



MNP47

Pressure Field Microphone High SPL Microphone



MNP47

The MNP47 1/4" measurement microphone opens the possibility of using a high-quality, pre-polarized 1/4" pressure field measurement microphone capsule on measurement systems with IEPE supply. Typical applications are measurements of high sound pressure levels e.g. in the defense industry or development of rocket engines or noise measurement in high voltage arc experiments.

The measuring microphone is connected to the measuring channels via a fixed SMB connector with SMB cables or usual BNC cables via a SMB-BNC adapter.

The MH-37 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 measurement 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 IEC 61094-4 WS3P

IEPE Supply	24 to 30 V DC
Operating current	2 – 20 mA
Bias	12.5 V
Frequency range (± 3 dB)	10 Hz - 20 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	162 dB
Sensitivity	4 mV/Pa
Measuring range	35 – 162 dB (A)
Connector	SMB
Dimensions	$\Phi 6.35 \times 68.0$ mm
1/4" outside diameter	6.35 ± 0.02 mm
Weight	8.25 g

MP47 ¼" Pressure Field Microphone Capsule

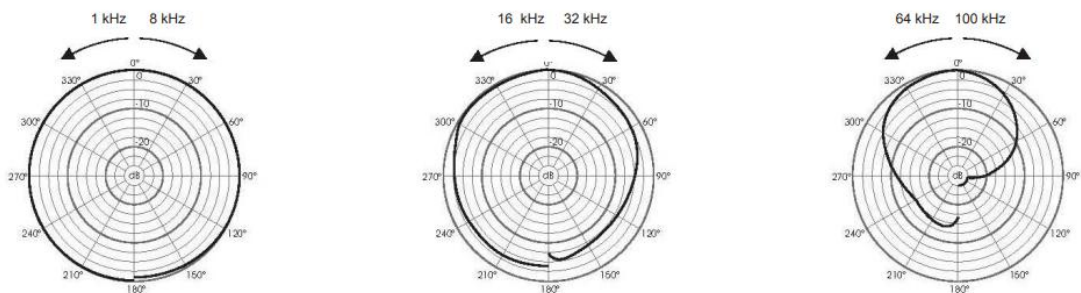
- WS3P acc IEC 61094-4
- pressure
- 10 Hz to 70 kHz
- 35 dBA to 164 dB
- prepolarized

Transducer type	Capacitive pressure transducer
Frequency range of	10 Hz to 70 kHz (± 3 dB) 5 Hz to 50 kHz (± 2 dB) 20 Hz to 20 kHz (± 1 dB)
Sensitivity	4 mV/Pa
Limit sound pressure level for 3 % distortion at 1 kHz	164 dB
Noise	35 dB
Polarization voltage	backelectret
Capacitance with polarization voltage at 1 kHz	4.5 pF
Working temperature range	-30 ... +80 °C
Humidity up to	70 °C, 90 %
Temperature coefficient	≤ 0.01 dB/K
Static pressure coefficient	0.00001 dB/Pa
Diameter with protective cap	7 \pm 0.02 mm
Height	10.5 mm
Weight	1.85 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 Pressure frequency response

typical pressure frequency response

