

## MK 301 E - MP30 1/4" IEPE Ultrasonic Microphone



### MK301 E & MP30

The MK301E-MP30 1/4" microphone opens up the possibility of using a high-quality, pre-polarized MK 301 E microphone capsule on DAQ systems with IEPE supply. Typical applications include array arrays and envelope measurement methods, e.g. in automotive acoustics.

The electrical connection is made via the permanently attached BNC connector with BNC cables.

The 1/2" MP30 preamplifier is equipped with a 1/2" to 1/4" reducing adapter A 67, so that pre-polarized 1/2" microphone capsules with higher sensitivities or other properties, for example with MK 222 E, infrasound measurements can be realized if required.

The MI-MKAL microphone holder is recommended for holding the microphone. The use of the 1/4" measuring microphone capsule accessories, such as windscreens, etc., is possible without any problems.

The microphone can be calibrated with the sound calibrator type CA 111 or with other suitable sound pressure calibrators using a 1/4" adapter.

### Technical data

IEPE Supply	24 to 30 V DC
Operating current	2 – 20 mA
Bias	12.5 V
Frequency range ( $\pm 2$ dB)	5 Hz - 100 kHz
Microphone capsule thread	60 UNS
Polar pattern	Sphere
Electrical noise floor	12 dB (A)
Acoustic background noise	35 dB (A)
Limit sound pressure level	168 dB
Sensitivity	3.5 mV/Pa
Measuring range	35 – 168 dB (A)
Connector	BNC
Dimensions	$\Phi 12.5 \times 150$ mm
1/4" outsidiameter	$7.0 \pm 0.02$ mm
Weight	47 g

## MK 301 E Specs

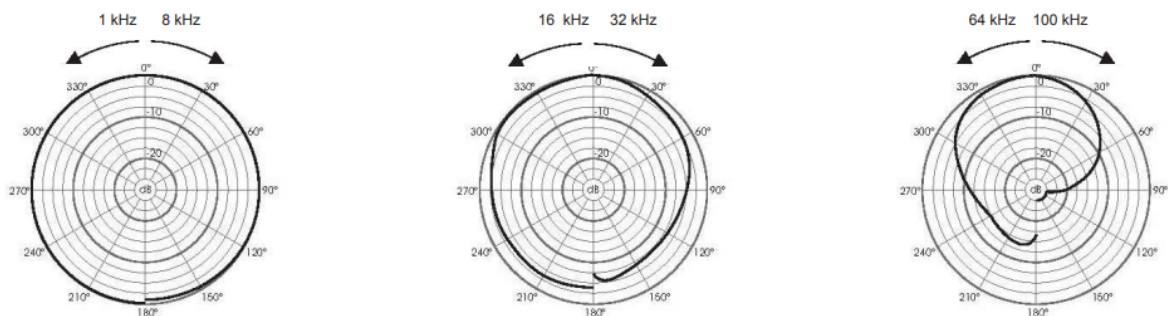
Transducer type	Capacitive pressure receiver
Frequency range of free-field transmission measurement	5 Hz ... 100 kHz ( $\pm 2$ dB)
Sensitivity	3.5 mV/Pa
Limit sound pressure level for 3 % distortion at 1 kHz	168 dB
Noise	35 dB
Polarization voltage	backelectret
Capacitance with polarization voltage at 1 kHz	4.5 pF
Working temperature range	-50 ... +100 °C
Humidity up to	70 °C, 90 %
Temperature coefficient	$\leq 0.01$ dB/K
Static pressure coefficient	0.00001 dB/Pa
Diameter with protective cap	$7 \pm 0.02$ mm
Height	9.7 mm
Weight	2 g
Thread for preamplifier	5.7 mm 60 UNS
Thread for protective cap	6.35 mm 60 UNS



### Maintenance and servicing

In order to ensure proper functionality, the measuring microphone capsule must be protected from mechanical damage and, depending on the conditions of use, checked on all sides for contamination at intervals to be specified in the operating voltage-free state. After removing the protective cap, the impurities in its interior, as well as on the membrane, should be removed extremely carefully with a soft brush or cloth. The measurement microphone capsule is not suitable for use in chemically aggressive media and conductive dust. Condensation formation must be ruled out.

### Polar diagrams



### 1 free-field frequency response | 3 pressure frequency response

