SEV Motor Series



Elevate Performance in a Compact Package

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sEV Motor Series





Key Features

Optimal Power Density: The sEV motor boasts exceptional power density, offering a compact yet powerful solution for a range of applications, from personal transport to high-power fans and pumps.

Versatile Voltage Optimization: Optimized for a wide voltage range from 12V to 650V, the sEV motor adapts seamlessly to various power requirements, providing versatility and efficiency across different applications.

Low-Noise Operation: The sEV motor prioritizes a serene experience with its low-noise operation. Whether in personal transport or powering high-power fans and pumps, enjoy the benefits of efficient performance without compromising on comfort.

Compact Packaging: Designed for efficient use of space, the sEV motor's compact packaging ensures easy integration into various systems, making it an ideal choice for applications with limited space availability.

Example Applications

Personal Transport (Bikes):

The sEV motor revolutionizes personal transport, particularly in electric bikes, with its lightweight, compact design, and efficient use of space. It ensures efficient mobility without compromising on power, making it ideal for eco-friendly and agile urban commuting.

High-Power Fans and Pumps:

Powerful Performance: In applications like high-power fans and pumps, the sEV motor's power density and compact packaging shine. Its efficient use of space, combined with versatility, make it an optimal choice for ventilation systems and industrial pumps, delivering powerful and efficient performance.

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Motor Data





Electrical Specification	UNIT	sEV135-3U-WN100	sEV180-3U-WN2100
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	48	800
Maximum Phase Current (Motor)	Arms	200	20
Rotor Position Sensor		Resolver	

Performance Specification		sEV135-3U-WN100	sEV180-3U-WN2100
Peak Torque (For 10s)	Nm	30	50
Peak Power (For 10s)	kw	10	8
Continuous Torque	Nm	17	19
Continuous Power	kw	2.7	3
Torque Density Peak	Nm/kg	1.8	2.9
Power Density Peak	kW/kg	0.6	0.5

Mechanical Specification		sEV135-3U-WN100	sEV180-3U-WN2100
Cross Section Dimension	mm	140 x 140	
Package Length (Excluding Shaft)	mm	234	
Mass	kg	17	
Maximum Speed	rpm	6,000	3,000
Axial/Radial Shaft Load	N	100N Axial, 200N Radial	
Shaft Output		External Spline	
Ingress Protection	IP	IP67	
Motor Connection Type		Automotive Connector	
Cogging Torque	Nm	<2.5%	

Thermal Specification		sEV135-3U-WN100	sEV180-3U-WN2100
Cooling Method		Air	Fan
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 48VDC and 200Arms for sEV135-3U-WN100 and 800VDC and 20Arms for sEV180-3U-WN2100, 3) Continuous Values are simulated using 48VDC for sEV135-3U-WN100 and 800VDC for sEV180-3U-WN2100, 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 Geometry



Explore inetictraction.com to design your drive system with multiple configurations, matched gearboxes

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