CRY3212

1/2" Pressure-field Prepolarized Microphone

Features

- **Key Specifications**

Sensitivity	37.5 mV/Pa
Dynamic Range	18 dBA to 148 dB
Frequency Range	3.15 Hz to 20 kHz

- **Applications**

  Noise test
  Couper test
  Electroacoustic test

- **Standards**

  IEC 61094 4:1995 Measurement microphones - Part 4

Introduction

CRY3212 is a 1/2-inch pressure field prepolarized measurement microphone, widely used in noise testing.The microphones in outdoor noise monitoring stations are usually installed upright. However, in common noise monitoring scenarios, sounds usually propagate horizontally and form a 90-degree angle with the microphones. The high frequencies of ordinary free-field microphones are difficult to meet the requirements of metrological regulations. To address this issue, the CRY3212 microphone has optimized its frequency response to meet the relevant specification requirements.

CRY3212 can also be used for relevant electroacoustic tests in conjunction with couplers, providing users with excellent test performance and flexibility.

Highlights

- **Use of Pressure-field Microphones**

  Pressure-field microphones are specifically designed for measurements in small enclosed cavities or near the sound source ports, and are widely used in fields such as acoustic research and electroacoustic testing.

- **Compatibility**

  The CRY3212 measuring microphone is compatible with the IEPE preamplifier of CRYSOUND.

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

- **Calibration**

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

- **Quality & Warranty**

  All CRYSOUND 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.

  CRYSOUND microphones enjoy a one-year warranty period. We will provide users with comprehensive after-sales support services.

Technical Specifications

Specifications

Field Type	Pressure-field
Sensitivity(±2 dB)	37.5 mV/Pa, -28.5 dB re 1V/Pa
Frequency Response	3.15 Hz to 16 kHz ±2 dB 3.15 Hz to 20kHz +2~-5 dB
Polarization Voltage	0 V
Capacitance	17 pF (@250 Hz)
Dynamic Range(re.20uPa)	18 dBA to 148 dB
Operating Temperature	-30°C to +60°C(-22°F to +140°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	WS2P

Drawings(mm)[inch]

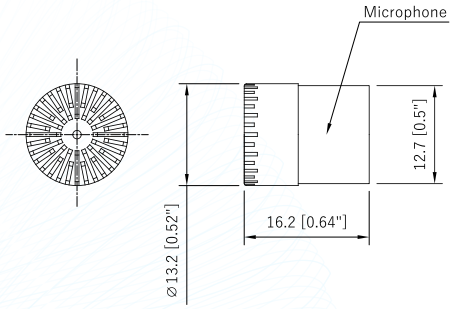

Fig.1 CRY3212 Microphone Drawings

Dimensions

Height with Grid	16.2 mm (0.64")
Diameter with Grid	13.2 mm (0.520")

Frequency Response

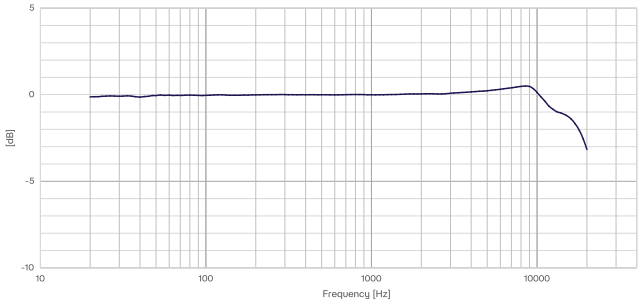

Fig.2 CRY3212 Microphone Pressure-filed Typical Frequency Response

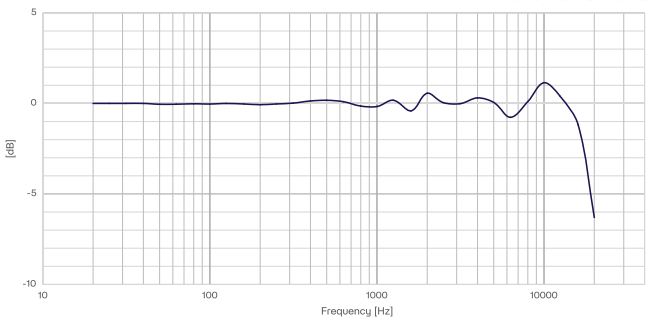

Fig.3 CRY3212 Microphone 90° Incidence Free-filed Frequency Response

In the noise monitoring scenario, the sound propagation direction is mostly horizontal, forming a 90-degree angle with the microphones that are usually installed upright. At this time, the high frequencies of ordinary free-field microphones cannot meet the requirements of some metrological regulations. The CRY3212 microphone has been optimized in terms of frequency response to address this issue and meet the requirements of metrological regulations.

Ordering Information

Optional Accessories

Preamplifier	CRY507 1/2" BNC Interface
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer
Cable	BL5001 BNC to BNC Cable /1.6m

Related Products

CRY371	1/2" free-field prepolarized high-frequency microphone, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dBA-160 dB
CRY372	1/2" pressure-field prepolarized wide-frequency microphone, 12.5 mV/Pa, 3.15 Hz-20kHz, 23 dBA-160 dB