



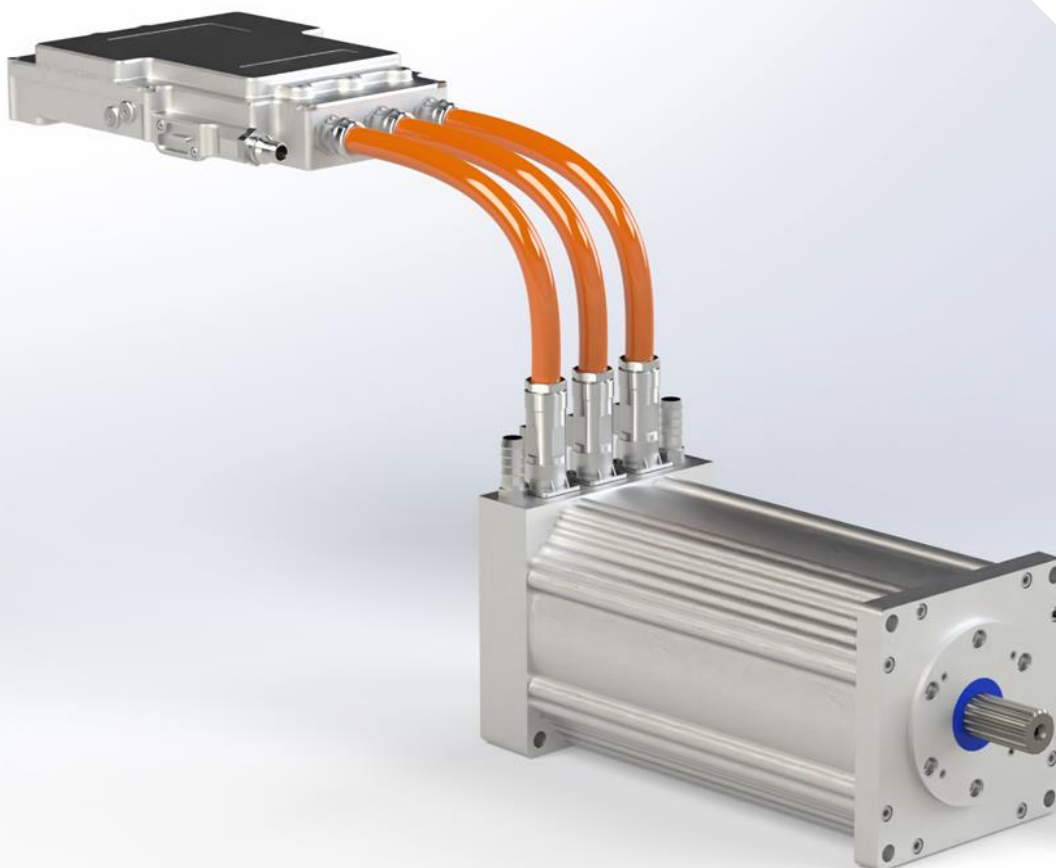
iEV180 + A8002 Drive

Inetis

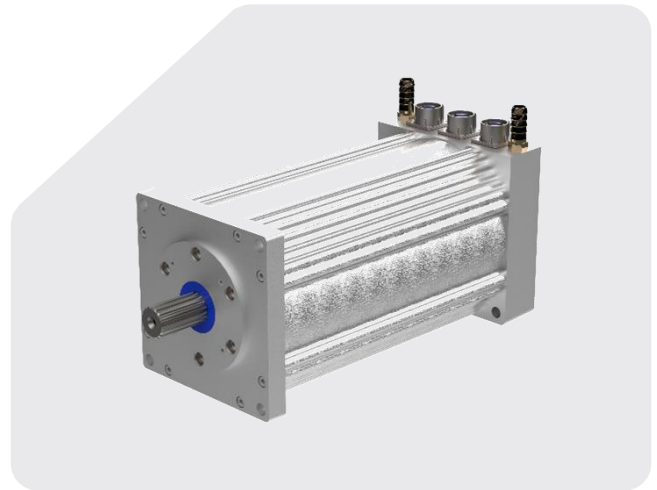
Engineered for **Extreme Axial Load**  
Performance

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## Inverter Features

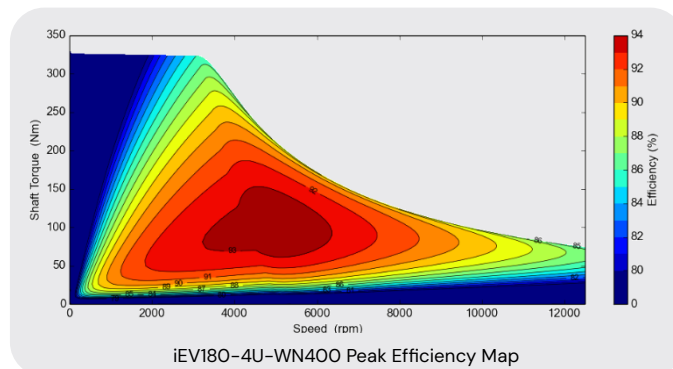
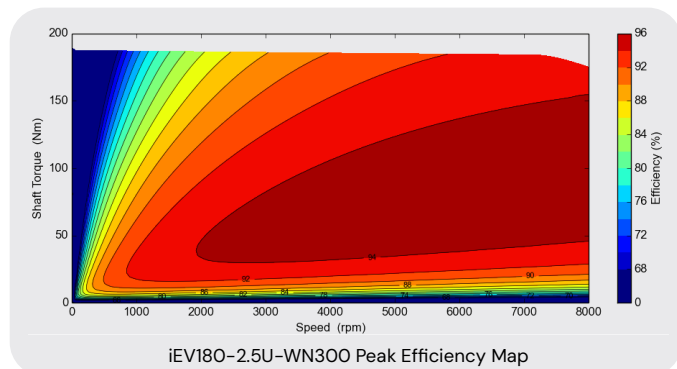
- ASIL D certified triple core microcontroller @300Mhz
- Redundancy functions through a CPLD device for safety-critical applications
- Over current, over voltage and over temperature self-protection features
- Application software enables sensors auto-calibration functions
- Customizable control algorithms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

## Inverter Data

Electrical Specification	UNIT	
Nominal DC link voltage	VDC	48-800
Max Operational Voltage	VDC	840
Max Current	Arms	250
Continuous Power @800V	kW	150
LV Supply	VDC	9-28
Switching Frequency	kHz	2-15

Performance Specification		
Working Temperature	°C	-40 to 85
Cooling		Water-Glycol 50:50
Mass	Kg	4.8
Flow Rate	l/m	6-12

## Motor 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, Rail, Marine and Power Generation
DC Voltage (Motor)	VDC	800
Maximum Phase Current (Motor)	Arms	250
Rotor Position Sensor		Resolver

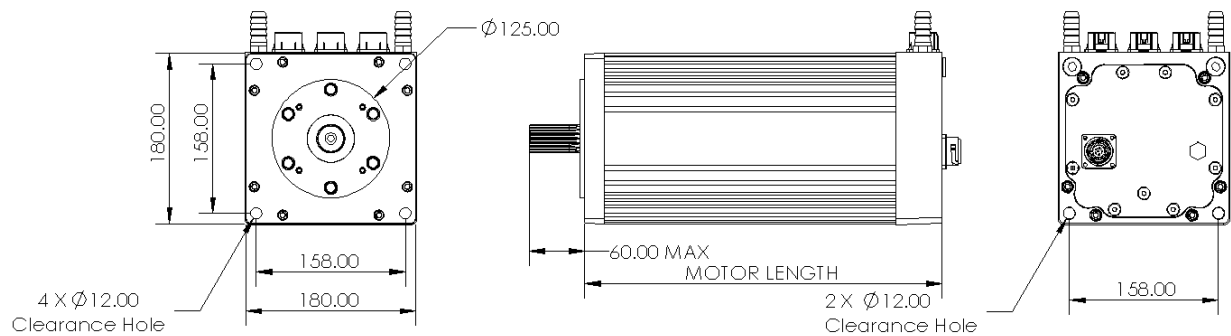
Performance Specification		iEV180-2.5U-WN300	iEV180-4U-WN400
Peak Torque (For 10s)	Nm	185	330
Peak Power (For 10s)	kw	97	110
Continuous Torque	Nm	82	168
Continuous Power	kw	60	73
Torque Density Peak	Nm/kg	6.4	9.5
Power Density Peak	kW/kg	3.3	3.2

Mechanical Specification		iEV180-2U-WN200	iEV180-4U-WN200
Cross Section Dimension	mm	180x180	
Package Length (Excluding Shaft)	mm	256	381
Mass	kg	29	52
Maximum Speed	rpm	14,000	
Axial/Radial Shaft Load	N	2500N Axial, 200N Radial	
Shaf Output		External Spline	
Ingress Protection	IP	IP67	
Motor Connection Type		PowerLok Connectors	
Cogging Torque	Nm	<2.5%	

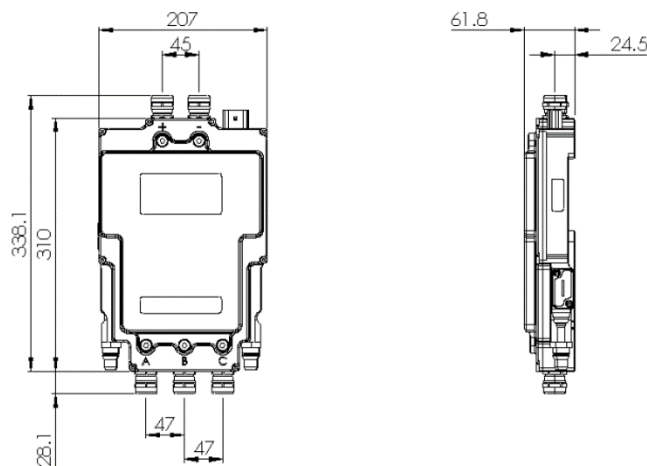
Thermal Specification		iEV180-2U-WN200	iEV180-4U-WN200
Cooling Method		Water-Glycol 50:50	
Coolant Inlet Temperature	°C	-10 to 85	
Coolant Inlet Pressure	bar (gauge)	0.5-3.0	
Maximum Stator Winding Temperature	°C	180	
De-Rate Stator Winding Temperature	°C	165	
Temperature Sensor	-	PT1000	
Ambient Temperature	°C	-20 to 100	

NOTE: 1) Mass: excludes cables and coolant tubes, 2) Peak Values are simulated using 800VDC and 250Arms, 3) Continuous Values are simulated using 800VDC, 70°C inlet temperature and 12l/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.

## Motor Geometry



## Inverter Geometry



Explore [inetictraction.com](https://inetictraction.com) to design your drive system with multiple configurations, matched gearboxes