

## 48LA UTP MICROPHONE, HIGH PRESSURE

Ultra ohut tarkkuusmikrofoni, jossa yhdistyy perinteisen mittausmikrofonin kyvykkyydet ja 1 mm paksuus. Maailman ohuin kondensaattorimikrofoni.

|                         |                       |
|-------------------------|-----------------------|
| <b>Valmistaja:</b>      | GRAS                  |
| <b>Tuotenumero:</b>     | 48LA                  |
| <b>Herkkyys:</b>        | 0.12 mv/Pa            |
| <b>Taajuusalue:</b>     | 16.5 hz - 31.5 kHz    |
| <b>Dynaaminen alue:</b> | 64 - 184 dB           |
| <b>Tyyppi:</b>          | Ultra thin mikrofonit |

**FLAT - FAST - PRECISE**

### The World's Thinnest Condenser Microphones

Laminaarisen ja turbulentin ilmapvirran akustiset mittaukset edellyttävät matalaproofilisia antureita äänikentän häiriöiden minimoiseksi.

Siksi olemme GRAS: ssa kehittäneet UTP-mikrofonit - Ultra Thin Precision -mikrofonit. Ne yhdistävät klassisen mittausmikrofonin edut - laaja taajuusalue, tarkkuus ja toistettavuus - erittäin pieneen kokoon.

GRAS 48LA on vain 1 mm korkea, ja siksi se on ihanteellinen mittauksiin pintarakenteissa ja turbulenssissa.

## EXPLORE THE BENEFITS

**The very small things which make the BIG difference**

### Quality Data

UTP provides accurate data from precision measurement microphones manufactured to narrow specifications.

### Low Profile

With a height of 1 mm the door to a whole new world of what can be measured in boundary layers and turbulent flow opens.

### Easy Mounting and Verification

As described below, mounting is easy, and once mounted, the setup can easily and quickly be verified in-situ, a major advantage when you want to check the integrity of your measurement setup.

### Small Form Factor

48LA can be used in small or difficult-to-access spaces where conventional microphones must give up.

### Cost-saving Solution

Easy mounting, CCP interface with integral cabling and in-situ verification all add up to reduced setup time and faster measurements - with reliable data.

### Flow-optimized Fairings

Fairings with a rise angle of 6.5 or 7.5 degrees ensure minimal disturbance to the sound field/airflow.

## Easy Mounting and In-Situ Verification

### 48LA is easy to mount and remove.

It can be mounted in a hard fairing which can be used as a permanently mounted dock. A click-mechanism ensures easy and stable mounting. The microphone can easily be removed, leaving the mounting position ready for future measurements. The fairing is secured with double-sided adhesive tape.

### Fast and reliable in-situ verification saves time and increases confidence.

A special verification adapter with a soft cushion allows for quick, easy, and reliable in-situ verification. Four distance spacers ensure that the correct volume is achieved and that this volume can easily be reproduced. Even on curved surfaces, this verification method is so precise that dismounting is not necessary.



# &NBSP;

## Tekniset tiedot

## Specifications

|                                                      |                                                 |                                                |
|------------------------------------------------------|-------------------------------------------------|------------------------------------------------|
| Frequency range ( $\pm 1$ dB)                        | Hz                                              | 20 to 20 k                                     |
| Frequency range ( $\pm 3$ dB)                        | Hz                                              | 16 to 31.5 k                                   |
| Dynamic range lower limit (microphone thermal noise) | dB(A)                                           | 64                                             |
| Dynamic range upper limit                            | dB                                              | 184                                            |
| Set sensitivity @ 250 Hz ( $\pm 2$ dB)               | mV/Pa                                           | 0.12                                           |
| Set sensitivity @ 250 Hz ( $\pm 2$ dB)               | dB re 1V/Pa                                     | -78.4                                          |
| Output impedance                                     | $\Omega$                                        | <50                                            |
| Power supply min. to max.                            | mA                                              | 2 to 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                                          |
| 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                                             |
| Connector type                                       |                                                 | Microdot 10/32                                 |
| Weight                                               | g / oz                                          | 1 / 0.035 (excl. cable) 4 / 0.14 (incl. cable) |

## Toimitussisältö

- Gras 48 LA UTP mikrofoni, High Pressure, 3 metrin kaapelilla
- Kovareunainen asennusadapteri mallille 48LA / 48LX-1 napsautuskiinnikkeellä
- Microdot Female - BNC Male adapteri
- Kalibrointitodistus

## Dokumentit

1. [Esite UTP mikrofoniaperhe](http://www.mip.fi/images/docs/fi/utp-auto_brochure_v72.pdf), (URL: [http://www.mip.fi/images/docs/fi/utp-auto\\_brochure\\_v72.pdf](http://www.mip.fi/images/docs/fi/utp-auto_brochure_v72.pdf))
2. [Esite 48LA](http://www.mip.fi/images/docs/fi/gras_48la.pdf), (URL: [http://www.mip.fi/images/docs/fi/gras\\_48la.pdf](http://www.mip.fi/images/docs/fi/gras_48la.pdf))

## Lisäkuvat ja videot