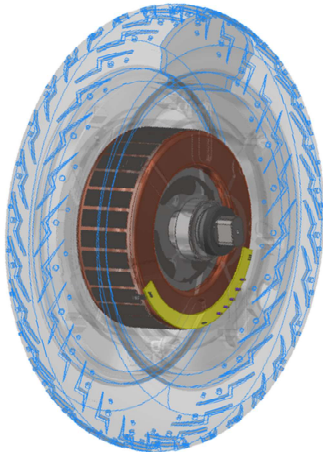


E-Mobility Solutions for Micro Mobility (E-Scooter, etc.) Vehicles

Your gateway to zero emission



Among the key components of an EV, the electric motor plays a critical role in determining its performance and efficiency. In recent years, Permanent Magnet Synchronous Motors (PMSM) and their controllers have emerged as the preferred choice for e-mobility applications.

Radial and axial flux PMSM motors are the ideal choice for e-mobility applications because of their high efficiency, power density, variable speed capability, and low maintenance requirements. They are also compatible with a wide range of battery technologies, which makes them flexible and adaptable to different types of EVs.

Basic Specs			
Nominal Voltage	48 V. DC	Continuous Torque	6.3 Nm.
Rated Speed	525 rpm	Peak Torque	28 Nm.
Top Speed (Scooter)	25 km./h.	Rated Power	350 W.
Max. Gradient	20 %	Peak Power	1.000 W.

Motor Specs
Outer Runner BLDC Motor
Hall Effect Sensor Feedback
High Efficiency
IP55 Protection
H Class Insulation
Thermal Sensor on Request
Custom Winding Applications
High Temperature Resistant Magnets

- **Applicable to 10 inch rim**
- **Stainless Steel Shaft**
- **Customizable Shaft Diameter**



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Motor Controller Basic Specs			
Nominal Voltage	48 V. DC	Continuous Current	40 A.
Voltage Range	18 - 55 V. DC	Maximum Current	60 A.

Motor Control Specs
Designed for PMSM motor at mobility
Sinusoidal or trapezoidal control
Programmable 16-20 kHz PWM frequency
3-shunt motor phase current measurement
Feedback with Hall Effect Sensor
External motor PTC input
Internal PTC connection

Protections
Adjustable over speed protection
Under/over voltage lockout
Over current protection
Over temperature protection
Drive error fault
Motor hall error fault

Communication and I/Os
RS485 interface for motor control or others
Analog speed control
Enable/disable mode
Direction control input
Brake signal input
12V 1.5A supply output for peripherals
5V 1.5A supply output for peripherals
2 PWM output for peripherals
Header connector or direct soldering outs

- **PCB dimension 90 x 78 x 35 mm**
- **Heatsink for thermal enhancements**
- **Operating temperature 0 / +70 °C**
- **Storage temperature -10 / +85 °C**
- **Max. humidity 85%**