TEST CONTROLLER

1 to 32 channels test controller for automotive testing

At Moog, we understand that your investments in automotive prototypes are high. That's why you need a dependable, proven Automotive Test Controller to protect both the test article and the test data.

The Automotive Test Controller incorporates our unique control loop technology to handle general purpose tests of up to 32 servo channels, with or without a PC. Its operator flexibility, high-performance handling of complex testing formulas and ability to run without offline external software make it an indispensable tool for automotive testing labs.

ADVANTAGES

• Unsurpassed flexibility for user-friendly, cost-effective operation in a range of testing applications

• Proven controller reliability—more than 5,000 control channels installed and used daily in test labs around the world

• Advanced safety checks are built-in to ensure your test article and test data are always protected

• High-performance operation for both basic and complex applications

TEST APPLICATIONS

• 4-8 Poster test system

• 6 Degree-of-Freedom (DOF) suspension test rigs

• 6 Degree-of-Freedom (DOF) simulation tables

• Durability and fatigue tests

• Vibration and performance evaluation

• Multi-axis test rigs

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The Automotive Test Controller is designed based on input from customers of leading automotive test laboratories, making it the ideal choice for simple, efficient operation in an array of testing applications, and as an extension on the Portable Test Controller.

The Automotive Test Controller with an integrated full VGA color display that can handle up to 32 channels. It includes the Moog unique control loop technology for force, displacement and acceleration control with bumpless transition. It can be used in manual control, for durability and fatigue testing and has the capacity to apply complex automotive test spectra.
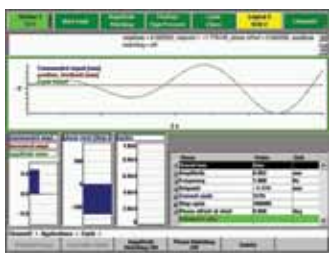
KEY FEATURES

- Advanced control that is expandable up to 32 channels
- A movable test controller
- Unique control loops (e.g. force, displacement and acceleration) for faster and more efficient testing and reduced set-up time
- Simple operation that allows you to add just the functionality you need for cost-effective integration
- Built-in data-acquisition, integrated oscilloscope display and data storage capability on a local hard-disk, make testing easier and save both lab space and running costs
- Flexibility with any hydraulic, electric or pneumatic actuators
- Plug and play with all connectors for cost-effective, immediate integration

- Pseudo channels capability allowing the user to create online calculated channels using formulas and other inputs, offering greater flexibility and cost savings for the lab
- Matrix control provides measurement and control flexibility for more efficient testing
- Bumpless switching (e.g. Force, Position) to take advantage of the full range of application
- Scripting for digital and analog I/O as well as limits and peak detectors makes set up and running of tests easier
- Online adaptive controls for amplitude and phase saves set-up time
- Calibration and tuning wizard to facilitate and accelerate setup

Housing	• 19" cabinet 1.8 m (314 in) high • Integrated 17" full VGA color display • Ventilated control cabinet
Servo controller	• Up to 2.5 kHz multi channel or up to 10 kHz single channel control loop (software selectable) • Moog unique control loop • Three feedback control possibilities (Force, Position, Acceleration) • Bumpless instant mode switching between force and position mode
Function Generation	• Frequency range 0.01 to 500 Hz • Multi-channel function generation with user defined "mixer" functions (e.g. mix a low frequency offset with a higher frequency load) • Waveforms: sine, sawtooth, block/square, ramp, rounded ramp, exponential • Analog input can be used as command • Complex simulation spectrum support including spectral density (psd frequency definition) • Constant amplitude and phase matching
Software	• FasTest application software suite

Standard Inputs (per channel)	• 2x high resolution (0.03 %) with selectable gain and bridge excitation. • Pot meter input (0.03 %) (± 5 V 5 mA) or LVDT input (0,03 %) with LVDT excitation (5 V RMS @ 3.5 kHz) • Encoder, absolute (SSI) maximum 32 bit or relative 10 bit • 16 bit input (± 10 V)
Standard Outputs (per channel)	• 16 bits ± 100 mA valve driver output, with a limit in software from 0 to 100 % or (hardware selectable) +/- 10 V output • 2x 16 bit D/A converters, ± 10 V
Optional Items	• Manifold Control Unit with 4 On/Off Low/High pressure valves (24 VDC/2 A each) • Digital I/O board containing 8 inputs and 8 outputs • Analog I/O board containing 8 inputs and 8 outputs • Analog I/O board containing 16 inputs • Strain amplifier board (6 channels, 1/4, 1/2 and full bridge 120/350 ohm) • Add on board for 3-stage servovalve • Accelerometer input board 6 channels • TestSDK for connection to Matlab®, LabVIEW®, and other programming environments • Uninterruptible Power Supply (UPS)

Moog has offices around the world. For more information or the office nearest you, contact us online.

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This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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