

USP REGULAR

3D SOUND INTENSITY PROBE



PRODUCT DATA



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USP REGULAR

1/2 INCH 3D SOUND INTENSITY PROBE



3D ACOUSTIC VECTOR SENSOR ENABLING 3D SOUND FIELD VISUALIZATION

The Ultimate Sound Probe (USP) regular is a state-of-the-art 3D acoustic vector sensor that captures the complete sound field at a single point. Three orthogonally placed acoustic particle velocity sensors measure the acoustic particle velocity vector in three dimensions. A sound pressure transducer simultaneously

measures the scalar sound pressure. By combining vector and scalar acoustic quantities, all acoustic information at a specific location is fully characterized, enabling accurate sound source localization and detailed analysis of sound propagation.

THE USP REGULAR AT A GLANCE

- Compact design
- Collocated sensors
- Covers a broad range of 20 Hz - 10kHz
- Sound pressure and the three-dimensional acoustic particle velocity vector
- 3D sound intensity and sound power directly from the same measurement
- Anechoic conditions not required

TYPICAL APPLICATIONS

- Noise source identification & mapping
- Sound ranking
- Scanning solutions e.g. Scan&Paint 3D
- Range of acoustic quantities: 3D Sound Intensity, Sound Power, PVL measurements

SPECIFICATIONS

SENSOR PERFORMANCE

Parameter	Sound Pressure Particle Velocity	Unit
Sensitivity	70 17	mV/Pa V/(m/s)
Frequency Range (±1 dB)	40 - 8,000	Hz
Frequency Range (±2 dB)	20 - 10,000	Hz
Maximum Level	112 130	dB
Noise floor (20 Hz - 2 kHz)	21 32	dB(A)
Noise floor (20 Hz - 10 kHz)	27 48	dB(A)

ENVIRONMENTAL

Parameter	Sound Pressure Particle Velocity	Unit
Temperature range	-20 to 63	°C
Temperature Coefficient	0.067 0.006	dB/°C
Influence of Humidity (30 - 90%)	0.05 0.06	dB/%RH
Static Pressure Coefficient	< 0.5	dB/kPA
Maximum airflow	1.5	m/s

PHYSICAL DIMENSIONS

Parameter		Unit
Connector type	7 pin	LEMO
Weight	42	g
Diameter	12.7 1/2	mm (inch)
Length	128	mm

SPECIFICATIONS

DIMENSIONS

