



PLACID
MEASUREMENT
MICROPHONE

**PMP
21**

ACCURATE & STABLE

PLACID MEASUREMENT MICROPHONES

Discover a wide selections of our measurement
microphones according to your sound
measurement needs

Placid Instruments BV

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PLC/PMP21/23/UAV2.2

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PLACID PMP21

1/2" PRE-POLARIZED FREE-FIELD MICROPHONE, CLASS 1



Specification

Frequency Range

20 Hz to 20 kHz

Dynamic Range

16 to 146 dB(A)

Nominal Sensitivity

50 mV/Pa

PLACID PMP21 is 1/2" prepolarized free field measurement microphone. It is intended to be used in IEC Class 1 Sound Level Meters, and other noise measurements where Class 1 accuracy is required.

All the microphones are going through solid environmental testing, which includes high temperature ageing and high humidity ageing.



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Specification

Basics

The PLACID PMP21 is a high-precision condenser microphone manufactured in compliance with the IEC 61094-4 requirements and classified as a class 1 microphone. The PMP21 microphone is optimized for free-field measurements.

As all PLACID microphones, the PMP21 comes with an individually calibration certificate.

Connectivity

The PLACID PMP21 microphone requires a standardized 1/2" BNC preamplifier that does not need to provide polarization.

Uses

The PMP21 is a robust and stable microphone and is being used as an all-round free field microphone suitable for laboratory as well as field jobs.

Daily usage

PLACID recommends calibration before and after each measurement with a calibrator.

Individual calibration

All PLACID microphones are being calibrated in a controlled laboratory environment using traceable calibration equipment complying with ISO17025 standards. We recommend that all PLACID microphones are re-calibrated every year to guarantee an optimized usage. PLACID Traceable Calibration is performed by our qualified staff and under controlled conditions according to the procedures and standards such as ISO17025

Quality

All PLACID microphones are made of high-quality materials that will ensure long stability and durability.

The microphone diaphragm, body, and protection grid are made of high-grade stainless steel, which makes the microphone resistant to physical damage. PLACID offers 2 years warranty against defective materials and workmanship.



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DATASHEET PLACID PMP21 MICROPHONE



Materials

Grid	Copper (Nickel plated)
Housing	Stainless Steel
Diaphragm	Nickel
Back Plate	Stainless Steel
Insulator	Crystal Quartz
Electret	Teflon

Acoustical Properties

Frequency Response	Free-field
Open Circuit Sensitivity	50mV/Pa \pm 2dB
Equivalent Noise Level	< 16 dB(A)
T.H.D	< 3% at 146dB SPL
Polarization Voltage	0 V
Capacitance	16.0 pF
Equivalent Air Volume	230 mm ³ at 250 Hz.
Diaphragm Resonance Frequency	16 kHz.
Pressure Vent	Rear
Operating Temperature Range	-30°C, ~ 90°C
Temperature Coefficient	< -0.012 dB/°C (at 250Hz, -10 ~ 50 °C;)
Humidity Coefficient	< 0.1 dB/% (at 250Hz, 0 ~ 98 %RH)
Pressure Coefficient	< -0.01 dB/kPa (at 250 Hz, 65 kPa – 108 kPa)



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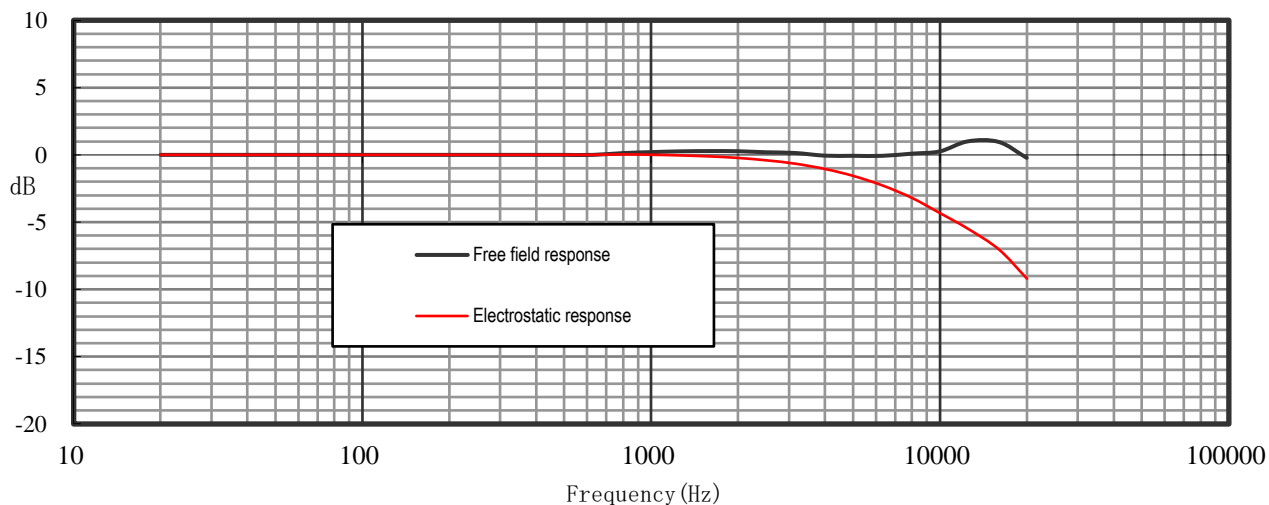
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The typical frequency response for PMP21





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Pressure to free field correction

when using an electrostatic actuator of PMP21 with Protection Grid

(unit: dB)

Frequency kHz	0°	30°	60°	90°	120°	150°	180°
1.00	0.2	0.1	0.0	-0.1	-0.2	-0.2	-0.1
1.25	0.3	0.3	0.1	-0.1	-0.2	-0.2	0.0
1.60	0.4	0.4	0.1	0.0	-0.2	-0.2	0.1
2.00	0.5	0.5	0.2	0.0	-0.2	-0.2	0.1
2.50	0.6	0.5	0.2	0.1	-0.3	-0.2	0.1
3.15	0.8	0.5	0.1	0.0	-0.4	-0.3	0.2
4.00	1.0	0.8	0.2	0.0	-0.5	-0.6	-0.4
5.00	1.5	1.2	0.3	0.0	-0.9	-0.9	-0.5
6.30	2.2	1.9	0.9	0.1	-0.8	-0.8	-0.3
8.00	3.3	2.7	1.4	0.1	-0.9	-0.9	-0.1
10.00	4.6	3.9	1.9	-0.2	-1.7	-1.6	-0.4
12.50	6.5	5.7	3.4	0.7	-1.0	-0.8	0.7
16.00	8.0	6.7	3.4	-0.5	-3.0	-2.5	-1.0
20.00	9.0	7.2	2.5	-2.7	-5.8	-5.5	-3.5



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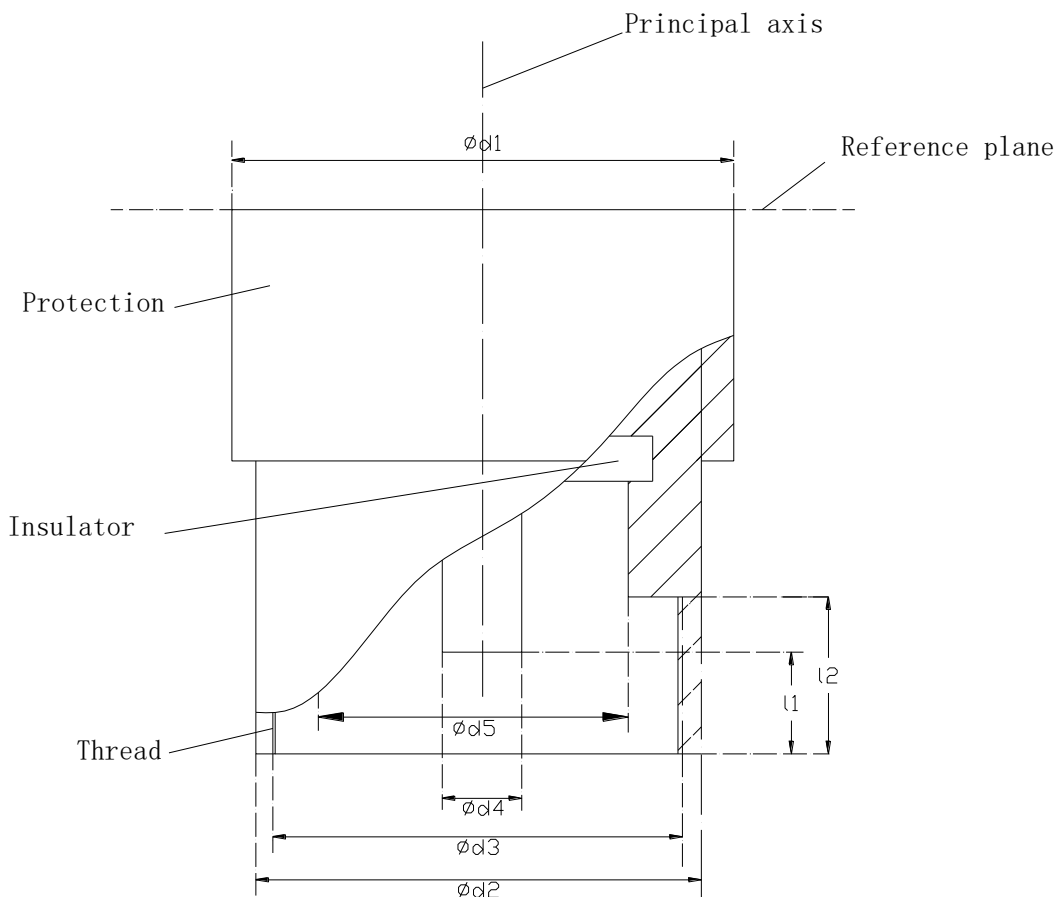
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Dimensions

Dimensions	d1	d2	l1	l2	d4	d5	d3	Total L
IEC 61094-4 Requirements for WS2F	13.2	12.7	3.6-4.6	>2.2	3-5	>7.8	11.70- 60UNS- 2B	N/A
PMP21	13.20	12.68	4.30	4.30	3.01	7.90	11.70- 60UNS- 2B	16.50
Height (Single Membrane)							2.8 mm	
Height(from the top of membrane to the end of Housing)							15.8-16.3mm	





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