



CRY3401-S01

1/4" Free-field Prepolarized Low-noise Microphone Set

Features

- **Key Specifications**

Nominal Sensitivity	15.8 mV/Pa
Dynamic Range	26 dBA to 142 dB
Frequency Range	4 Hz to 40 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**

CRY3401 1/4" Free-field Prepolarized Microphone
CRY3541 1/4" IEPE Preamplifier

Introduction

The CRY3401-S01 is a 1/4" free-field, prepolarized, microphone and preamplifier set designed for high-frequency and high dynamic range acoustic measurements. With a flat frequency response to 40k Hz and sound pressure levels up to 142 dB, it is an excellent general purpose measurement microphone for High-definition audio measurements and other ultrasonic acoustic applications.

Highlights

- **Use of Low-noise Free-field Microphones**

Low-noise microphones have very low internal noise. When performing acoustic measurements, they have lower background noise to obtain lower acoustic signals. 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(± 1.5 dB)	15.8 mV/Pa, -36 dB re 1V/Pa
Frequency Response	4 Hz to 40 kHz ± 2 dB
Polarization Voltage	0 V
Dynamic Range(re.20uPa)	26 dBA to 142 dB
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Temperature Stability	0.01 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	< 35 Ω
Maximum Output Voltage	> 9 Vp
DC Bias Voltage	12V $\pm$ 2 V
Current Source	IEPE (2 mA to 20 mA)
Typical Operating Current	4 mA
Interface Type	SMB

Ordering Information

Consisting of

Measurement Microphone	CRY3401 1/4" Free-field Prepolarized Microphone
Preamplifier	CRY3541 1/4" IEPE Preamplifier
Cable	SMB to BNC Cable /1.5m

Optional Accessories

Electrostatic Actuator	TA0303 1/4" Electrostatic Actuator
Power Supply	CRY575 Three-channel Microphone Power Supply
Cable	SMB to BNC Cable /0.6m SMB to BNC Cable /0.8m SMB to BNC Cable /2.0m

Frequency Response

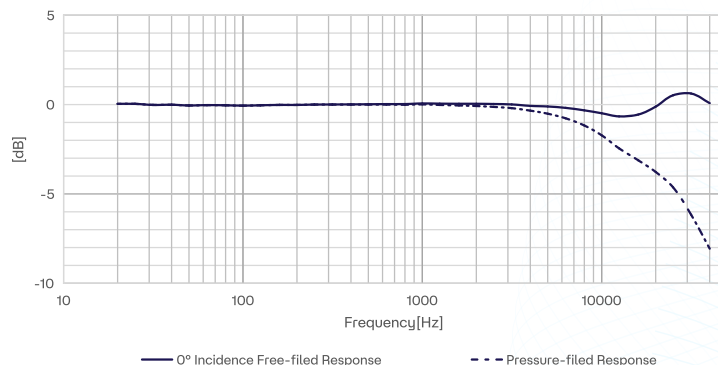


Fig.1 CRY3401-S01 Microphone Set Typical Frequency Response

Dimensions

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

Drawings(mm)[inch]

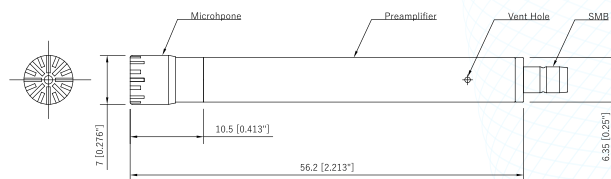


Fig.2 CRY3401-S01 Microphone Set Drawings

Related Products

CRY3402-S01	1/4" pressure-field prepolarized ultra-high frequency microphone set, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-161 dB
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