

# GRAS 48LX-1

UTP传声器，中压



Freq range: 20 Hz to 31.5 kHz ( $\pm 1$  dB)

10 Hz to 50 kHz ( $\pm 3$  dB)

Dyn range: 54 dB(A) to 170 dB

Sensitivity: 0.6 mV/Pa ( $\pm 3$  dB)

Use: For aeroacoustic measurements

48LX-1是一款用于空气声学测试的超薄精密 UTP 表面传声器。这是一款小尺寸1/4"CCP中压电容传声器。麦克风只有1毫米高，因此可以安装在气流中而不会干扰声场...

## 超薄精密表面传声器

48LX-1是一套用于气动声学测试的超薄精密 (UTP) 表面传声器。

这是一套 ¼ CCP 中压电容式传声器，高度为 1 毫米。传声器套件包括一个带 TEDS 的前置放大器。集成电缆连接器为 Microdot 母头。电缆总长度为 3 米。

### 典型应用和用途

48LX-1 适用于平面和曲面的中低水平表面压力测量。由于其外形低矮，非常适合在边界层和湍流中进行测量，例如在：

- 车辆风噪测量
- 风洞试验
- 密闭空间内的测量

### 安装

48LX-1 可使用 RA4810 用于 48LA/48LX-1 的硬整流罩进行安装，该整流罩带有单击安装和附带的双面粘合安装垫。整流罩具有锁定机制，可以在不拆卸整流罩的情况下安装和拆卸传声器。整流罩的角度为 7.5°

### 实地验证

为了在现场使用声音校准器进行灵敏度验证，我们提供了一种特殊的适配器，即 RA4800 适配器，用于平装/表面传声器的灵敏度验证 RA4800 配有一个圆形软垫，类似于耳戴式耳机上使用的软垫。该衬垫可确保校准信号的密封腔。点击[了解更多信息](#)。

有了这个适配器，就可以快速方便地进行现场灵敏度验证，因此可以在测量前立即检查测量设置的完整性。

### 校准

可提供用于灵敏度和频率校准的附件。

RA4801 适配器用于 48LA/48LX-1 的灵敏度校准。该适配器适用于配有 ½ 耦合器的活塞发声器或声音校准

器。

对于频率校准，可提供用于 48LA/48LX 频率校准的 RA4802 促动器 RA4801 和 RA4802 还可组合成 RA4805

48LX-1 在出厂前均经过检查和校准。每个传声器都随附一张单独的校准表，其中包括单独的压力频率响应。

### 质量和保修

GRAS 传声器套件由我们久经考验的标准产品组合中的部件组成，全部采用优质材料和品牌部件制造，这些材料和部件都经过精挑细选和加工，以确保终身稳定和坚固耐用。

所有部件均在丹麦工厂由技术熟练的专业操作人员在经过验证的无尘室环境中进行生产和组装。

48LX-1 传声器的质保期为两年。

保修范围包括传感器元件、印刷电路板和外壳的材料和工艺缺陷。

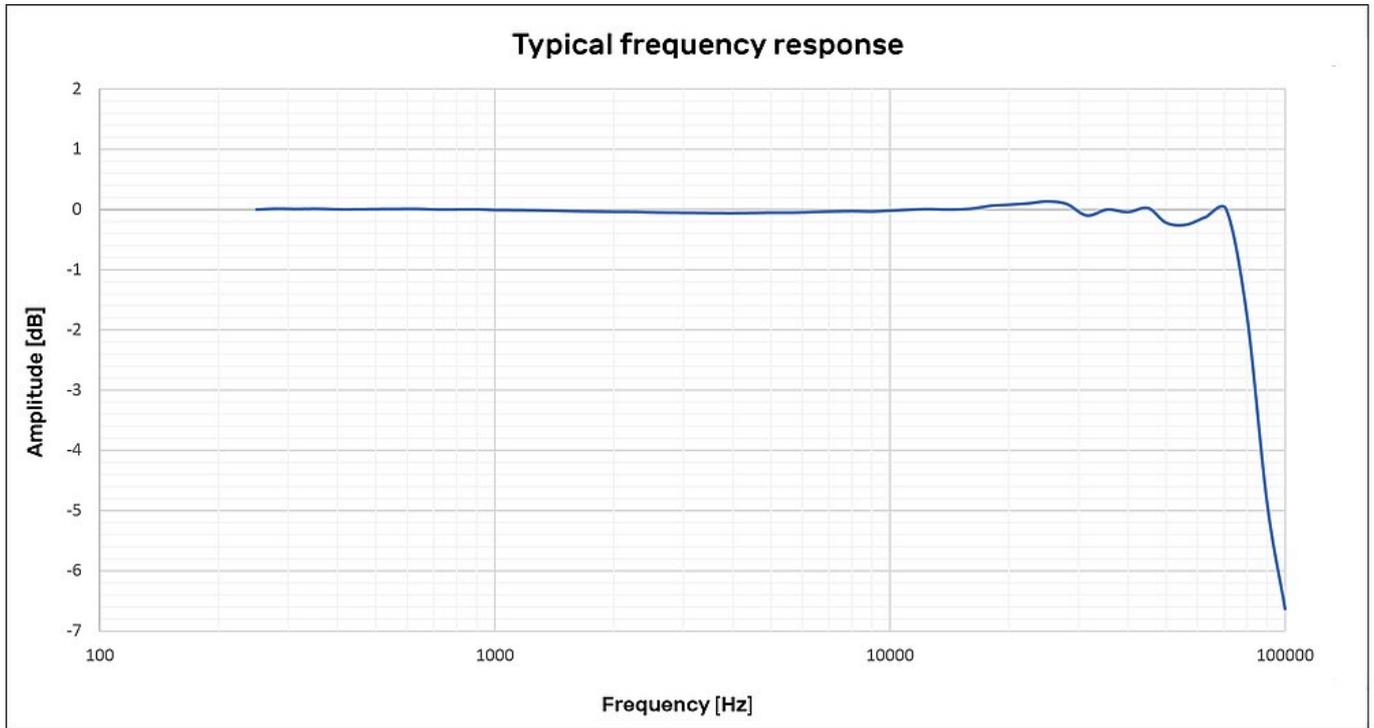
电缆和连接器的保修期为六个月。

### 服务

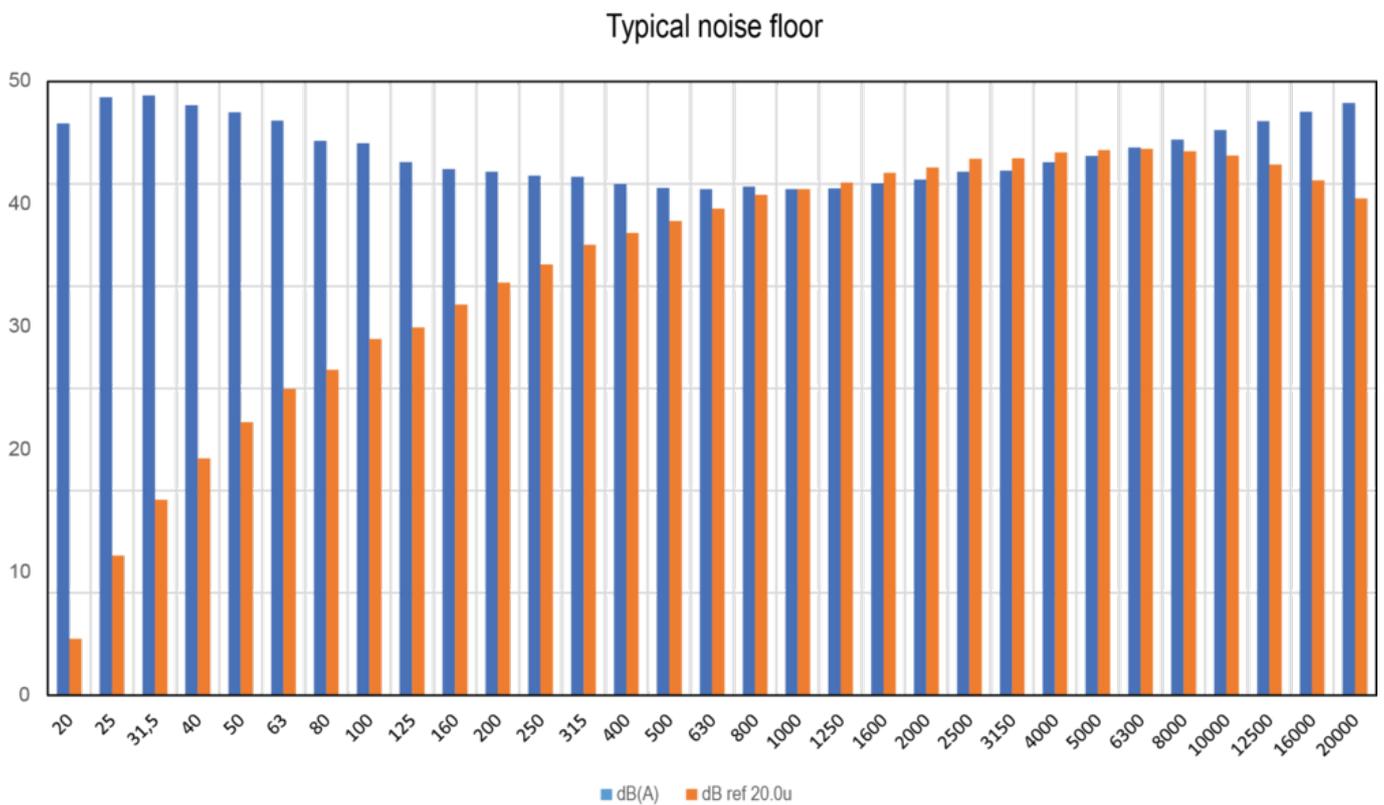
如果您不小心损坏或毁坏了传声器，我们将以合理的价格和较短的周转时间提供更换服务。

GRAS Sound & Vibration 不断努力为客户提高产品质量。因此，产品规格和配件可能会有变动。

Frequency range ( $\pm 1$ dB)	Hz	20-31.5 k
Frequency range ( $\pm 3$ dB)	Hz	10-50 k
Dynamic range lower limit (microphone thermal noise)	dB(A)	54
Dynamic range upper limit	dB	170
Sensitivity @ 250 Hz ( $\pm 3$ dB)	dB re 1V/Pa	-64.4
Sensitivity @ 250 Hz ( $\pm 3$ dB)	mV/Pa	0.6
Output impedance	$\Omega$	<50
Power supply min. to max.	mA	2 - 10
Microphone venting		Front
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-20 to 85 / -4 to 185
Temperature range, storage	$^{\circ}\text{C} / ^{\circ}\text{F}$	-40 to 85 / -40 to 185
Temperature coefficient @250 Hz	dB/ $^{\circ}\text{C}$ / dB/ $^{\circ}\text{F}$	-0.03, Typical
Static pressure coefficient @250 Hz	dB/kPa	-0.0003
Humidity range non condensing	% RH	0 to 80
Humidity coefficient @250 Hz	dB/% RH	-0.01
Influence of axial vibration @1 m/s <sup>2</sup>	dB re 20 $\mu\text{Pa}$	73
TEDS UDID (IEEE 1451.4)		I27-0-0-0U
Weight	g / oz	1 / 0.035 (excl. cable); 18 / 0.63 (incl. cable)

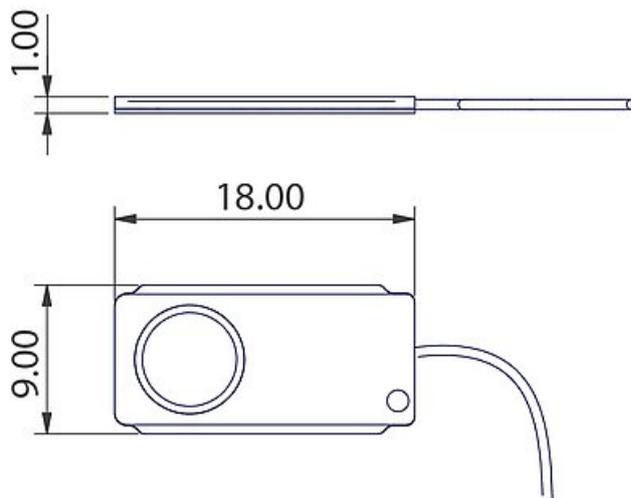


The frequency response is within  $\pm 3$  dB up to 70 kHz

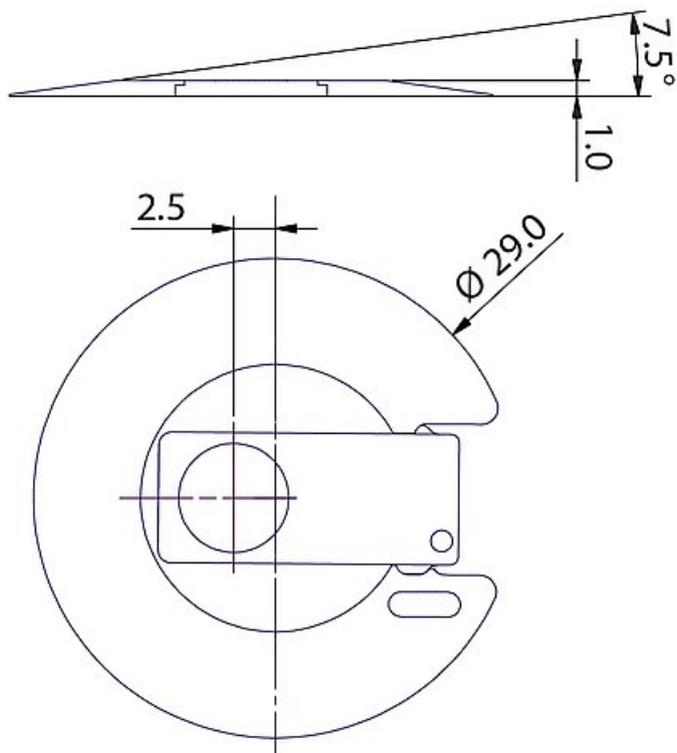


All dimensions in mm

48LA/LX-1



Fairing



## Included items

GRAS 48LX-1	UTP Microphone, Medium Pressure, with 3 m cable and booster
GRAS RA4810	Hard Fairing for 48LA/48LX-1, with click mount, double-sided self-adhesive mounting pad included x1

## Optional items

GRAS RA4800	Adapter for Sensitivity Verification of Flush/Surface Microphones
GRAS RA4801	Adapter for Sensitivity Calibration of 48LA/48LX-1
GRAS RA4802	Actuator for Frequency Calibration of 48LA/48LX-1
GRAS RA4805	Actuator and Pistonphone Adapter Kit for 48LA/48LX-1. This kit includes RA4801 and RA4802.
GRAS RA4810-2	Hard Fairing for 48LA/48LX-1, with click mount, 10-pack, mounting pads are included
GRAS RA4810-10	Hard Fairing for 48LA/48LX-1, with click mount, 50-pack, mounting pads are included
GRAS RA4811	Soft Fairing Mounting Kit for UTP Microphone Sets
GRAS RA4811-2	Soft Fairing Mounting Kit for UTP Microphone Sets, 10 pcs
GRAS RA4812	DB0521 Mounting overlay tape for UTP fairings (1 pc.)
GRAS RA4812-2	DB0521 Mounting overlay tape for UTP fairings (10 pcs.)
GRAS AE0101	Microdot Male - BNC Male Adapter
GRAS AA0070	Microdot - BNC Cable, 3 m
GRAS AA0071	Microdot - BNC Cable, 5 m
GRAS AA0072	Microdot - BNC Cable, 10 m

# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

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## 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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