CRY3403-S01

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

Features

- **Key Specifications**

Nominal Sensitivity	4 mV/Pa
Dynamic Range	35 dBA 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
  CRY3541 1/4" IEPE Preamplifier

Introduction

CRY3403-S01 is a 1/4" free-field prepolarized measurement microphone and preamplifier set designed for ultra-high-frequency and high dynamic range acoustic measurements.

CRY3403-S01 features a unique design that provides an exceptionally wide and flat frequency response, with a frequency range of up to 90kHz, and can withstand sound pressure levels of up to 160dB. This set is an outstanding general-purpose measurement microphone set, well-suited for high-definition audio measurements 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 CRYSOUND pre-polarized microphone kit requires a constant current source power module (IEPE power supply), also known as ICP, CCP, etc., capable of supplying a current ranging from 2mA to 20mA.

- **TEDS Microphone Set**

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

- **Calibration**

  Each CRYSOUND microphone set 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 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 dBA to 160 dB
Operating Temperature	-30℃ to +70℃ (-22℉ to +158℉)
Temperature Stability	0.01 dB/℃ (-10℃ to +50℃) 0.006 dB/℉ (+14℉ to +122℉)
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 ± 2 V
Current Source	IEPE (2 mA to 20 mA)
Typical Operating Current	4 mA
Interface Type	SMB

Frequency Response

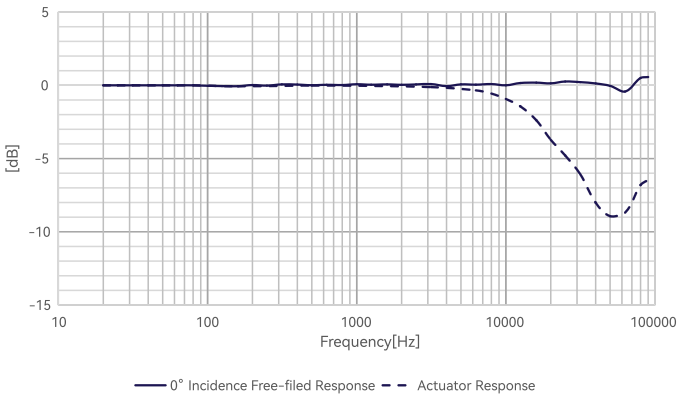

Fig.1 CRY3403-S01 Microphone Set Typical Frequency Response

Dimensions

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

Drawings(mm)[inch]

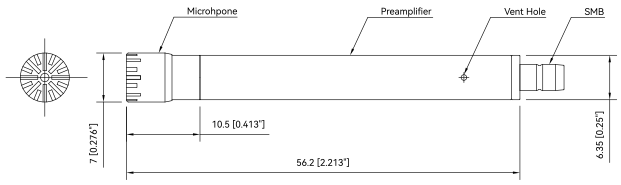

Fig.2 CRY3403-S01 Microphone Set Drawings

Ordering Information

Consisting of

Measurement Microphone	CRY3403 1/4" Free-field Prepolarized Microphone
Preamplifier	CRY3541 1/4" IEPE Preamplifier
Cable	SMB to BNC Cable /1.5m

Optional Accessories

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

Related Products

CRY3403-S02	1/4" free-field prepolarized high-frequency microphone set, 4 mV/Pa, 4 Hz-90kHz, 35dBA-160dB
CRY3201-S01	1/2" free-field prepolarized high-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dBA-150dB
CRY3401-S01	1/4" free-field prepolarized low-noise microphone set, 15.8 mV/Pa, 4 Hz-40 kHz, 26dB-148 dB