



MP30-231

random incidence
diffuse field microphone

For diffuse field applications

The 1/2" measurement microphone MP-30-231 opens the possibility of using a high-quality, pre-polarized microphone capsule MK 231 E on measuring systems with IEPE supply.

MK 231 E has a diffuse field-equalized frequency response of the transmission dimension and is designed especially for acoustic measurements in the diffuse sound field and in acoustic couplers. The static pressure equalization takes place via a capillary to the downstream preamplifier (rear-vented).

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

The MI-MKAL microphone holder is recommended for holding the microphone. The use of the 1/2" measuring microphone capsule accessories, such as windscreens, etc., is possible without any problems.

The measurement microphone can be calibrated with the 4010, CA 111 sound calibrator or with other suitable sound pressure calibrators.



Technical data

Capacitive pressure receiver	WS2D IEC 61094-4
Sensitivity	50 mV/Pa
Frequency response ± 2 dB	3.5 Hz ... 16 kHz
Polarization voltage	0 V
Limit sound pressure level for 3% harmonic distortion at 1 kHz	149 dB
Polar pattern	Sphere
Output voltage	≤ 6.5 Vrms
Noise	15 dBA
Operating current	2 mA to 20 mA, nom. 4 mA
IEPE Voltage	UL 24 V DC to 30 V DC
Temperature range ± 0.5 dB	-25°C to +100°C
Connector	BNC
Dimensions	$\Phi 13.2 \times 81$ mm
Preamplifier thread	11.7 mm 60 UNS
Weight	37 g

MK 231 E Specs

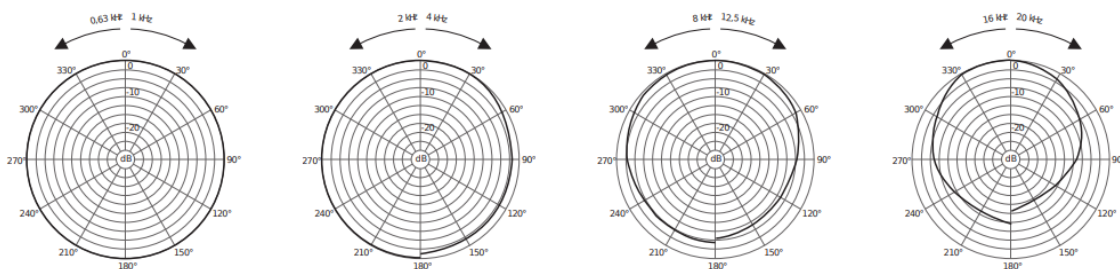
Transducer type	Capacitive pressure receiver
Frequency range of the diffuse field transmission measure ± 2 dB	5 Hz ... 16 kHz
Frequency range of pressure transmission measurement ± 1 dB	10 Hz ... 8 kHz
Field Idle Transfer Factor	50 mV/Pa
Limit sound pressure level for 3 % distortion at 1 kHz	149 dB
Noise	15 dBA
Polarization voltage	0V
Capacitance with polarization voltage at 1 kHz	16 pF
Working temperature range	-50 ... +100 °C
Humidity up to	70 °C, 90 %
Temperature coefficient	≤ 0.01 dB/K
Static pressure coefficient	0.00001 dB/Pa
Diameter with protective cap	13.2 mm \pm 0.05 mm
Height	16.4 mm
Weight	9 g
Thread for preamplifier	11.7 mm 60 UNS
Thread for protective cap	12.7 mm 60 UNS



Maintenance and servicing

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



Frequency curves:

Typical frequency response: 1 random incidence / 2 pressure response

