

# Mobile vibration calibrator

## for on-site calibration

Type 8501A

Portable calibration system in a suitcase for autarkic on-site calibration of acceleration sensors. Easy-to-understand and user-friendly handling provides you with a calibration certificate within the shortest time possible and confidence in your measurement equipment.

- Frequency range up to 10 kHz
- Acceleration range up to 200 m/s<sup>2</sup>
- Payload up to 900 g
- Battery operation for more than 10 h
- Wide range of integrated signal conditioners

### Description

Portable calibration case with integrated signal conditioner for voltage, charge, IEPE, 4 mA ... 20 mA gives you the freedom you need to perform calibrations on site. An optional amplifier for PR transducers is available to extend the capabilities. The case can be used for traceable calibrations and offers an easy data exchange via USB or Ethernet interface. A WiFi interface is available as an option. The internal battery offers the possibility for self-sufficient work of up to 10 hours and makes this case the perfect tool for calibrating the equipment before your test.

### Application

- On-Site calibration of accelerometers, proximity probes and vibration velocity sensors
- On-Site calibration of vibration meters
- On-Site calibration of vibration test beds
- Vibration test system for small devices

### Measurement Uncertainty

To be expected for accelerometer calibration and vibration generation:

5 Hz ... 1 kHz	1.5% <sup>1)</sup> (2.0%) <sup>2)</sup>
1 kHz ... 5 kHz	1.5% <sup>1)</sup> (3.0%) <sup>2)</sup>
5 kHz ... 10 kHz	3.5% <sup>1)</sup> (6.0%) <sup>2)</sup>

<sup>1)</sup> Under laboratory conditions: (23 ± 5)°C,  
max. x. acceleration: 30 m/s<sup>2</sup>, max. payload: 30 g

<sup>2)</sup> Under worst case conditions: 0°C ... 50°C,  
max. acceleration: 200 m/s<sup>2</sup>, max. payload: 40 g



### Technical data

Frequency range	Hz CPM	5 ... 10 000 300 ... 600 000
Velocity, max. (sine peak)	mm/s in/s	700 27
Acceleration, max. (sine peak)	m/s <sup>2</sup> g <sub>n</sub>	200 20.39
Displacement, max. (peak - peak)	mm mils	5 196
Temperature range (for operation)	°C °F	0 ... 50 32 ... 122
Payload, max	g oz	900 31.7
Power supply	V Hz	100 ... 240 50 ... 60
Total weight	kg lbs	9 19.8
Dimensions (HxWxD)	mm in	170 x 350 x 300 6.7 x 13.8 x 11.8
THD	–	<1% (>100Hz)

### Operation modes / software

- Operation modes (standard):
  - Manual operation
  - Transfer calibration mode (calibration / check of the system via calibrated reference transducer)
- Operation modes (optional):
  - Measurement mode
  - Sweep mode (automatic)
  - Stepped sine calibration (automatic)
- PC-software (optional):
  - Management of DUT in a database, test setups, protocols and measurement campaigns

### Data exchange

- Interfaces:
  - USB flash storage drive (standard)
  - Ethernet with optional software
  - WIFI (optional)
- Data formats:
  - CSV-file for sensor data and test setups
  - XML-file for calibration results

### Accessories (included)

- Adapters
  - 1/4-28 to 1/4-28 mounting stud
  - 10-32 to 1/4-28 mounting stud
  - Adhesive mounting base
- Power supply with plug adapters
- Mounting wrench
- USB flash drive with report generation worksheet
- Traceable calibration certificate (DAkkS)

### Accessories (optional)

- Proximity probe adapter
- Signal conditioner module for PR-sensors
- Special sensor power supplies (on request)
- BN-17 IEPE transfer standard accelerometer