

USP REGULAR

3D SOUND INTENSITY PROBE



PRODUCT DATA



Microflow Technologies
Charting sound fields



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USP REGULAR

1/2INCH 3D SOUND INTENSITY PROBE

3D ACOUSTIC VECTOR SENSOR ENABLING 3D SOUND FIELD VISUALIZATION

The USP regular, is a state of the art sensor that provides the complete sound field information including the direction of the propagation vectors in three dimensional space at a given point. Comprising three Microflow on orthogonal basis and a sound pressure microphone, the USP is capable of measuring the three dimensional components of the acoustic vector quantity, acoustic par-

ticle velocity and the scalar sound pressure. Accelerating innovation and design by providing valuable insight in to the sound source location and sound propagation, the USP is an ideal transducer solution for your measurement needs.

THE USP REGULAR AT A GLANCE

- Covers a relevant and broad range of 20 Hz - 10kHz
- Sound pressure and the three-dimensional particle velocity vector
- Compact design
- 3D Sound intensity & sound power estimations directly from the same measurement
- Less dependent on environmental conditions

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
- Acoustic impedance & absorption

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 (20-2k Hz)	21 32	dB(A)
Noise floor (20-10k Hz)	27 48	dB(A)

ENVIRONMENTAL

Parameter	Sound Pressure Particle Velocity	Unit
Temperature Range	-20 to 63	$^{\circ}$ C
Temperature Coefficient	0.067 0.006	dB/ $^{\circ}$ 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	Value	Unit
Connector type	7 pin	LEMO
Weight	42	g
Diameter	12.7 1/2	mm inch
Length	128	mm

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PHYSICAL DIMENSIONS

