



RENNOVA MCU FUNCTIONAL TESTER

Motor Control Unit Automatic Test Equipment (MCU ATE) refers to a testing system or equipment specifically designed for testing and validating motor control units (MCUs).

Motor control units are electronic devices used to control the operation of motors in various applications, including EV, automotive, industrial, and consumer electronics. They play a crucial role in managing motor speed, direction, torque, and other parameters.

The MCU ATE is utilized during the manufacturing process to ensure the functionality, performance, and reliability of motor control units. It typically consists of hardware and software components tailored for testing MCUs used in motor control applications.



The ATE system incorporates specialized test interfaces, test fixtures, and test programs to facilitate comprehensive testing of motor control units. These components allow for precise control and monitoring of the motor control signals and responses.

The MCU ATE performs a series of tests to verify the motor control unit's proper operation and compliance with specified requirements. These tests may include functional testing of various control modes, verification of motor speed and torque regulation, testing of communication interfaces (such as CAN or Ethernet), fault detection and protection mechanisms, and more.

By utilizing MCU ATE, manufacturers can efficiently and effectively test motor control units in high volumes, ensuring their quality and reliability before integration into end products. This helps to minimize production defects and enhance overall product performance and customer satisfaction.

Overall, Motor Control Unit Automatic Test Equipment plays a vital role in the manufacturing process, enabling rigorous testing of motor control units to meet stringent quality standards and ensure optimal motor performance in various applications.



Specification and Features:

- As per requirements ATE will be customised
- Fully Automated and Closed loop MCU test system with command and Response through CAN with various signal input scenario
- Simulates low voltage Digital signals like High side and low-side switch inputs, low voltage Analog signals like throttle, etc., quadrature PWM signals like encoder etc., and passive temperature sensor signals
- Measures and validates MCU outputs like sensor supply, MCU 3Phase Power output and efficiency
- Simulates Motor Load using 3Phase R-L Load
- Software flashing and updating features
- Pneumatic fixture and Spring loaded pins for easily engaging and disengaging MCU
- Report generation and traceability for individual DUT
- Industry 4.0 system with MES server communication



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