VCS 401

Vibration Control System – powerful, modular, flexible

Applications

- Vibration tests
- Modal excitation
- Quality assurance
- Environmental tests
- Micro-structural investigation

Fields of use

- Subsystem for automatic tests in production lines
- Mobile use in field
- Laboratory applications
- Updating of existing vibration test systems
- Customized solutions
- Tailored controller configurations for SPEKTRA HF-shaker SE-09 and APS-shakers
- Laser measurement station for micro-mechanic components

Features

- Scaleable, flexible vibration control system with variable number of measurement/control channels
- Hardware base:
  National Instruments PXI
  reasonable price, worldwide available
- Compact hardware, suitable for industrial applications
- Controller for vibration test modes:
  sine, random, shock, time signal replication
- Control of acceleration, velocity, displacement, voltage, also with laser vibrometers
- Stand-alone usage without PC possible
- Remote controllable by Ethernet interface, DLL
- Measurement database
- Rich display and export options
- Real time data acquisition, transmission, recording
- Complex test schedules by easy scripts inside user interface program

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Operation modes

- Sine
- Random
- Shock
- Sine over Random
- Resonance (search & dwell)
- Time signal replication
- others on request

Technical data

Sine	0.01 Hz ... 50 (95) kHz (Extensions on request)
Random	1 Hz ... 50 (95) kHz, 5,000 (10,000) Lines
Shock	Halfsine, Trapezoid, Sawtooth, Custom; 0.25 ms ... 40 ms

Multi channel operation

- 1 to 8 control channels for up to 8 shakers
- Synchronous excitation, with adjustable phase shift if required
- Individual excitation of some or all channels
- 1 channel control with up to 34 inputs, average, min., max.
- Monitoring channels

Configuration

- NI PXI Real time system in flexible composition
- Connection to PC via Ethernet
- Powerful PC User Interface (National Instruments LabVIEW), extensible by customer if necessary
- 2 to 34 Analogue Inputs 24 Bit, 10 V, with or without IEPE, switchable
- 2 to 8 Analogue Outputs 24 Bit, 10 V
- optional data acquisition channels e.g. 16 * 16 Bit
- optional Digital I/O for status, start, stop
- optional signal conditioning for charge sensors, PR sensors, capacitive sensors

Remote control

- simple flexible remote control by DLL, Ethernet, VI or COM/DCOM

Data acquisition

- Real time data acquisition, transmission, recording
- flexible data analysis

Special solutions

- Low cost standard system, 1 output / 2 input channel(s), 0.1 Hz ... 5 kHz
- 4 Channel Controller for 4 long stroke shakers APS 400 with seismic masses for modal analysis
- HF-Controller with HF Shaker SE-09, 1 Hz ... 95 kHz
- Customized solutions, production test systems, digital acc. Sensor data acquisition, 3D excitation

Standards

- DIN EN 60068-2 Part 6, 27, 29, 64, 80

All data are subject to change without notice

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