

# AWA14434-S14E 1/4" Pressure-Field High-Sound-Pressure Measurement Microphone Set



## Features

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### Key Parameters

Sensitivity: 0.63 mV/Pa  
Frequency Range : 3.15 Hz~40 kHz  
Dynamic Range: 61 dBA~173 dB

### Typical Applications

High sound pressure testing  
Pressure field testing  
High sound intensity testing

### Standards

IEC 61094-4:1995 Measurement microphones - Part 4: Specifications for working standard microphones

### Main Components

AWA14434 Measurement Microphone  
AWA14614E Preamplifier

## Brief Introduction

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The AWA14434-S14E is a measurement unit comprising a pressure-field microphone and a preamplifier, specifically designed for acoustic measurements in high sound pressure level (SPL) pressure-field environments. It comes with an individual calibration certificate and features a flat frequency response, supporting an upper frequency limit of 40 kHz and a dynamic range upper limit of 175 dB. Compatible with mainstream acoustic analysis instruments, the unit is widely used in applications such as high-SPL testing, ultrasonic testing, noise source localization, and acoustic performance testing of equipment.

## Product Highlights

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### Applications of Pressure-Field, High-Sound-Pressure Microphone Units

Featuring a wide frequency response range and a high dynamic upper limit, these pressure-field, high-sound-pressure microphone units are ideally suited for applications such as high-sound-pressure testing, ultrasonic testing, noise source localization, and acoustic performance testing of equipment.

### Compatibility

The AWA14434-S14E measurement microphone unit requires an external constant-current power supply module capable of delivering 2 mA to 20 mA of current and an open-circuit voltage of 24 V. Different manufacturers may use various terms for such power supply modules and their powering modes, such as IEPE (Integrated Electronics Piezo-Electric), ICP (Integrated Constant-Current Circuit), CCP (Constant Current Power), or CCLD (Constant Current Line Drive).

### TEDS-Enabled Measurement Microphone Unit

This unit supports TEDS (Transducer Electronic Data Sheet) functionality, is programmed according to the IEEE 1451.4 standard, and complies with V1.0 format requirements. It is compatible with smart sensor technology, facilitating the integration and automated management of sensor information.

### Calibration

Each measurement microphone unit is calibrated at the factory using traceable calibration equipment and is supplied with a calibration certificate. Annual recalibration is recommended.

### Quality and Warranty

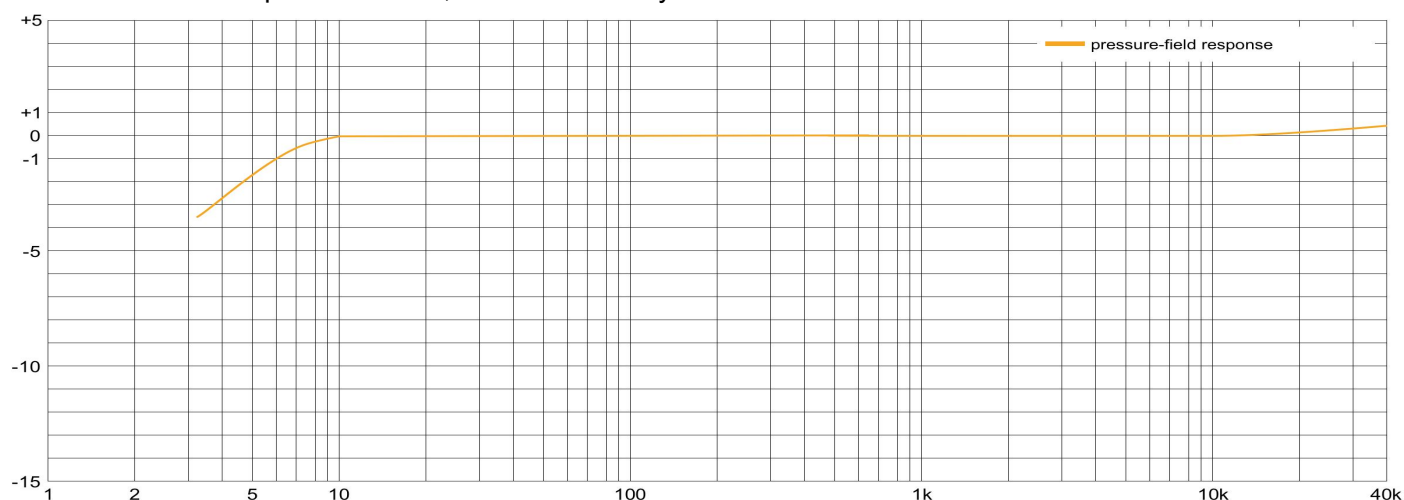
All Aihua microphones utilize second-generation alloy diaphragms, high-strength protective grids, and synthetic corundum insulators, making them highly stable and reliable measurement microphones. Compared to traditional nickel or stainless steel, these alloy diaphragms offer superior corrosion resistance, high-temperature stability, impact resistance, and specific strength. To ensure the highest quality, all microphones are assembled and tested in a Class 1000 cleanroom. The measurement microphone unit comes with a one-year warranty, backed by comprehensive after-sales support.

## Technical Specifications

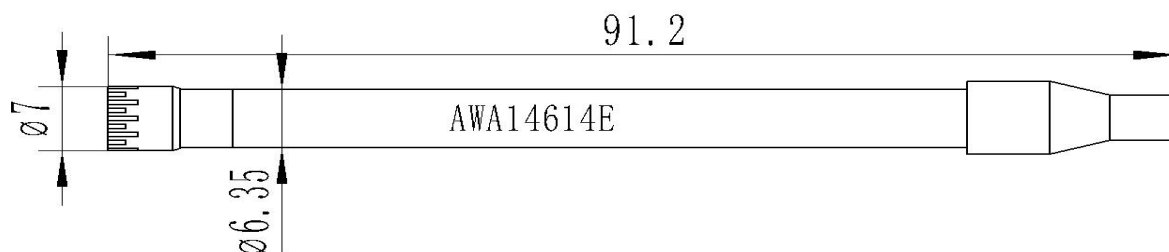
| AWA14434-S14E 1/4" Pressure-Field High-Sound-Pressure Measurement Microphone Set |                   |                                           |                               |
|----------------------------------------------------------------------------------|-------------------|-------------------------------------------|-------------------------------|
| Sound field type                                                                 | Pressure field    | Pressure equalization method              | Lateral pressure equalization |
| Diameter                                                                         | 1/4 inch          | Operating temperature (°C)                | -30~+80                       |
| Dimensions compliant with standard (IEC 61094)                                   | WS3P              | Temperature coefficient (dB/°C) (@250 Hz) | -0.01 (-10 °C~50 °C)          |
| Power supply                                                                     | IEPE (2 mA~20 mA) | Static pressure coefficient (dB/kPa)      | -0.005                        |
| Sensitivity (mV/Pa) (@250 Hz ±2.0 dB)                                            | 0.63              | Input impedance/capacitance               | ≥10 GΩ/≤0.5 pF                |
| Frequency range (Hz)                                                             | 3.15~40k          | Output voltage                            | ≥5 Vrms@24 Vsupply            |
| Polarization voltage (V)                                                         | 0                 | Output impedance                          | ≤50 Ω                         |
| Dynamic range                                                                    | 61 dBA~173 dB     | TEDS                                      | Standard                      |
| Noise floor (dBA)                                                                | ≤61               | Output connector                          | BNC                           |

## Frequency response

Test conditions: Temperature 23 °C, Relative humidity 50 %RH



## Specifications and Dimensions



## Ordering Information

Optional Accessories

Microphone test clip      1/4" Preamplifier  
power supply              AWA1710

## Related Products:

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AWA14404-S00E     1/2" Pressure-field working standard microphone set  
12.6 mV/Pa, 3.15 Hz–20 kHz, 24 dBA–160 dB

AWA14403-S00E     1/2" Free-field working standard microphone set  
14.1 mV/Pa, 3.15 Hz–40 kHz, 23 dBA–159 dB

AWA14423-S04E     1/2" Free-field measurement microphone set  
50.0 mV/Pa, 3.15 Hz–20 kHz, 17 dBA–135 dB

AWA14423C-S01C    1/2" Free-field infrasound microphone set  
39.8 mV/Pa, 0.1 Hz–20 kHz, 21 dBA–137 dB

AWA14424C-S01C    1/2" Pressure-field infrasound microphone set  
21.1 mV/Pa, 0.2 Hz–16 kHz, 28 dBA–143 dB

AWA14523-S04E     1/2" Free-field infrasound/wideband microphone set  
31.6 mV/Pa, 0.5 Hz–40 kHz, 21 dBA–139 dB

AWA14435-S14E     1/4" Free-field High-SPL Measurement microphone set  
4.0 mV/Pa, 5 Hz – 20 kHz, 43 dBA – 160 dB

AWA14436-S14E 1/4" Pressure-Field Wideband High-SPL measurement microphone set  
1.0 mV/Pa, 3.15 Hz~70 kHz, 57 dBA~171 dB

AWA14411-S04E     1-inch free-field low-noise  
measurement microphone set  
100.0 mV/Pa, 10 Hz–16 kHz, 11.5 dBA–129 dB

AWA14431-S14E 1/4" Free-field Broadband  
Measurement Microphone set

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