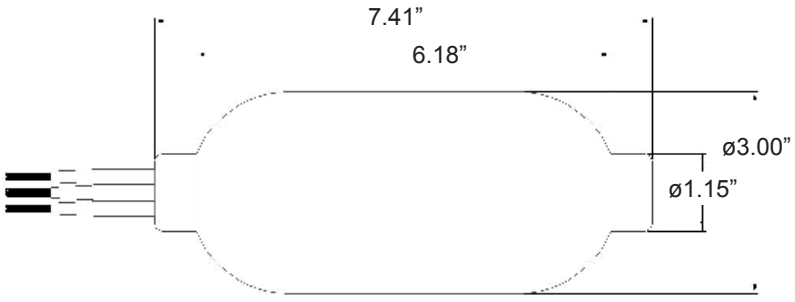
Low-frequency vector sensor

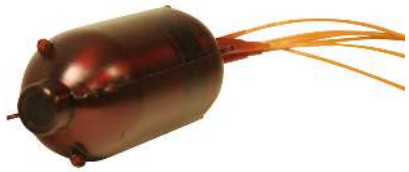
VS-101

SPECIFICATIONS

Output sensitivity, nominal[1]:	
Accelerometer	6.0 V/g
Hydrophone	–162 dB re 1.0 V/µPa
Full scale input range:	
Accelerometer	0.5 g peak
Hydrophone	200 Pa peak
Frequency response, ±3 dB:	
Accelerometer	3.0 Hz - 2.0 kHz
Hydrophone	8.0 Hz - 2.0 kHz
Transverse sensitivity, max	2%
Power requirement:	
Voltage	6.5 - 12.0 VDC
Current, nominal	40 mA
Output type, differential	2.1 - 2.6 V bias
Output impedance, max	100 Ω
Pressure range:	
Operational, max	1,000 psi
Absolute max	1,500 psi
Operating temperature	–10° to +60°C
Diameter	3.00 in.
Length	7.41 in.
Buoyancy in water	–2%
Weight, without cables	700 grams
Cable[2]	6 cables, 15 ft. each
External material	polyurethane

Options: Connector; cable length





Key features

- Three orthogonal axis accelerometers and one omni-directional hydrophone
- Four channel combination provides an approximately 4.8 dB improvement in signal to noise ratio
- Pitch and roll, heading
- Preamplifier and differential output
- Micro-controller with RS-485 link
- Manufactured in an ISO 9001 facility

Cable	Lead color	Function
Power	White	PWR (+)
	Black	PWR (–)
	Shield	Cable shield[3]
Digital (RS-485)[6,7]	White	B (EIA-485)[4]
	Black	A (EIA-485)[5]
	Shield	Cable shield[3]
X-axis (Differential Out)	White	Signal (+)
	Black	Signal (–)
	Shield	Cable shield[3]
Y-axis (Differential Out)	White	Signal (+)
	Black	Signal (–)
	Shield	Cable shield[3]
Z-axis (Differential Out)	White	Signal (+)
	Black	Signal (–)
	Shield	Cable shield[3]
H-axis (Differential Out)	White	Signal (+)
	Black	Signal (–)
	Shield	Cable shield[3]
Sensor case[8]	N/A	PWR (–) via H-axis

Notes: [1] Actual values of X, Y, Z, and H are recorded on calibration sheet.
[2] Cable: twisted, shielded pair, polyurethane jacket.
[3] Cable shield is not connected in the sensor.
[4] B (EIA-485): also known as TX+ / RX+ or D+ as alternative for B (high for MARK i.e. idle)
[5] A (EIA-485): also known as TX- / RX- or D- as alternative for A (low for MARK i.e. idle)
[6] A and B are compliant with other VS legacy sensors with digital RS-485.
[7] I.C manufactures of RS-485 parts use an incorrect (but consistent) A/B naming designation.
[8] Sensor case connects to ground in the sensor.

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

Wilcoxon Sensing Technologies
An Amphenol Company

8435 Progress Drive
Frederick, MD 21701
USA

Tel: +1 (301) 330-8811
Fax: +1 (301) 330-8873
info@wilcoxon.com

buy.wilcoxon.com
www.wilcoxon.com

98933NC Rev.B.1 10/19