

AWA14404-S00E 1/2" Pressure-Field Working Standard Microphone Set



Features

Key Parameters

Sensitivity: 12.6 mV/Pa

Frequency Range: 3.15 Hz~20 kHz

Dynamic Range: 24 dBA~160 dB

Polarization voltage: 200V

Typical Applications

Mass and Heat Transfer

Sound Pressure Field Testing

Electroacoustic Testing

Noise Testing

Standards

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

Main Components

AWA14404 Measurement Microphone

AWA14600E Preamplifier

Brief Introduction

The AWA14404-S00E is a unit comprising a pressure-field working standard microphone and a Lemo-type preamplifier. Designed in strict accordance with specifications for working standard microphones, it features a press-fit diaphragm structure and requires external polarization power for operation. It offers exceptional stability and a frequency range extending up to 20 kHz, making it suitable for use as a transfer standard in the calibration of acoustic measurement instruments, as well as for electroacoustic testing applications such as artificial ear measurements.

Product Highlights

Applications of Pressure-Field Working Standard Microphone Set

Pressure-field working standard microphone cartridges feature a wide frequency response range, making them suitable for diverse measurement scenarios. Designed specifically for measurements within precision cavities, these units offer exceptional stability, allowing them to serve as transfer standards for calibrating acoustic measurement instruments; they are widely used in fields such as acoustic research and electroacoustic testing.

Compatibility

The AWA14404-S00E measurement microphone set requires an external 200 V polarization voltage supplied via a preamplifier. The preamplifier itself must be powered by either a low-noise dual power supply (maximum voltage not exceeding ± 75 V) or a low-noise single positive power supply (maximum voltage not exceeding 150 V).

TEDS Measurement Microphone Cartridge

This cartridge 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 cartridge is calibrated using traceable equipment prior to shipment and comes with a calibration certificate. Annual recalibration is recommended.

Quality and Warranty

All Aihua microphones feature 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. Assembly and testing are conducted in Class 1000 cleanrooms to ensure the highest quality. The measurement microphone unit comes with a one-year warranty, backed by comprehensive after-sales support.

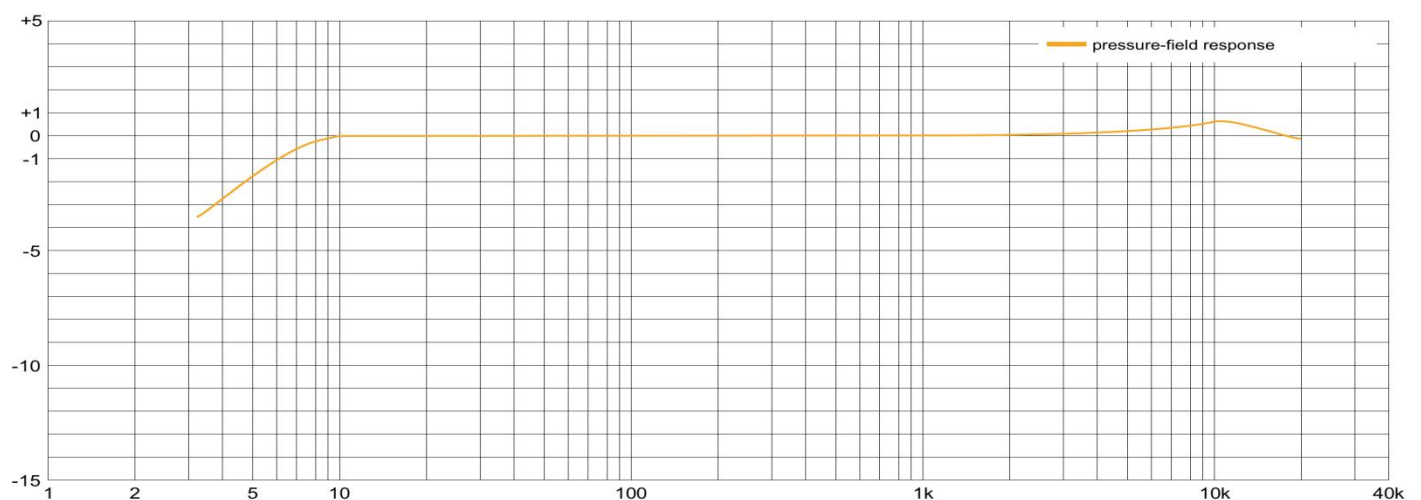
Technical Specifications

AWA14404-S00E 1/2" Pressure-Field Working Standard Microphone Set

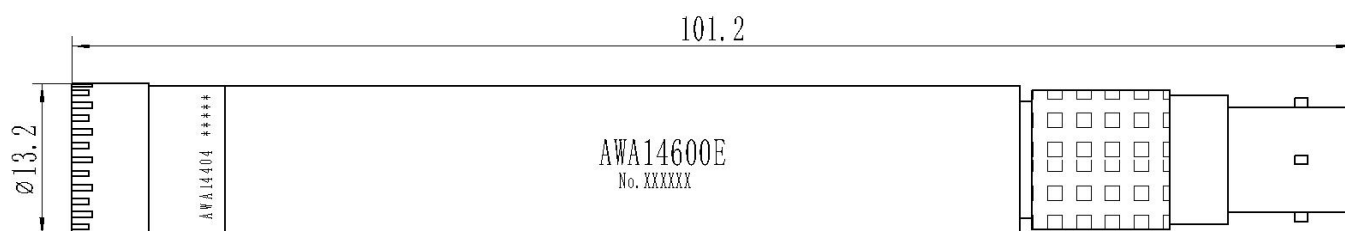
Sound Field Type	Pressure field	Pressure Equalization	Lateral pressure equalization
Diameter	1/2 inch	Operating Temperature (°C)	-30 to +100
Dimensions Standard (IEC 61094)	WS2P	Temperature Coefficient (dB/°C) (@250 Hz)	-0.005 (-10 °C ~ 50 °C)
Polarization voltage (V)	200	Static pressure coefficient (dB/kPa)	-0.005
Sensitivity (mV/Pa) (@250 Hz ±2.0 dB)	12.6	Operating humidity range (%RH)	0–100
Frequency range (Hz)	3.15~20k	Input impedance/capacitance	≥10 GΩ / ≤0.5 pF
Typical capacitance (pF)	18	Output voltage	>10 Vrms (at 60 V supply)
Dynamic range	24 dBA~160 dB	Output impedance	≤50 Ω
Noise floor (dBA)	≤24	Output interface	LEMO plug

Frequency response

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



Specifications and Dimensions



Ordering Information

Optional Accessories

Microphone test clip	1/2" microphone test clip
Preamplifier power supply	AWA1710
Cable	AWA8742

Related Products:

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

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

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

AWA14434-S14E 1/4" Pressure-field high-SPL measurement microphone set
0.63 mV/Pa, 3.15 Hz–40 kHz, 61 dBA–173 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

AWA14431-S14E 1/4" Free-field Wideband measurement microphone set
4.0 mV/Pa, 3.15 Hz~80 kHz, 43 dBA~160 dB

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