



# Transducer Calibration

## Catalog

*ECS-1028 Portable Calibration System*

*ECS-1815 Middle Frequency Calibration System*

*ECS-1816 Middle-high Frequency Calibration System*



Econ Technologies Co., Ltd.

## Portable, Field Use

ECS-1028 is suitable for field calibration of monitoring purposes in production lines, and instant calibration in outdoor field. Commons in such cases, customers only need to know the sensitivity of the sensor-under-test (SUT).

This procedure of ECS-1028 is simple, and processing time will be very short since quantities of SUT is large or the outdoor environment is not that comfortable as in indoors. After a quick and instant calibration, a sensitivity result will be generated and the calibration data will be ready for export.

### Features

- ✓ ISO 16063-21 standard compliant
- ✓ Calibration frequency range is 20-2,000Hz
- ✓ Compact design with light weight
- ✓ Loop control calibration with automatic procedure
- ✓ Portable and instant calibration
- ✓ Support to calibrate voltage, PE, IEPE, Piezo-resistive, and Capacitive mode sensor.
- ✓ Customized calibration report generation
- ✓ Support calibration data export by USB
- ✓ 6 hours battery Endurance



### Ordering Information

System Model	ECS-1028
Max. Excitation Force	100 N
Calibration Frequency Range	20-2,000 Hz
Max. acceleration	10 g
Max. Displacement (p-p)	1.8 mm
Max. Velocity	0.2 m/s
Max. Load	0.8 kg
System Uncertainty	<3% (160Hz, 100 m/s <sup>2</sup> )
Calibration Method	secondary (back to back)
Calibration Function	sensitivity
Calibration Procedure	point to point

**10-5,000Hz, Laboratory Use**

ECS-1815 is for laboratory use to calibrate vibration transducers which are working during middle frequency range. It is composing of a standard shaker, a reference accelerometer, programmable calibrator with calibration software, and an optional conditioning amplifier.

ECS-1815 is working under secondary calibration method (back to back), to measure the sensitivity of the sensor-under-test (SUT) by point to point, swept sine or random vibration over standard or user-defined frequency and acceleration ranges. The process is simple in calibration. Customer only need to mount the SUT on standard shaker and start the automatic calibration procedure.



**Features**

- ✓ ISO 16063-21 standard compliant
- ✓ Calibration frequency range is 10-5,000Hz
- ✓ Support to calibrate all kinds of vibration accelerometers, velocity and displacement sensors (voltage, PE, IEPE, Piezo-resistive, Capacitive), etc.
- ✓ Multiple vibration excitation mode of point to point, swept sine and random
- ✓ Loop control calibration, and optional open loop calibration available
- ✓ Support point-by-point, swept sine, and random excitation;
- ✓ Automatic procedure, quick and accurate calibration for instant results
- ✓ Support calibration raw data export
- ✓ Customized calibration report generation

**Ordering Information**

System Model	ECS-1815
Max. Excitation Force	250 N
Calibration Frequency Range	10-5,000 Hz
Max. acceleration	25 g
Max. Displacement (p-p)	10 mm
Max. Velocity	1 m/s
Max. Load	2 kg
System Uncertainty	<1% (160Hz, 100 m/s <sup>2</sup> )
Calibration Method	secondary (back to back)
Calibration Software	sensitivity, frequency response (amplitude and phase), amplitude linearity, and transverse sensitivity
Calibration Procedure	point to point, swept sine and random excitation

**5-10,000Hz, Laboratory Use**

ECS-1816 Middle-high 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-1816 is working based on comparison method (back to back), consisting of ECI programmable calibrator, standard shaker, power amplifier, reference transducer, high precision conditioning amplifier, and computer, with high precision and automation in calibration. 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.

ECS-1816 is an excellent calibration partner applied in the R&D, manufacture, metrology and use procedure of transducer or vibration meter.



**Features**

- ✓ ISO 16063-21 standard compliant
- ✓ Calibration frequency range is 5-10,000Hz
- ✓ Support to calibrate all kinds of vibration accelerometers, velocity and displacement sensors (voltage, PE, IEPE, Piezo-resistive, Capacitive), etc.
- ✓ Multiple vibration excitation mode of point to point, swept sine and random
- ✓ Loop control calibration, and optional open loop calibration available
- ✓ Support point-by-point, swept sine, and random excitation;
- ✓ Automatic procedure, quick and accurate calibration for instant results
- ✓ Support calibration raw data export
- ✓ Customized calibration report generation

**Ordering Information**

System Model	ECS-1816
Max. Excitation Force	100 N
Calibration Frequency Range	5-10,000 Hz
Max. acceleration	10 g
Max. Displacement (p-p)	5 mm
Max. Velocity	0.50m/s
Max. Load	2 kg
System Uncertainty	<1% (160Hz, 100 m/s <sup>2</sup> )
Calibration Method	secondary (back to back)
Calibration Software	sensitivity, frequency response (amplitude and phase), amplitude linearity, and transverse sensitivity
Calibration Procedure	point to point, swept sine and random excitation

# 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.



- Headquarter
- R&D Center
- Sales and Market Center
- CNAS and CMA qualified Testing lab



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

## Qualification & Certification

China Certificate of High & New Technological Enterprise

ISO 9001:2015 Qualified

Testing lab qualified by CNAS (China National Accreditation Service for Conformity Assessment) and CMA

(China Inspection Body and Laboratory Mandatory Approval)

CE Compliance with all main products

## Contact

ECON Technologies Co., Ltd.

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

Tel/Fax: +86-571-88174609

Product enquiry, quotation [salesintl@econ-group.com](mailto:salesintl@econ-group.com)

Delivery and logistics [coordinator@econ-group.com](mailto:coordinator@econ-group.com)

Technical support and service [support@econ-group.com](mailto:support@econ-group.com)

