# **Vibration Calibrating System**

# VC120



## Application

- Rapid and easy calibration and fault detection of vibration sensors and instruments
- Measurement of amplitude response and frequency sweeps

## Properties

- Self-contained calibration system
- Test amplitude of 1 m/s<sup>2</sup> rms
- Vibration frequency from 70 Hz to 10 kHz selectable
- Suitable for test objects weighing up to 400 g
- Internal measuring channel for charge, IEPE and voltage
- LCD for settings and measurements
- USB interface for PC controlled calibration
- PC software for calibration and display with sensor data base included
- Customer software control by simple ASCII commands
- Mains buffered NiMH battery for desktop and field use
- Upon request, we also offer DAkkS-accredited calibration with traceability



## **Technical Data**

#### Shaker System

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Vibration frequency	70 – 10000	Hz
Vibration acceleration	1	m/s²
Weight of test object, max.	400	g
Basic accuracy at 23 ± 10 °C	±2 calibrated (80 / 160 / 315 / 630 Hz)	%
	±2 typically (70 – 1000 Hz)	%
	±5 typically (1000 - 10000 Hz)	%
Transverse vibration	<10 (70 - 400 Hz; m < 200 g )	%
Total Harmonic Distortion (THD)	<2 (70 – 3000 Hz)	%
Temperature coefficient	±0,02	%/K
Sensor mounting	M5 thread, magnet	

#### Signal Conditioner

Charge input	Single-ended, Umax= 500 V, BNC socket at rear	
IEPE input	Single-ended, 3,8 5,6 mA, > 22 V, BNC socket at rear	
AC voltage input	Single-ended, 100 M $\Omega$ , Umax= 500 V, BNC socket at rear	
Transducer sensitivity range	0,12 – 1200 (IEPE/AC voltage)	mV/m/s²
	0,12 – 1200 (Charge)	pC/m/s²
Sensitivity display	LCD, value with unit	
Accuracy	±0,3 (IEPE/AC voltage)	%
	±0,6 (Charge)	%
Further displayed quantities	IEPE bias voltage, frequency	
ADC resolution	16 bit	

## Connections

interface	

USB 2.0; Mini-B socket; control and measurement via ASCII commands

### **Power Supply**

Battery	built-in NiMH battery pack	
Operating time per battery charge	2 – 4 (depending on shaker use)	h
Accumulator charging time	2	h

Case Data		
Dimensions without connectors	105 x 90 x 205 (W x H x D)	mm
Case material	Aluminum	
Weight	3	kg
Operating temperature range	-10 to 55 (95 % rel. humidity without condensation)	°C
Scope of delivery	Plastic carrying case	
	Mains adapter 100 – 240 VAC; 15 VDC	

Thread adapters M3 / M5 / M8 / 1/4"-28 / UNF 10-32

Plug adapter BNC/UNF 10-32, Model 017

Notice

The standard delivery includes a factory calibration sheet. This is a non-accredited measurement/calibration and consequently not covered by EA MLA. On request, we offer a DIN EN ISO/IEC 17025:2018 accredited calibration of the measurand acceleration.

Manfred Weber

## Metra Mess- und Frequenztechnik in Radebeul e.K.

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PC software USB cable

