

# Torque Measurement for Electric Vehicles

## AxialTQ™

### Industry: Automotive and Vehicle

#### Summary

##### Customer Need / Challenge

An electric vehicle manufacturer needed a torque measurement system for their electric vehicle motors. These motors run at significantly higher rotational speeds than their internal combustion engine (ICE) counterparts, and have much higher power densities due to the small size and light weight. The system would be used to test the torque and speed of their electric motors to achieve and ensure optimum instant peak torque performance.

##### Interface Solution

Interface's AxialTQ™ Wireless Rotary Torque Transducer is a highly accurate system that provides the highest quality torque measurement. This product comes with the AxialTQ™ Output Module and the provided AxialTQ™ Assistant software, that can be installed on a test bench. Data results are calculated and collected in real-time.

##### Results

Interface's AxialTQ Wireless Rotary Torque Measurement System accurately measured the torque and RPM of the electric vehicle motor and they were able to achieve their required instant peak torque.

#### Materials

- AxialTQ™ Wireless Rotary Torque Transducer
  - Rotor
  - Stator
  - AxialTQ™ Output Module
  - supplied AxialTQ™ Assistant Software
- AxialTQ™ Speed Gear Option
- Interface Integrated Disc Couplings
- Customer's PC or Laptop
- Customer's test bench

#### How It Works

1. The AxialTQ™ Wireless Rotary Torque Transducer is installed on a test bench.
2. The AxialTQ™ Wireless Rotary Torque Transducer tests and senses the electric vehicles motor with high accuracy. It both measured and calculated the electric vehicles torque and rotational speed (RPM), while collecting data.
3. Results can be reviewed on the customer's PC or laptop with the included AxialTQ™ Assistant Software.

