



CRY3203-S02

1/2" Free-field Prepolarized High-sensitivity Microphone Set

Features

- **Key Specifications**

Sensitivity	50 mV/Pa
Dynamic Range	16 dBA to 132 dB
Frequency Range	3.15 Hz to 20 kHz ± 2 dB

- **Applications**

Anechoic chamber test
Electroacoustic test
Noise test

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

- **Components**

CRY3203 1/2" Free-field Prepolarized Microphone
CRY3503 1/2" IEPE Preamplifier

Introduction

CRY3203-S02 is a free-field prepolarized microphone and preamplifier set widely used in acoustic testing environments, such as anechoic chambers and quiet rooms. Its frequency response range matches the auditory frequency range of the human ear, making it highly suitable for noise detection. Additionally, it is also widely applicable in various fields including electroacoustic measurements, audio measurements, and acoustical research.

Highlights

- **Use of High-sensitivity Free-field Microphones**

High-sensitivity microphone sets have a broad measurement frequency range and are applicable to a variety of measurement scenarios.

Free-field microphone sets are specifically designed for measurements in environments that are free from reflections or echoes and are widely used in fields such as acoustic research, noise monitoring, and sound system testing.

- **Compatibility**

The CRY SOUND prepolarized microphone kit requires a constant current source power module (IEPE power supply) that can provide a current of 2mA to 20mA and a no-load voltage of 24V.

IEPE is a universal constant current source power supply technology used on sensors. Each manufacturer has different names, such as ICP, CCP, etc.

- **TEDS Microphone Set**

Supports TEDS, and TEDS programmed to the IEEE 1451.4 standard for SMART transducers, V 1.0 format.

- **Calibration**

Each CRY SOUND microphone set is calibrated at the factory using traceable calibration equipment. Calibration certificates are provided with each unit. CRY SOUND recommends recalibration at least once a year.

- **Quality & Warranty**

All CRY SOUND microphone capsules use 3rd generation titanium diaphragms and protection grids and synthetic sapphire insulators - resulting in the most rugged and reliable measurement microphones on the market. Titanium provides superior corrosion resistance, high temperature stability, impact resistance and strength-to-mass than traditional nickel and stainless steel. All capsules are assembled in strict clean-room environments for maximum quality.

CRY SOUND microphones and preamplifiers are supported by a 10-year warranty—offering one of the best service guarantees in the world.

Technical Specifications

Specifications

Field Type	Free-field
Sensitivity(± 1.5 dB)	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	3.15 Hz to 20 kHz ± 2 dB
Polarization Voltage	0 V
Dynamic Range(re.20uPa)	16 dBA to 132 dB
Operating Temperature	-30°C to +70°C (-22°F to +158°F)
Temperature Stability	0.012 dB/°C (-10°C to +50°C) 0.007 dB/°F (+14°F to +122°F)
Static Pressure Stability	-0.01 dB/kPa
Operating Humidity Range	0 to 90%RH no condensation
Humidity Stability	< 0.1 dB (0 to 90%RH no condensation)
Pressure Equalization Vent	Rear vented
IEC 61094-4 Type	WS2F
Output Impedance	< 35 Ω
Maximum Output Voltage	> 9 Vp
DC Bias Voltage	12V $\pm$ 2 V
Power Supply	IEPE (2 mA to 20 mA)
Typical Operating Current	4 mA
Interface Type	10-32UNF(Microdot)

Ordering Information

Consisting of

Measurement Microphone	CRY3203 1/2" Free-field Prepolarized Microphone
Preamplifier	CRY3503 1/2" IEPE Preamplifier
Cable	Microdot to BNC Cable /1.5m

Optional Accessories

Electrostatic Actuator	TA0302 1/2" Electrostatic Actuator
Power Supply	CRY575 Three-channel Microphone Power Supply

Frequency Response

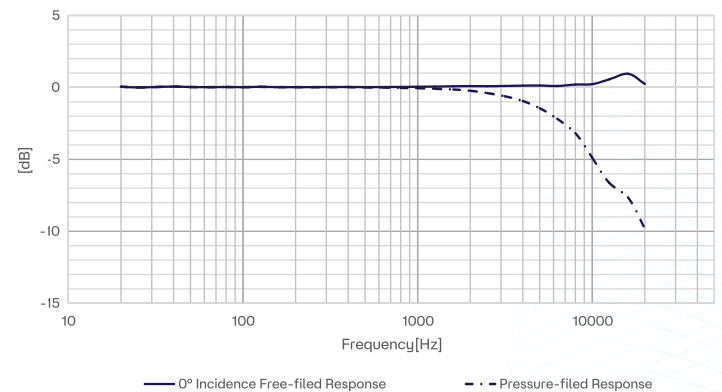


Fig.1 CRY3203-S02 Microphone Set Typical Frequency Response

Dimensions

Height with Grid 40.2 mm (1.58")

Diameter with Grid 13.2 mm (0.52")

Drawings(mm)[inch]

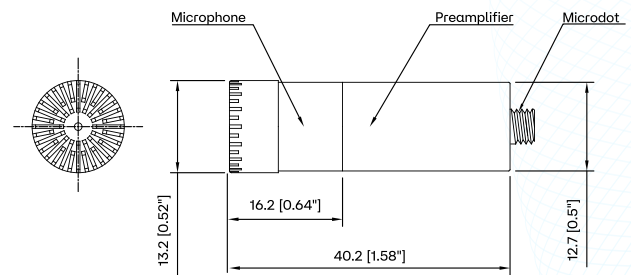


Fig.2 CRY3203-S02 Microphone Set Drawings

Related Products

CRY3203-S01	1/2" free-field prepolarized high-sensitivity microphone set, 50 mV/Pa, 3.15 Hz-20kHz, 16 dBA-135dB
CRY3101-S01	1" free-field prepolarized low-noise microphone set, 50 mV/Pa, 4 Hz-16kHz, 12 dBA-135dB
CRY3201-S01	1/2" free-field prepolarized high-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dBA-147dB
CRY3403-S01	1/4" free-field prepolarized high-frequency microphone set, 4 mV/Pa, 4 Hz-90kHz, 35dBA-154dB
CRY3261-S01	1/2" free-field prepolarized ultra low-noise microphone set, 354 mV/Pa, 3.15 Hz-20kHz, 7.5dBA-115dB