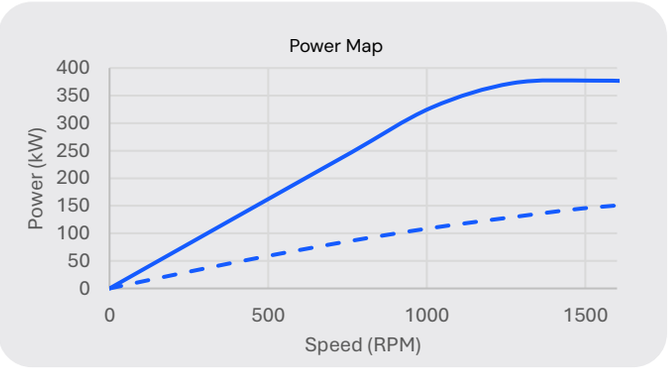
EDU Data





Electrical Specification	UNIT	
Motor / Generator Type		3-Phase Radial Synchronous Flux Permanent Magnet Motor/Generator
Applications		Automotive Motorsport, Off-Highway, Motorcycle, Passenger Vehicle, Commercial Vehicle
DC Voltage (Motor)	VDC	550-850
Maximum Phase Current (Motor)	Arms	510
Rotor Position Sensor		Resolver

Performance Specification		
Peak Torque (For 10s)	Nm	3129
Peak Power (For 10s)	kw	377
Continuous Torque	Nm	1182
Continuous Power	kw	155
Torque Density Peak	Nm/kg	36.8
Power Density Peak	kW/kg	4.4

Mechanical Specification		
Motor Cross Section Dimension	mm	265.6
Package Length	mm	616
Mass	kg	85
Maximum Speed	rpm	3808
Axial/Radial Shaft Load	N	300N Axial, 300N Radial
Shaft Output		Flanged coupling
Ingress Protection	IP	IP67
HV Connection Type		PowerLok Connectors

Thermal Specification		
Cooling Method		Water-Glycol 50:50
Coolant Inlet Temperature	°C	-10 to 85
Coolant Inlet Pressure	bar (gauge)	0.5-3.0
Maximum Stator Winding Temperature	°C	180
De-Rate Stator Winding Temperature	°C	165
Temperature Sensor	-	PT1000
Ambient Temperature	°C	-20 to 100

NOTE: 1) Mass: excludes cables and coolant tubes, 2) Peak Values are simulated using 800VDC and 510Arms, 3) Continuous Values are simulated using 400VDC, 70°C inlet temperature and 12 l/m flow rate, 4) The data provided in this datasheet is for guidance only and does not form part of any contract. 5) Motor, inverter, gearbox should undergo application testing to validate performance.

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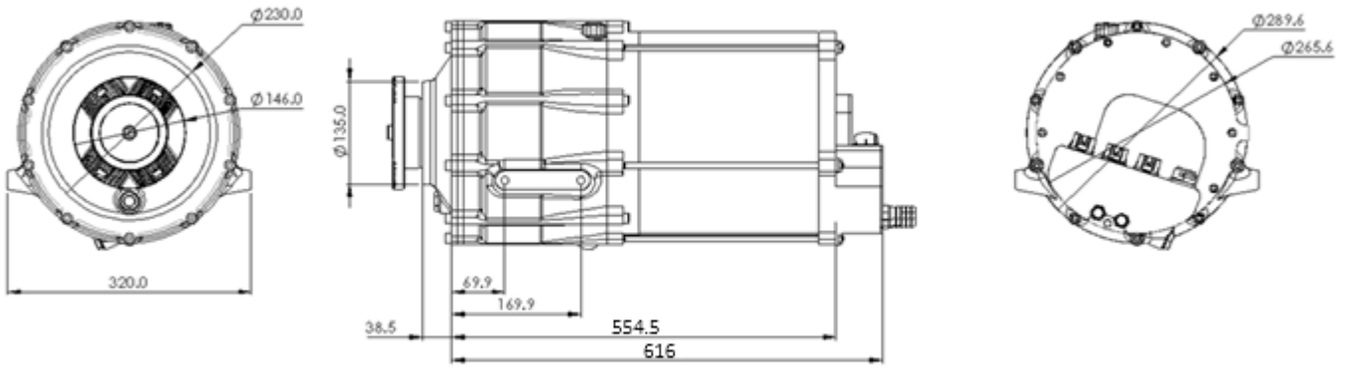
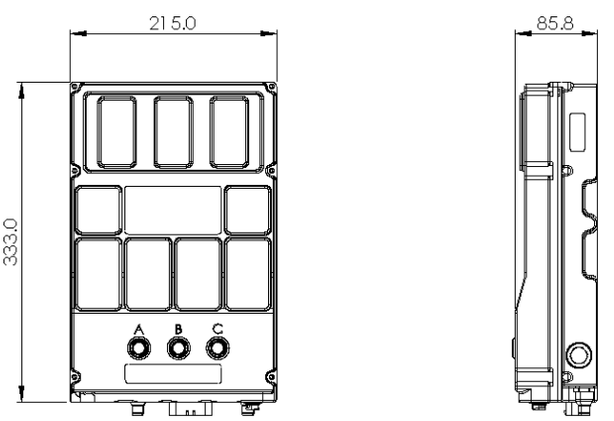
Motor / Gearbox Geometry



Inverter Geometry



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