RTC-9001: Controller for fatigue test

The RTC-9001 is a Real Time Controller designed and optimized to perform static and fatigue test with all types of actuators

EnginLAB designed the RTC-9001, Real Time Controller, keeping in mind the need for laboratories and industries to easily perform static and fatigue test with a very powerful and cost effective system.

The RTC-9001 electronic can control any actuator equipped with a servo-valve or a servo-drive with analog input control in the range of ±10V, ±5V, 0-10V.

The Software is powerful and user friendly, check it on EnginLAB YouTube channel. The RTC-9001 training is completed in less than an hour.

The software is also available for torque test.

RTC-9001 hardware and software technical characteristics

- PID control loop based on National Instruments FPGA board and Real Time Processor
- 1kHz control loop rate (5kHz on request)
- selectable PID output voltage
- PID coefficients can be changed on the fly
- amplitude control during fatigue test
- actual cycles monitoring
- sensors max min monitoring versus cycles
- analog input ±10V for Force Transducer
- analog input ±10V for Displacement Transducer
- analog input ±10V Aux1, Aux2 (on request)
- Load or Displacement feedback control selectable on the fly
- SetPoint with ramp mode and hold, sine triangular and squared waves
- safety limits both for force and displacement
- Force versus Displacement graph
- Procedure test editor
- Continuous Recording, Max Min Vs. Cycles recording
- Export data to csv format
- user interface developed with Labview
- 24V Digital outputs for servo enable and manifold control
- Sensor Calibration Tool for table data calibration coefficients
- Save and load for different system setup
- Power Supply 220V, 50Hz
- Option of two actuators control (on request)
- Option of additional input sensors (strain gauges)
- Control software customization (on request)