UP TO 32 CHANNEL DIGITAL SERVOCONTROLLER

SmarTEST xX SERVOCONTROLLER FOR AUTOMOTIVE TESTING

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

The SmarTEST xX servocontroller incorporates Moog FCS' unique force 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.

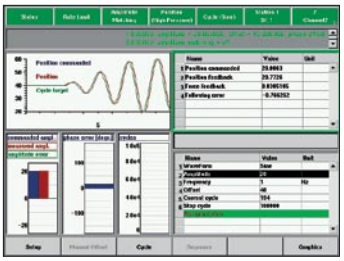
ADVANTAGES

- Unsurpassed flexibility for user-friendly, cost-effective operation in a range of testing applications
- Proven reliability—more than 5,000 controllers 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

AUTOMOTIVE TEST APPLICATIONS

- 4-Poster Test Systems
- 6-Degree of Freedom (DOF) Suspension Test Rigs
- Durability and fatigue testing
- Vibration, shock and performance evaluation
- Kinematics and compliance testing
- Elastomeric testing

SPECIFICATIONS



The SmarTEST xX Servocontroller is designed based on input from customers from 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 SmarTEST ONE.

The stand-alone digital controller with an integrated full VGA color display that can handle up to 32 channels. It includes the Moog FCS unique control loop technology for force, displacement and acceleration control with bumpless transition. It can be used in manual control, constant amplitude tests and has the capacity to apply complex automotive test spectra.

KEY FEATURES

- Advanced control that is expandable up to 32 channels
- Unique patented 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 (up to 2500 Hz/ channel), integrated oscilloscope display and data storage capability on a local hard-disk, make testing easier
- Flexibility with any hydraulic or electric actuator
- 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
- Dual mode, bumpless switching (e.g. stroke to load or load to stroke) to take advantage of the full range of application
- Scripting for digital & 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

HOUSING	• 19" cabinet 1.8m high • Integrated 17" full VGA color display • Climate controlled cabinet
SERVOCONTROLLER	• Up to 10kHz control loop (software selectable) • Moog FCS unique control loop • Three feedback control possibility (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, • Analogue input can be used as command • Complex simulation spectrum support including spectral density (psd frequency definition) • Constant amplitude and phase matching
STANDARD INPUTS (PER CHANNEL)	• 2 x high resolution (0.003 %) with selectable gain and bridge excitation. • Pot meter input (0.003 %) (+/- 5V 5mA) or LVDT input (0.003%) with LVDT excitation (5V peak to peak @ 3kHz) • Encoder, absolute (SSI) max 32 bit or relative 10 bit • 16 bit input (+/- 10V)
STANDARD OUTPUTS (PER CHANNEL)	• 16 bits ± 100 mA valve driver output, with a limit in software from 0 to 100% or (hardware selectable) +/- 10V output • 2 x 16 bit D/A converters, +/- 10V
OPTIONAL ITEMS	• Manifold Control Unit with 4 On/Off for Low/High pressure valves (24VDC/2A 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 (6ch. 1/4, 1/2 and full bridge 120/350 ohm) • Add on board for 3 stage servovalve • Accelerometer input board 6 channels • UPS

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

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