



Medium-Frequency Vibration Transducer Calibration System

Technical Specifications

ECS-1815



Econ Technologies Co., Ltd.

Overview

ECS-1815 Medium-Frequency Vibration Transducer Calibration System is designed according to ISO 16063-21:2003, for calibrating the sensitivity, frequency response, amplitude linearity and transverse sensitivity of acceleration transducer, velocity transducer, displacement transducer, vibration meter, bearing vibration meter and foundation pile dynamic meter.

ECS-1815 consists of ECI programmable calibrator, standard shaker, power amplifier, reference transducer, high precision conditioning amplifier, and computer, with high precision and automation in calibration.

Comparison method is applied in ECS-1815 system to achieve the calibration, and meanwhile improved comparison method is provided: substitution method and shoulder-to-shoulder method. The system automatically measures the frequency and amplitude of reference transducer and the transducer under test, and then calculates the sensitivity, frequency response and amplitude linearity, etc., and finally automatically generates the calibration report.

The ECS-1815 series Medium-Frequency Vibration Transducer Calibration System is an excellent calibration partner applied in the R&D, manufacture, metrology and use procedure of transducer or vibration meter.

Features

- ✓ Compliant with ISO 16063-21:2003 Methods for the calibration of vibration and shock transducers Part 21: Vibration calibration by comparison to a reference transducer.
- ✓ Accredited to NIMC (National Institute of Metrology, China)
- ✓ Back-to-back calibration procedure.
- ✓ Support calibration on various of vibration accelerometers (optional velocity transducers, displacement transducers, and vibration meters).
- ✓ Calibration contents include sensitivity, frequency response, amplitude linearity and transverse sensitivity.
- ✓ Accurate and professional calibration software based on loop control.
- ✓ Calibration frequency range up to 10 kHz.
- ✓ Extended uncertainty degrees <1% (@160Hz, 100m/s²).
- ✓ Support Substitution calibration method and extension calibration method.
- ✓ Support "Shoulder to shoulder" calibration method.
- ✓ Automatic calibration procedure save engineers calibration time significantly.
- ✓ Generate calibration report in Word or PDF format automatically, and the report is compliant with ISO 17025 and can be customized as per customer's request.

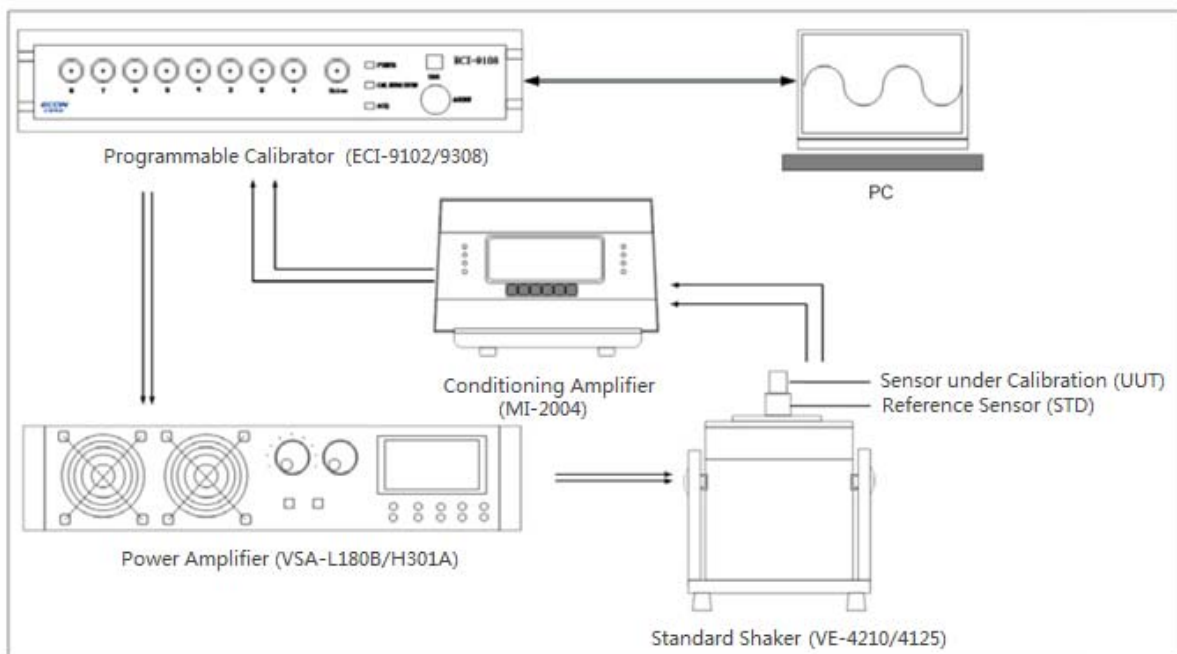


Components

ECS-1815 Mid-frequency Transducer Calibration System consists of the following parts:

- ✧ Standard Shaker and its amplifier.
- ✧ Programmable calibrator (ECI-9102 or ECI-9108)
- ✧ Reference transducer (STD).
- ✧ Conditioning amplifier (MI-2004).
- ✧ Calibration software.

Working Diagram



The calibration course is compliant with ISO 16063-21:2003, back to back mode. Programmable calibrator generates standard signal which is amplified by the power amplifier and drive the standard shaker. The signal measured from standard transducer is regarded as a close-loop control signal, and the signals measured from standard transducer and under-test transducer will be back to programmable calibrator used for vibration comparison. Then the programmable calibrator automatically makes calculation, generates curves based on the data, and finally these results are displayed on the computer screen.

System Parameter

Technical parameters



System Model	ECS-1815
<u>Composing</u>	
Programmable Calibrator	ECI-9102 or 9108
Standard Shaker	VE-4125
Power Amplifier	VSA-H301A
Reference transducer (STD)	As required
Conditioning amplifier	MI-2004
<u>Performance</u>	
Rated Force (N)	250
Max. acceleration	250m/s ²
Max. velocity	1m/s
Calibration Frequency range	10~5,000Hz
Frequency range	5~10,000Hz
Max. travel	10mm(p-p)
Max. load	2kg
Diameter of table	Φ95mm
Effective moving mass	1kg
Maximum load	2kg
Calibration Channels	2 or 8
Calibration Software Options	Sensitivity, Frequency Response, Amplitude Linearity Transverse Sensitivity, etc
Transducer Compliant	Accelerometer, Velocity Transducer, Displacement Transducer, Vibration Meter, Bearing Vibration Meter, Pile Dynamic Meter
<u>Mechanical</u>	
Dimension	φ280×379.5mm
Weight	100KG
<u>Electrical</u>	
Power supply	220V AC, 50-60 Hz
Power Consumption	300VA
<u>Environmental</u>	
Temperature	0~40℃
Humidity	10~90%RH, non-condensing (20℃)

About Us

ECON is a world-wide one station manufacturer and supplier for equipment and solution of vibration testing, measurement and calibration.

Founded in 2002, ECON have been dedicated in developing better quality and higher cost-efficiency equipment and solutions to help customers to meet market crucial demand on their products quality and reliability. More than 20 years experiences and innovative ambition support us to fulfill this vision into reality.

Today ECON is well-known and taking leading role in China to produce and supply Electro-dynamic Shaker, Servo-hydraulic Shaker, Vibration Controller, Measurement Instrument and Transducer Calibration system.

ECON is supplying products, solution and service to customers under support of our local partners and sales representatives. Also ECON is looking forward to more global partners for promotion in their area.



- Headquarter
- R&D Center
- Sales and Market Center
- CNAS and CMA qualified Testing lab
- 5,000 sqm Facility



- Factory
- Product Center
- Logistics Center
- 20,000 sqm Facility

Econ Technologies Co., Ltd.

Add: Building 4, 1418-41 Moganshan Rd., Hangzhou 310015, China

Tel/Fax: +86-571 88174609

Email: salesintl@econ-group.com (enquiry, quotation and business development)

coordinator@econ-group.com (order processing and logistics)

support@econ-group.com (technical support and maintenance)

Website: <http://www.econ-group.com>

Econ All Rights Reserved

The information described in this specification does not constitute any of the elements of the contract are subject to change without notice. Microsoft Windows, Windows XP / 7/10, Word, Excel of Microsoft Corporation in the United States and other countries are registered trademarks.