



1 TO 384 CHANNEL DIGITAL SERVOCONTROLLER

SmarTEST ELITE SERVOCONTROLLER FOR AEROSPACE TESTING

At Moog FCS, we understand that your investment in aerospace prototypes are high. That's why you need a dependable, proven servocontroller to help you be more productive and to protect both the test article and the test data.

The SmarTEST ELITE servocontroller incorporates Moog FCS' unique force loop technology to handle complex multi-channel tests of up to 384 servo channels. Its operator flexibility and high-performance handling of complex testing formulas utilizing the Moog FCS Explorer/Manager software make it an ideal tool for modern aerospace testing labs.

ADVANTAGES

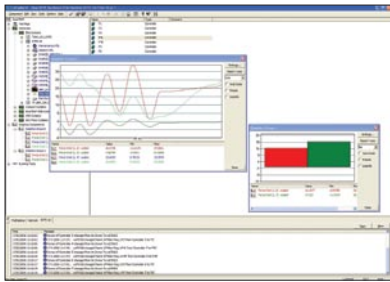
- Loop update rate 2,500 Hz for ultimate response/higher if required
- SmartLOOP technology for faster, more accurate testing
- Pseudo channels capability to meet the most complex test requirements
- Distributed system architecture



AEROSPACE TESTING APPLICATIONS

Moog FCS offers servocontrollers that provide static and fatigue testing, ranging from complete aircraft to sub-assemblies to components.

- Aircraft/airframe structural tests
- Iron bird tests
- Landing gear tests
- Helicopter airframe, rotor head and blade tests
- Fuselage and cockpit pressurization
- Engine casing tests
- Fin actuation loading tests
- Hydraulic system tests
- Load calibration tests
- Spacecraft structural integrity



KEY FEATURES

- Advanced control that is expandable up to 384 channels
- 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
- Flexibility with any hydraulic or electric actuator
- Plug and play for cost-effective, immediate integration of all test modules
- 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
- Test-oriented SmartBAR user interface
- Fast graphics capabilities for a large number of signals
- Display of engineering units, zoom option

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

e-mail: info@moog-fcs.com

www.moog-fcs.com

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SmartTEST ELITE Aerospace
Mobium/PDF/0207

The SmarTEST ELITE servocontroller was designed based on input from customers from leading aerospace test laboratories, making it the ideal choice for simple, efficient operation in an array of testing applications.

The SmarTEST ELITE can handle up to 384 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 aerospace test spectra.

INTERFACES

- CAN-bus
- Ethernet
- Reflective Memory
- Arinc 429
- Digital I/O, Analog I/O, DDE

REAL-TIME DIGITAL AND ANALOG I/O

- Digital Input**
- Up to 192 channels
- Digital Output**
- Up to 192 channels
- Analog Input**
- Up to 384 channels
- Analog Output**
- Up to 160 channels

STANDARD CONTROL INPUTS (PER CHANNEL)

- 2 x 18 bit resolution with selectable gain and +/- 5V bridge excitation for load cells, pressure transducers etc.
- Potmeter (+/- 5V, 5mA) or LVDT input 18 bit (5V RMS @ 3.5 kHz LVDT excitation)
- 18 bit resolution A/D converter, +/- 10V differential
- 2 x opto-coupled digital inputs for Safetylink

STANDARD CONTROL OUTPUTS (PER CHANNEL)

- ± 100 mA OR +/- 10V valve driver output, with a limit in software from 0 to 100%
- 2 x 16 bit D/A converters, +/- 10V differential
- 2 x opto coupled digital outputs for Safetylink

SOFTWARE

- SmarTEST Explorer
- SmarTEST Manager with SmartBAR
- Conversion tools

INPUT VOLTAGE

• 95-132 VAC/ 190-240 VAC; 47-63 Hz

OPTIONS

- SmartMODEL for faster testing
- Real-time interface to DAQ
- SmartPDA for remote control and tuning

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.