

MA231A 1/2 Inch Preamplifier

Product Introduction

Features

- Suitable for 1/2 inch pre-polarized microphones
ICCP powered preamplifier
- Frequency response: 20 Hz ~ 100 kHz (± 0.2 dB);
5 Hz ~ 100 kHz (+0.2 dB / -0.5 dB) Attenuation:
0.3 dB (typical)
- Connector: BNC
- Optional TEDS (IEEE 1451.4)



Applications

- General acoustic testing
- Environmental, industrial, transportation, and other noise measurements

Product Overview

The **MA231A** preamplifier is a 1/2 inch ICCP powered preamplifier developed by BSWA Technology Co., Ltd. Designed for use with the MP series 1/2 inch pre-polarized microphones, it is a low-noise, high-quality solution for a wide variety of acoustic testing scenarios.

The primary role of the preamplifier is impedance conversion, as the output impedance of microphones can reach above $G\Omega$, making direct connection to standard data acquisition devices impossible. The preamplifier's high input impedance and low output impedance reduce the microphone's output impedance to below 100 Ω .

MA231A does not provide polarization voltage and is therefore only suitable for pre-polarized microphones. It uses ICCP (Integrated Constant Current Power), allowing both power and signal transmission via coaxial cable with a constant current source, ensuring low signal attenuation even with long cables. It requires use with the MC1xx series power conditioners. For more details, refer to "Technical Summary 4: ICCP Powered Preamplifiers".

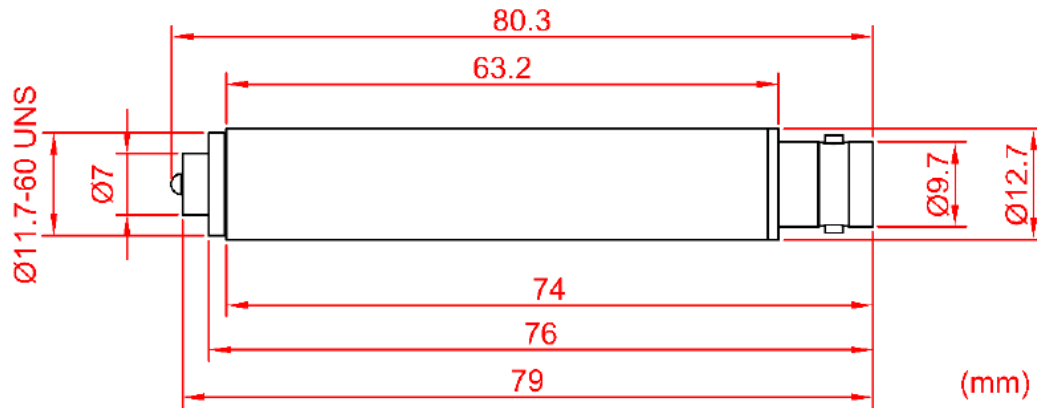
MA231A is available with or without TEDS, enabling data acquisition devices to directly read microphone information such as model, serial number, and sensitivity. BSWA's TEDS microphones comply with IEEE 1451.4 (default v0.9, optional v1.0). For more information, see "Technical Summary 5: TEDS Sensor Electronic Data Sheet".

Technical Specifications

Diameter	1/2"
Polarization Voltage	0V (pre-polarized)
Frequency Response (Hz)	20 ~ 100k, ± 0.2 dB 5 ~ 100k, +0.2 dB / -0.5 dB
Attenuation (dB)	0.3 (typical)
Max Output Voltage (Vp)	± 8
Self-Noise (A-weighted)	<3.5 μ V (3 μ V typical)
20 Hz ~ 20 kHz	<15 μ V (8 μ V typical)
Input Impedance ($G\Omega$ pF)	15 0.4
Output Impedance (Ω)	<30
Power Supply	ICCP (2mA ~ 20mA, 4mA typical)
DC Bias Voltage (V)	12 $\pm$ 2
Operating Temperature ($^{\circ}$C)	-30 ~ 80
Operating Humidity (%RH)	0 ~ 95
Dimensions (mm)	$\varnothing 12.7 \times 80.3$
Microphone Connection Thread	11.7 mm-60 UNS
Output Connector	BNC
Weight (g)	27.3
TEDS	Optional, compliant with IEEE 1451.4 (default v0.9, optional v1.0)

Note: Unless otherwise specified, all data are measured at 23°C, 101.3 kPa, 50% RH, using a 1-meter coaxial cable, 4 mA / 24 V power supply, and a 15 pF microphone capacitance.

Dimension Drawing



Contact:

BSWA Technology Co., Ltd.

Room 1003, Beihuan Center, No.18 Yumin Road, Xicheng District, Beijing, 100029

Tel: 010-5128 5118 | Fax: 010-8225 1626

Email: news@bswa.com.cn | Website: www.bswa.com.cn