



## MP401S 1/4-inch Free-field Microphone

### Features:

- 1/4-inch free-field microphone
- Sensitivity (@250 Hz): 4 mV/Pa (-48 dB re 1V/Pa)
- Frequency response: 8 Hz ~ 50 kHz ( $\pm 2$  dB)
- Dynamic range: 38 dBA ~ 158 dB
- Polarization voltage: 0V (prepolarized)
- Pressure equalization: side-vented
- Suitable for 1/4-inch preamplifier with ICCP power supply
- Optional TEDS (IEEE.1451.4)



### Applications:

- High sound pressure measurements
- High frequency noise measurements

### Introduction

**MP401S** is the 1/4-inch free-field microphone developed by BSWA. It is suitable for measurement in free-field and semi free-field environments with minimal sound reflection. It is prepolarized microphone without external polarization voltage, and suitable for ICCP powered MA411A/B preamplifier (optional TEDS).

**MP401S** is side-vented and can measure the sound pressure level up to 158 dB in the frequency range of 8 Hz ~ 50 kHz.

**MP401S** has a redesigned microphone structure with nickel metal diaphragm and high nickel alloy housing with the same expansion coefficient, which can effectively improve the temperature stability of the microphone and have excellent corrosion resistance.

**MP401S** can choose a preamplifier with TEDS to support data acquisition equipment to read microphone information directly, including microphone model, serial number, sensitivity, etc. BSWA microphone supports the IEEE 1451.4 standard. The v0.9 version is used by default to be compatible with more data acquisition equipment. The v1.0 version can also be selected according to user's requirements.

Each MP401S is supplied with an individual calibration data chart including sensitivity, frequency response and so on.

### Specifications

Sound Field	Free-field
Diameter	1/4"
Open-circuit Sensitivity@250 Hz (mV/Pa) ( $\pm 3$ dB)	4 (-48 dB re 1V/Pa)
Polarization Voltage	0 V (Prepolarized)
Frequency Response (Hz)	8 ~50 k ( $\pm 2$ dB)
Dynamic Range (dBA ~ dB)	38 ~ 158
Cartridge Thermal Noise (dBA)	38



Maximum Sound Pressure Level (dB) (3% distortion)	158
Capacitance (pF)	6
Equivalent Air Volume@250 Hz (mm <sup>3</sup> )	0.6
Pressure Equalization Vent	Side-vented
Operating Temperature Range (°C)	-30 ~ 80
Operating Humidity Range (%RH)	0 ~ 95
Temperature Coefficient (250Hz) (dB/°C)	-0.02
Pressure Coefficient (250Hz) (dB/kPa)	-0.01
Influence of Humidity (dB)	<0.1
Dimensions (mm) with Grid	Ø7 × 10.2
Dimensions (mm) without Grid	Ø6.35 × 9.4
Mounting Thread for Preamplifier	5.7 mm-60UNS
Weight (g)	1.7
Suitable Preamplifier	MA411A/B
TEDS	Optional, IEEE 1451.4 compliant (default v0.9, optional v1.0)