



## Condenser Measuring Microphone Cartridge Type MK 301 E

The 1/4" MK 301 E measuring microphone cartridge is designed for acoustical measurements in research and development and also for industrial use. Some applications include audiometry, the measurement of building acoustics and noise levels.

- Frequency range 5 Hz to 100 kHz, free-field
- Sound pressure level up to 158 dB

The microphone cartridge has a fixed layer of backelectret to supply the polarisation voltage. It is designed and very carefully constructed to ensure excellent long-time stability of the electroacoustical parameters. All essential components including the diaphragm are made of nickel and the diaphragm is bonded by a special galvanic process. The diaphragm is protected against mechanical damage by a protection grid.



The equalization of the static air pressure between the inside and outside of the cartridge is by means of a capillary tube side-vented. The individual pressure frequency response curves can be conveniently measured by using a calibration grid, e.g. UA 0033 by means of the adaptor DB 0264. The cartridge uses the international standard thread 60 UNS which ensures compatibility with a wide range of calibration equipment and measurement devices available from many manufacturers.

### Delivery

Measuring Microphone Cartridge MK 301 E in wooden case	Order-No. 311111
--	------------------

### Specifications

Measuring Microphone Cartridge	MK 301 E
Transducer Type	Capacitive pressure transducer
* Frequency range free field response without protection grid	5 Hz ... 100 kHz, ( $\pm 2$ dB)
* Sensitivity	4 mV/Pa
Max. SPL for THD $\leq 3\%$ at 1 kHz	158 dB
Inherent noise with preamplifier MV 310	36 dBA
Polarization voltage	0 V
* Polarized cartridge capacitance at 1 kHz	4,5 pF
Operating temperature range	-20 ... +100 °C

Main ambient temperature coefficient	$\leq 0,01$ dB/K
Main ambient pressure coefficient	$-1 \times 10^{-5}$ dB/Pa
Diameter with protection grid	$7,0 \pm 0,02$ mm
Diameter without protection grid	$6,35 \pm 0,02$ mm
Height	9,7 mm
Weight	2 g
Preamplifier thread	5,7 mm 60 UNS
Protection grid thread	6,35 mm 60 UNS

\* individually calibrated

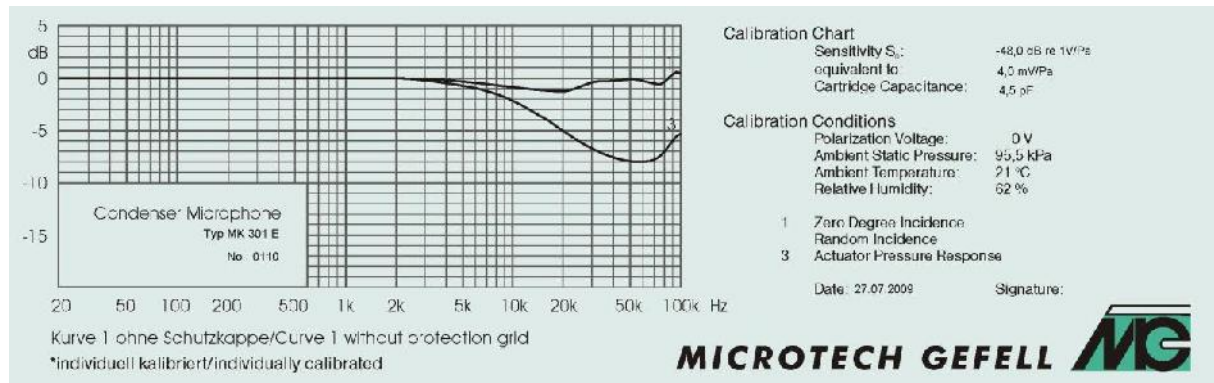
## Maintenance and upkeep

In order to maintain its functioning the measurement microphone cartridge should be protected against mechanical damage. It should be disconnected from its power source and completely checked for any pollution in regular intervals that have to be defined depending on the operating conditions.

After removal of the protection grid the pollution within the grid and on the diaphragm should be cleaned very carefully with a soft clean cloth or brush.

The measurement microphone cartridge is not suitable for use in chemical aggressive conditions and in conductible dust. Condensation must be avoided.

## Frequency responses



## Polar patterns

