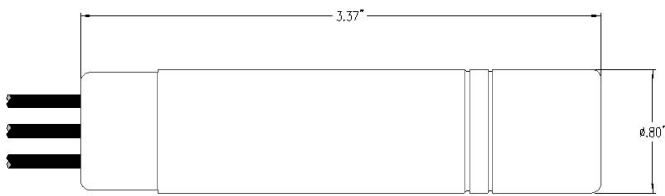


Low-frequency vector sensor VS-301



Wilcoxon's vector sensors measure the acoustic pressure and particle acceleration in three orthogonal axes. These four sensing elements are located in a single housing with a common acoustic phase center. The four channels of the vector sensor, when combined, produce a cardioid directivity pattern which provides approximately 4.8 dB improvement in the signal to noise ratio over a traditional omni-directional pressure sensor. In addition, engineering sensors are embedded within the housing and when combined with acoustic sensors, can provide a bearing to the target.



Pin out		
Cable	Lead color	Function
X	white black shield	X SIG + X SIG - X SHIELD
Y	white black shield	Y SIG + Y SIG - Y SHIELD
Z	white black shield	Z SIG + Z SIG - Z SHIELD
H	white black shield	H SIG + H SIG - H SHIELD
DIG	white black shield	DIG + (Clock) DIG - (Data) DIG SHIELD
PWR	white black shield	PWR + PWR - PWR SHIELD

Key features

- Three orthogonal axis accelerometers and one omni-directional hydrophone
- Preamplifier and differential output
- Pitch and roll
- Heading
- Temperature
- Health check
- Micro-controller with digital link
- Power management capability

Applications

- Towed and stationary arrays
- Underwater monitoring stations
- Sonobuoys
- Oil & gas exploration
- Marine wildlife monitoring
- Acoustic research
- Harbor and inlet security
- Homeland security and military surveillance

Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.

Wilcoxon Sensing Technologies
20511 Seneca Meadows Parkway
Germantown, MD 20876
info@wilcoxon.com

Tel: (301) 330 8811
Fax: (301) 330 8873
www.wilcoxon.com

Wilcoxon Sensing Technologies
An Amphenol Company

Low-frequency vector sensor VS-301

SPECIFICATIONS

Output sensitivity:	Accelerometer	10 V/g
	Hydrophone	-162 dB re 1.0 V/uPa
Full scale input range:	Accelerometer	0.5 g pk
	Hydrophone	600 Pa pk
Frequency response, ±3 dB:	Accelerometer 0.2 Hz	3.0 Hz - 2.0 kHz
	Hydrophone 6.0 Hz	3.0 Hz - 2.0 kHz
Transverse sensitivity, max		<5%
Temperature accuracy		±1.0° C
Power requirement:	Voltage	6.5 - 9.0 VDC
	Current, nominal	40 mA
Output type, differential		3.2 V bias
Output impedance, max		100 Ω
Pressure range:	Operational, max	800 psi
	Absolute max	1,200 psi
Operating temperature		-10 to +60° C
Diameter		0.80 in
Length		3.37 in
Buoyancy in water		-68%
Weight, without cables		43 g
Cable¹		6 cables, 15 ft each
External material		Polyurethane

Notes: ¹ Cable: twisted, shielded pair, polyurethane jacket

Contact

Wilcoxon Sensing
Technologies

20511 Seneca Meadows Parkway
Germantown, MD 20876, USA

Tel: +1 301 330 8811
Fax: +1 301 330 8873

info@wilcoxon.com

www.wilcoxon.com

Options:

- Connector
- Cable length

Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.

Wilcoxon Sensing Technologies
20511 Seneca Meadows Parkway
Germantown, MD 20876
info@wilcoxon.com

Tel: (301) 330 8811
Fax: (301) 330 8873
www.wilcoxon.com

Wilcoxon Sensing Technologies
An Amphenol Company