



CRY3403-S02

1/4" Free-field Prepolarized Ultra-high frequency Microphone Set

Features

- **Key Specifications**

Nominal Sensitivity	4 mV/Pa
Dynamic Range	35 dB to 160 dB
Frequency Range	4 Hz to 90 kHz ± 2 dB

- **Applications**

High-frequency (ultrasonic) measurements
High-definition speakers and NVH measurements
High Sound Pressure Level (SPL) measurements

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

- **Components**

CRY3403 1/4" Free-field Prepolarized Microphone
CRY3543 1/4" IEPE Preamplifier

Introduction

The CRY3403-S02 is a 1/4" free field prepolarization measurement microphone and preamplifier designed for ultra-high frequency and high dynamic range acoustic measurements.

It provides an unusually wide and flat frequency response with a frequency range of up to 90kHz and can withstand sound pressure levels up to 160dB. This is an excellent set of universal measurement microphones, ideal for high-definition audio measurement and other ultrasonic acoustic applications.

Highlights

- **Use of Ultra-high frequency Free-field Microphones**

Ultra-high frequency microphones can accurately capture high-frequency sounds and are highly suitable for ultrasonic detection, high-frequency acoustic research, and other similar applications.

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 2 mA to 20 mA 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 guarantee in the world.

Technical Specifications

Specifications

Field Type	Free-field
Sensitivity(± 3 dB)	4 mV/Pa, -48 dB re 1V/Pa
Frequency Response	4 Hz to 90 kHz ± 2 dB
Polarization Voltage	0 V
Dynamic Range(re.20uPa)	35 dB to 160 dB
Inherent noise	35 dBA
Operating Temperature	-30°C to +70°C (-22°F to +158°F)
Temperature Stability	0.010 dB/°C (-10°C to +50°C) 0.006 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	Side vented
IEC 61094-4 Type	WS3F
Output Impedance	< 50 Ω
Maximum Output Voltage	> 10.0 Vp
DC Bias Voltage	12V \pm 2 V
Current Source	IEPE (2 mA to 20 mA)
Typical Operating Current	4 mA
Interface Type	10-32UNF(Microdot)

Frequency Response

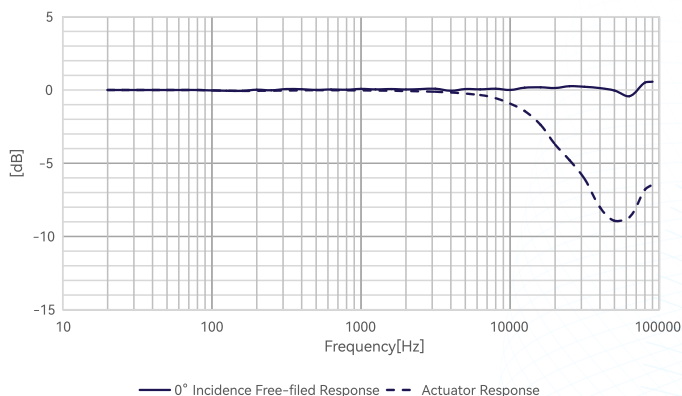


Fig.1 CRY3403-S02 Microphone Set Typical Frequency Response

Dimensions

Height with Grid	56.2 mm (2.213")
Diameter with Grid	7 mm (0.276")

Drawings(mm)[inch]

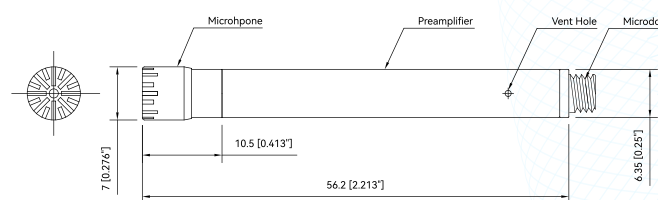


Fig.2 CRY3403-S02 Microphone Set Drawings

Ordering Information

Consisting of

Measurement Microphone	CRY3403 1/4" Free-field Prepolarized Microphone
Preamplifier	CRY3543 1/4" IEPE Preamplifier
Cable	Microdot to BNC Cable /1.5m

Optional Accessories

Microphone Holder	1/4" Microphone Holder
Power Supply	CRY575 Three-channel Microphone Power Supply

Related Products

CRY3403-S01	1/4" free-field prepolarized high-frequency microphone set, 4 mV/Pa, 4 Hz-90kHz, 35dB-160dB
CRY3201-S01	1/2" free-field prepolarized high-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dB-150dB
CRY3401-S01	1/4" free-field prepolarized low-noise microphone set, 15.8 mV/Pa, 4 Hz-40 kHz, 26dB-148 dB