

# GRAS 40PL-10

CCP 自由场阵列传声器，高压型



频率范围 10 Hz - 20 kHz  
动态范围 33 dB(A) - 142 dB  
灵敏度 9 mV/Pa

GRAS 40PL-10 阵列传声器是一款适用于阵列和矩阵中通用测量任务的低成本传声器。它具有宽广的有用频率范围，最高可达 20 kHz 以及宽广的动态范围，最高可达 147 dB

## 典型应用与用途

- 多通道测量
- 声场分析
- 声功率测量
- 并行空间和瞬态测量

## 设计

阵列传声器设计用于安装在大型或小型阵列上。此类系统通常用于测量和定位噪声源，此时相位匹配对于获得测量的高精度至关重要。阵列传声器的一个重要特性是传声器之间具有相位匹配。

40PL-10 的动态范围为 33 dB(A) 至 147 dB 峰值，上限为可见失真前的峰值。

40PL-10 配备集成式 CCP 前置放大器，并内置 TEDS 芯片，可作为完整单元进行编程。GRAS 40PL-10 需要恒流电源供应，例如 GRAS 12AL CCP 电源供应器，或任何其他兼容 CCP 的电源供应器。

严格的制造公差结合 TEDS 芯片的优势，使 GRAS 40PL-10 具备了极高的互换性；这一特性在形成阵列和矩阵时使用多个传感器时尤为重要。

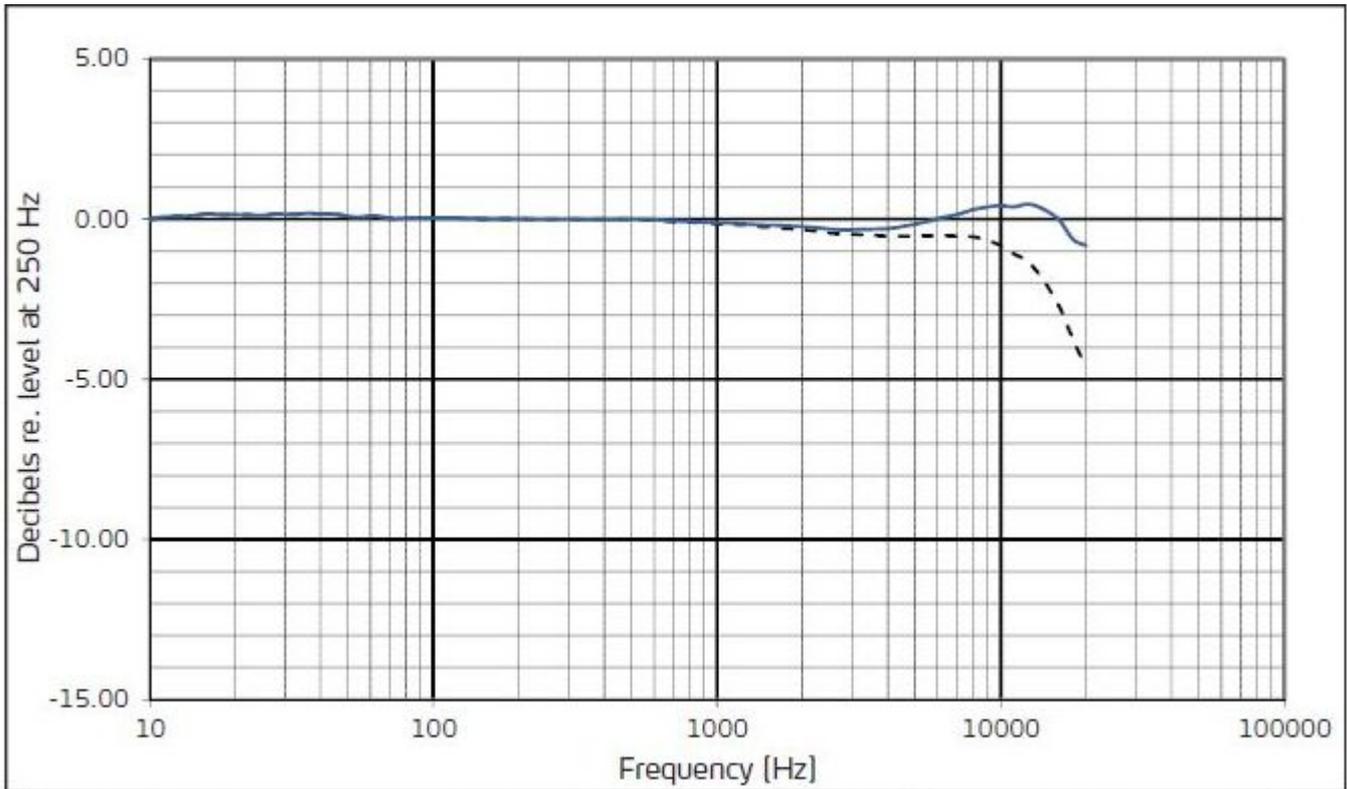
GRAS 40PL-10 的低成本是进行需要同时采集大量瞬态和空间数据的测量时的重要考虑因素。

使用 GRAS 校准器（推荐使用 GRAS 42AP 对 GRAS 40PL-10 进行校准，与校准其他 GRAS 1/4 英寸传声器一样简单。

所有 GRAS 传声器在出厂前均经过单独检测和校准。每个传声器均附带一份单独的校准图表。

Polarization/Connection		0 V / CCP
Frequency range ( $\pm 1.5$ dB)	Hz	50 to 5 k
Frequency range ( $\pm 2$ dB)	Hz	10 to 20 k
Dynamic range lower limit (microphone thermal noise)	dB(A)	< 33
Dynamic range upper limit	dB	142
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	mV/Pa	9
Power supply (Constant Current Power)	mA	2 to 20
Microphone venting		Front
Output impedance	$\Omega$	< 50
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-10 to 50 / -50 to 122
Temperature range, storage	$^{\circ}\text{C} / ^{\circ}\text{F}$	-20 to 60 / -4 to 140
Influence of axial vibration @1 m/s <sup>2</sup>	dB re 20 $\mu\text{Pa}$	55
TEDS (IEEE 1451.4)		27 v. 1.0
Connector type		SMB
CE/RoHS compliant/WEEE registered		Yes / Yes / Yes
Weight	g / oz	5.5 / 0.2
<b>Phase Match</b>		
50Hz - 100Hz		$\pm 5^{\circ}$
100Hz - 3kHz		$\pm 3^{\circ}$
3kHz - 5kHz		$\pm 5^{\circ}$
5kHz - 10kHz		$\pm 10^{\circ}$

## Frequency response



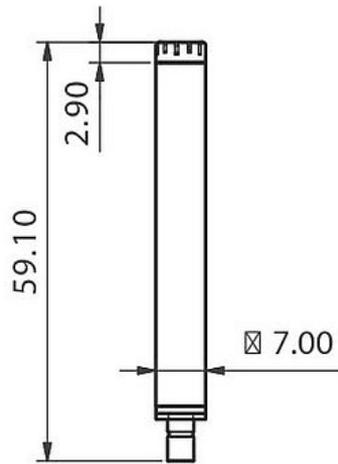
Typical frequency response

Free-field response

--- Pressure response

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Dimensions in mm



## 选配

<a href="#">GRAS AA0027</a>	3 m SMB - BNC Cable
<a href="#">GRAS 12AL</a>	1-Channel CCP Power Module with A-weighting filter
<a href="#">GRAS PR0002</a>	Array Module
<a href="#">GRAS AM0364</a>	Windscreens (set of 6)
<a href="#">GRAS RA0092</a>	Rain-protection cap
<a href="#">GRAS 42AA</a>	Pistonphone
<a href="#">GRAS 42AG</a>	Multifunction Sound Calibrator, Class 1

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# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

## HEAD OFFICE, DENMARK

**GRAS SOUND & VIBRATION**  
Skovlytoften 33  
2840 Holte  
Denmark  
Tel: +45 4566 4046  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[gras@grasacoustics.com](mailto:gras@grasacoustics.com)

## USA

**GRAS SOUND & VIBRATION**  
9290 SW Nimbus Avenue  
Beaverton, OR 97008  
Tel: 503-627-0832  
Toll Free: 800-231-7350  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-usa@grasacoustics.com](mailto:sales-usa@grasacoustics.com)

## UK

**GRAS SOUND & VIBRATION**  
Unit 115, Gibson House,  
Ermine Business Park, Huntingdon,  
Cambridgeshire, PE29 6XU  
Tel: +44 (0)7762 584 202  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-uk@grasacoustics.com](mailto:sales-uk@grasacoustics.com)

## CHINA

**GRAS SOUND & VIBRATION**  
Room 502, Building T1,  
No.1398 Ali Center  
Shenchang Road,  
Minhang District,  
Shanghai, China, 201107  
Tel: +86 21 400-888-9826  
[www.GRASacoustics.cn](http://www.GRASacoustics.cn)  
[cnsales@grasacoustics.com](mailto:cnsales@grasacoustics.com)



## About GRAS Sound & Vibration

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at [www.GRASacoustics.com](http://www.GRASacoustics.com)

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