

AWA6071A Vibration Calibrator Instruction Manual

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Precautions

1. Please read this manual carefully before using the instrument for the first time.
2. Damage caused by improper use is not covered by the warranty.
3. The instrument contains a built-in lead-acid battery; please charge it at least once a month.
4. Charge the instrument promptly after the low-voltage indicator appears.
5. Use only the charger supplied with the instrument for charging.
6. Place the instrument on a sturdy, level surface during use.

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1. Overview

The Model AWA6071A vibration calibrator is an instrument designed for calibrating the sensitivity of vibration sensors and vibration measuring instruments. It features a compact size, light weight, and ease of use.

2. Key performance indicators

Frequency: 15.915 Hz $\pm$ 1%

Amplitude: (<3%)

Frequency (Hz)	Acceleration (m/s ²)	Velocity (mm/s)	Displacement (mm)
15.915	1(RMS)	10(RMS)	0.1(RMS)
15.915	10(RMS)	100(RMS)	1(RMS)

Transverse vibration: < 5%

Warm-up time: < 20 s

Load capacity: > 70 g; < 100 g at 10 m/s² amplitude; < 1000 g at 1 m/s² amplitude

Total distortion: < 5%

Mass: 6.7 kg

Dimensions: 230 mm $\times$ 170 mm $\times$ 140 mm

Power supply: Built-in 12 V, 1.3 Ah rechargeable battery

Power consumption: Over 8 hours of continuous operation on a full charge

Sensor mounting hole: M5

Operating environment:

Temperature: 0°C to +40°C

Relative humidity: 10% to 90%

Dust and water protection rating: IP25

External charger: Input voltage 100–240 V, 50–60 Hz; charging time > 3 h.

3. Structural Characteristics



图 1



图 2

4. Instructions for Use

4.1 Button Functions

"Start/Pause": Press once to start platform vibration; press again to stop it.

"1 m/s² / 10 m/s²": Press once to set the vibration amplitude to 10 m/s²; press again to change it to 1 m/s².

4.2 Indicator Lights

"Battery Status": Indicates battery voltage; this light flashes when the internal battery voltage is low and requires charging.

"Amplitude Status": A steady green light indicates the instrument is powered on. After starting, a flashing red light indicates the instrument is adjusting; the red light remains steady once the

platform amplitude reaches the specified value.

"10 m/s²": This light illuminates when the vibration amplitude is set to 10 m/s².

4.3 Installation

Place the instrument on a sturdy, level platform, ensuring the platform surface is horizontal. If it is not level, the "Amplitude Status" indicator will flash green upon startup, and the instrument will not start. When calibrating vibration sensors that mount via M5 threaded holes, screw the M5 headless set screw into the M5 mounting hole at the center of the platform, then screw the sensor onto the M5 screw, tightening it to a torque of 2 N·m to 3 N·m. When calibrating the heavier AWA14400 environmental vibration acceleration sensor, simply place the sensor at the center of the platform.

4.4 Power On

Press the power switch to turn on the instrument. If the battery voltage is too low, the "Battery Status" indicator will flash, indicating that the battery should be charged promptly. The instrument then checks if the platform is level; if not, the "Amplitude Status" indicator flashes, requiring the instrument to be repositioned until the platform is level. Once level, the "Amplitude Status" indicator shows a steady green light. Press the "Start/Pause" button to begin vibration; the "Amplitude Status" indicator will show a flashing red light, which becomes steady once the vibration amplitude has stabilized at the

nominal value. 4.5 Changing Amplitude

Press the " $1\text{m/s}^2 / 10\text{m/s}^2$ " key; the " 10 m/s^2 " indicator lights up, and the vibration amplitude of the platform changes to 10 m/s^2 . The "Amplitude Status" indicator flashes red; when the red light stops flashing, it indicates that the platform's vibration amplitude has stabilized at the nominal value.

4.6 Charging

Charge the unit promptly when the "Battery Voltage" indicator flashes. To charge, insert the external charger's plug into the charging socket and connect it to a 220V AC mains outlet. External charger indicators: a red light indicates charging is in progress, while a green light indicates the battery is fully charged.

4.7 Battery Replacement

When the capacity of the built-in rechargeable battery drops, resulting in significantly reduced operating time, the user can replace the battery. Turn the instrument over, loosen the four M3 screws on the bottom with a screwdriver, and remove the battery cover plate to access the battery. Disconnect the terminals from the battery contacts, replace the old battery with a new one, reconnect the terminals, place the battery back inside the instrument, and retighten the four M3 screws.