KEV-06 | **ELECTRIC VEHICLE 4 WHEELER**

Technical Specification :

- Battery voltage (V): 48V
- Battery capacity: 210 Ah (~10.1 kWh) or 280 Ah (~13.4 kWh)
- Power output: 25.4 bhp/18.9 kW
- Maximum torque (Nm): 70
- Electric Motor: Three-phase AC induction motor, 19 kW or 30 kW
- 48V Direct drive motor with DC-to-DC convertor and controller
- Accelerator provided along with complete wiring harness.
- All components used for EV models are actual and functional model

Experiments Covered

- Identify the electrical circuits and test their parameters by using electrical measuring instruments, and the basic electronic circuits and analyze their circuit functioning.
- Identify and study of Electric vehicle components and Performance comparison of EV and IC engine vehicles. (Components of Electric Vehicle such as Motor, Motor Controller, Battery Pack, Battery Management System, Charging System)
- Trace and Test all Electrical, Electronic components & circuits and assemble circuit to ensure functionality of system.
- Perform checking and troubleshooting of wiring circuits - HV and LV and the electrical components in the electric vehicle.
- Apply the knowledge of power transmission system in electric vehicle, its basic components and functions; electric vehicle motor, its speed control technique and motor controller.
- Demonstrating the operation of the 48V EV system
- Identify and develop Battery Pack Components, monitor, and check performance of high voltage rechargeable energy storage system and Battery Management System.
- Perform battery testing, charging, and cycling operations.
- Test and troubleshoot Accessory and Auxiliary Components - Power Steering, Braking and AC Comfort System.
- Operate and troubleshoot Electric Vehicle Charging Ecosystem.
- Diagnose, repair, and testing of EV vehicles and subsystems and EV components.
- Perform servicing and testing of air conditioning system and electric vehicle accessories.
- Disassemble and assemble various components of EV using appropriate fasteners and hand tools.
- Demonstrate regulatory requirements for electric vehicle and new trends in electric vehicle.