Motor Test Bench (MTB)

Integrated testing and measurement platform for embedded systems.

Our Motor Test Bench is designed to facilitate comprehensive **testing** and **measurement** of **embedded systems**, that generate mechanical rotary movement, as well as their component, ensuring their seamless development. With both **automated** and **manual** capabilities, the MTB empowers engineers to assess various functions and parameters, including **mechanical** and **electrical characteristics**, during the development and validation phases.



Versatile testing capabilities (manual or automated)



Compliance with safety standards



Real time data tracing





High level communication with DUT

Setup

A test chamber is attached to the machine into which DUTs (Motors, optionally with integrated electronics) are placed. Load Motors (LM) are installed to measure the Torque measuring shaft and DUT speed and to drive and brake the DUTs. The test chamber includes Load Motor, Torque measuring shaft and DUT. In a separate area next to the test chamber, E-DUTs and connection options are located to test electronic components.

Your benefits

- Communication of measurements and test results to a control PC
- Several load motors can be operated in the machine
- Permissible to use separated or integrated DUT consisting of motor and electronics
- Software integration into existing ecosystem and application lifecycle management via industry standard software (ECU-TEST)
- Efficiency maps determination for motors, inverters, and combinations of these components

Technical Parameters

- Maximum continuous output power of 3.6 kW and maximum peak power of 4 kW
- High precision torque measurement with encoder resolution of 24 Bit
- Extensive safety protection with IP54 enclosure rating for electrical connection and an integrated safety controller
- Wide range of voltage supplies including 230 VAC and 440 VDC

Key applications

- Multi mechanical and electrical DUTs support
- Automated testing reduces verification effort
- Timing measurement and state change monitoring

Key features

- Time-synchronized recording of data via EtherCAT
- 4 parallel load motors with different ranges for DUTs
- Large range of supply voltage
- High precision power measurement with calibrated devices



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