Motor Controller for Small Mobility

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Precise control maximizes the potential of electric mobility!

We are committed to technological development to make electric mobility more comfortable and efficient. Motors that power electric mobility do not move as intended just by drawing current from the battery. This is where the “motor controller” comes into play! It finely adjusts the current and frequency according to driving conditions—ensuring a smooth ride and fulfilling the user’s intentions.

Aisan Industry has spent many years cultivating control technologies for engines and hybrid vehicles. Leveraging this experience, we develop hardware and software, as well as propose systems that perfectly match our customers’ needs.

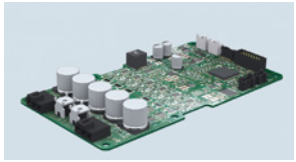
In addition, simulation technology is used to ensure lean designs and high-quality manufacturing processes. We continue to make fine adjustments even after installation in vehicles to ensure optimal performance.

This technology reduces vehicle shaking when starting or driving at low speeds and prevents the vehicle from rolling backward when starting on a slope. We will continue to support the evolution of safe and comfortable mobility, taking on the challenge of creating new value!

Highlights of Achievements

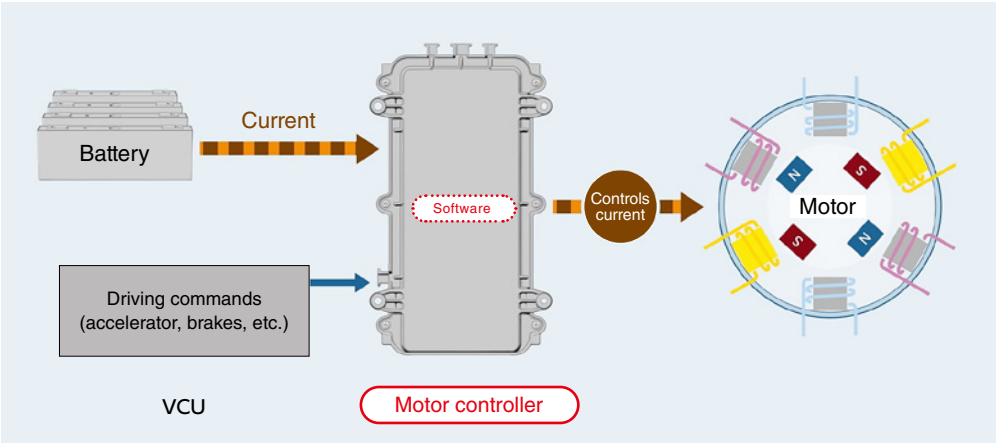
01 Motor controller

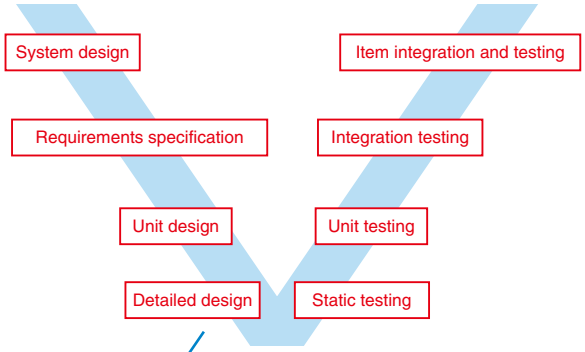
Motor controllers are essential products that support the entire mobility powertrain. They enable efficient driving by precisely controlling the current and frequency supplied to the motor according to driving conditions. This reduces mobility’s acceleration and deceleration, as well as battery consumption.



Circuit board required for motor control

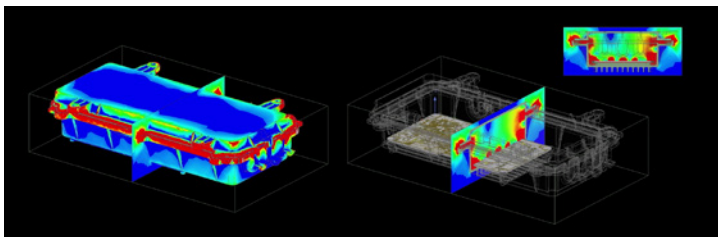
Software



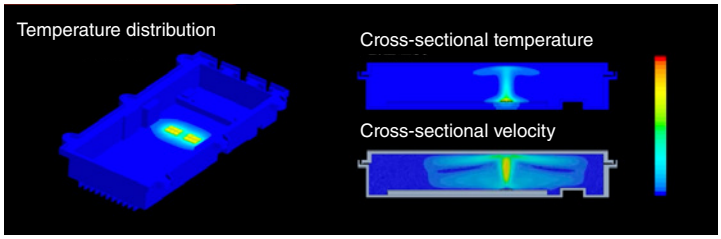


02
V-shaped model process

Leveraging our many years of experience in engine and hybrid control development enables us to proceed with development systematically, according to process, and ensure high quality.



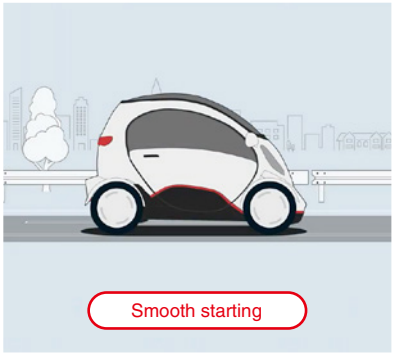
Noise simulation

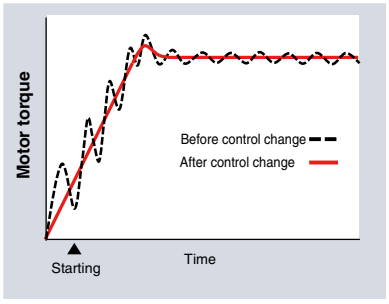


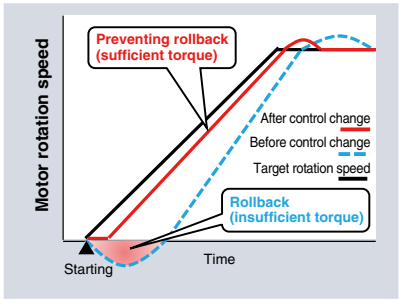
Thermal fluid analysis

03
Simulation

We have shortened schedules and reduced prototyping costs by utilizing simulation in the design process to promote efficient development without rework.







04
Motor control development

Our control technology and vehicle expertise, cultivated through body and torque control during hill starts, enable performance levels that meet mobility requirements.

Results (Problem Solving)

- Reduced shaking when starting to achieve a more comfortable ride.
- Prevented backward movement when starting on slopes, improving safety.

Achievements

- We aim to promote the adoption of electric mobility further by continuing to pursue improvements and cost reductions.