



An Amphenol Company

SHORT-FORM PRODUCT CATALOG

VIBRATION MONITORING SOLUTIONS



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Everything you need for vibration monitoring

Wilcoxon has what you need for monitoring your plant machinery. You'll find our catalog a useful resource all year long, and don't forget – you can always download our short-form catalog from our website.

Introducing new solutions

Our 2018 catalog showcases several new products, including:

- Cost-effective VLL enclosures
- New line of intelligent vibration transmitters
- Wider variety of hazardous area certified sensors
- HART-enabled vibration sensors with hazardous area options



Sensors

Cables & connectors

Mounting

Enclosures

Instrumentation

Process solutions

Premium high performance

Our customer favorite high performance sensors have tighter sensitivity tolerance for more precise measurements.



Wilcoxon model	• 786A	• 787A	786LF	• 780A
Description	Premium top-exit accelerometer	Premium side-exit accelerometer	Low frequency accelerometer	Compact accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 5%	± 5%	± 5%	± 5%
Frequency response ± 3 dB, Hz	0.5 - 14,000	0.5 - 10,000	0.1 - 13,000	0.5 - 14,000
Resonance frequency	30 kHz	22 kHz	30 kHz	30 kHz
Electrical noise 100 Hz	5 µg/√Hz	5 µg/√Hz	3 µg/√Hz	5 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +15%	-25° C: -10% +120° C: +10%
Bias output voltage	12 VDC	12 VDC	13 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole
Output connector	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



ADVANTAGE

Wilcoxon's premium high performance sensors have an industry-leading MTBF of up to 25 years. You'll retire before they do.

- Hazardous area options available on models 786A, 787A and 780A (see page 29 for full certification requirements)

General purpose

General purpose accelerometers can be used across a broad frequency range to monitor a wide variety of rotating industrial machinery.



Wilcoxon model	786B-10	787B	780B	785A
Description	Standard top-exit accelerometer	Side-exit, low profile accelerometer	Compact accelerometer	Low profile industrial accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 10%	± 10%	± 10%	± 10%
Frequency response ± 3 dB, Hz	0.5 - 14,000	0.7 - 10,000	0.5 - 14,000	1 - 12,000
Resonance frequency	30 kHz	22 kHz	30 kHz	30 kHz
Electrical noise 100 Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	6 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-50° C: -10% +125° C: +7%
Bias output voltage	12 VDC	12 VDC	12 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw
Output connector	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



Types of rotating machinery most commonly monitored include:

- Motors
- Fans
- Blowers
- Pumps
- Compressors
- Gearboxes

ONLINE



We offer even more general purpose sensors online. See our wide selection. Most are in stock, ready to ship. Visit buy.wilcoxon.com.

Extended temperature range

Wilcoxon's new HT series, the next generation of our signature FireFet sensors, provides superior long-lasting performance in 150° C environments.



Wilcoxon model	HT780A	HT786A	HT787A	376/CC701HT
Description	High temperature, compact accelerometer	High temperature accelerometer	High temperature, side-exit accelerometer	Accelerometer/charge amplifier system
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 5%	± 5%	± 5%	± 10%
Frequency response ± 3 dB, Hz	0.5 - 14,000	0.5 - 14,000	0.7 - 10,000	1 - 15,000
Resonance frequency	30 kHz	30 kHz	22 kHz	30 kHz
Electrical noise 100 Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	Broadband: 0.001 g peak
Max temperature	150° C	150° C	150° C	376: 260° C CC701HT: 100° C
Temperature response	-25° C: -10% +150° C: +15%	-25° C: -10% +150° C: +15%	-25° C: -10% +150° C: +15%	-50° C: -10% +260° C: +20%
Bias output voltage	at 25° C: 13 VDC at 150° C: 12 VDC	at 25° C: 13 VDC at 150° C: 12 VDC	at 25° C: 13 VDC at 150° C: 12 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole
Output connector	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	BNC



DID YOU KNOW

Temperature range is the temperature span, given by the temperature extremes, over which the sensor will perform without failure.



376/CC701HT system

Integral cable

Wilcoxon's IP68 rated integral cable sensors can be used with confidence in submerged applications of 30 feet or more.



Wilcoxon model	• 786F	787F	712F	780FM-2-J88C
Description	General purpose, integral cable accelerometer	Low profile, side-exit integral cable accelerometer	High frequency, side-exit integral cable accelerometer	Compact sensor with coiled integral cable and magnetic mount
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 5%	± 5%	± 10%	± 15%
Frequency response ± 3 dB, Hz	0.5 - 13,000	0.7 - 10,000	3.0 - 25,000	0.4 - 12,000
Resonance frequency	30 kHz	22 kHz	>45 kHz	30 kHz
Electrical noise 100 Hz	5 µg/√Hz	5 µg/√Hz	10 µg/√Hz	4 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-50° C: -5% +120° C: +5%	-50° C: -5% +120° C: +5%	-50° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%
Bias output voltage	12 VDC	12 VDC	12 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	8-32 captive screw or M4 captive screw	1/4-28 tapped hole, 2-pole magnet
Output connector	integral cable, blunt cut	integral cable, blunt cut	integral cable, blunt cut	integral cable, BNC



DID YOU KNOW



Wilcoxon developed the first underwater accelerometer in 1965 and introduced an ultra low-noise detection model in 1976.

- Hazardous area options available on model 786F (see page 29 for full certification requirements)

High sensitivity / low frequency

With an extended low-end frequency response, Wilcoxon's high sensitivity / low frequency sensors detect both high- and low-speed vibrations, making them ideal for critical slow-turning machinery.



Wilcoxon model	• 786-500	• 787-500	786LF-500	799LF
Description	Low frequency accelerometer	Side-exit, low frequency accelerometer	High sensitivity, low frequency accelerometer	Low frequency, low noise, filtered accelerometer
Sensitivity	500 mV/g	500 mV/g	500 mV/g	500 mV/g
Sensitivity tolerance	± 5%	± 5%	± 5%	± 5%
Frequency response ± 3 dB, Hz	0.2 - 14,000	0.2 - 10,000	0.1 - 13,000	0.1 - 2,500
Resonance frequency	30 kHz	22 kHz	30 kHz	18 kHz
Electrical noise 100 Hz	1.5 µg/√Hz	1.5 µg/√Hz	2 µg/√Hz	1 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +15%	-50° C: -7% +120° C: +5%
Bias output voltage	12 VDC	12 VDC	13 VDC	8 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole
Output connector	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



ONLINE

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Note: Model 786LF-250 also available with 250 mV/g sensitivity.

- Hazardous area options available on models 786-500 and 787-500 (see page 29 for full certification requirements)

Dual output and triaxial sensors

Dual output (vibration and temperature) and triaxial sensors provide more data all in one, simplifying your monitoring set-up.



Wilcoxon model	• 786T / 787T	793T-3	797T-1	• 993B-7-M12
Description	Top-exit / Side-exit accelerometers with temperature sensor	Accelerometer with internal temperature sensor	Side-exit accelerometer with temperature sensor	Hermetic triaxial accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 5%	± 5%	± 5%	± 10%
Frequency response ± 3 dB, Hz	0.5 - 12,000	0.5 - 15,000	1 - 12,000	2 - 10,000 (Z axis) 2 - 7,000 (X, Y axes)
Resonance frequency	30 kHz / 22 kHz	24 kHz	26 kHz	>35 kHz
Electrical noise 100 Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	2 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-25° C: -10% +120° C: +10%	-50° C: -10% +120° C: +5%	-50° C: -5% +120° C: +5%	-50° C: -12% +120° C: +12%
Bias output voltage	12 VDC	12 VDC	12 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole / 1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw	10-32 captive screw
Output connector	3-pin MIL-C-5015	3-pin MIL-C-5015	3-pin MIL-C-5015	4-pin M12 (integral cable option available)



DO MORE




Double-duty. Extra functionality. Defined by Wilcoxon quality and reliability to do more.

- Hazardous area options available on models 786T and 993B-7-M12 (see page 29 for full certification requirements)

Piezovelocity sensors


Piezoelectric velocity sensors offer the convenience and performance of a direct velocity output without the drawbacks of other styles of velocity sensors.



Wilcoxon model	 • 793V	793V-5	• 797V	893V
Description	Piezoelectric velocity transducers		Low profile piezo-velocity transducer	Industrial velocity sensor
Sensitivity	100 mV/in/sec	500 mV/in/sec	100 mV/in/sec	100 mV/in/sec
Sensitivity tolerance	± 10% (see note)	± 10%	± 10%	± 5%
Frequency response ± 3 dB, Hz	2.5 - 7,000	5.0 - 7,000	1.6 - 7,000	4.5 - 5,000
Resonance frequency	15 kHz	15 kHz	18 kHz	15 kHz
Electrical noise 100 Hz	1.0 µin/sec/√Hz	0.4 µin/sec/√Hz	0.8 µin/sec/√Hz	1.5 µin/sec/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-50° C: -5% +80° C: +3% +120° C: -5%	-50° C: -5% +80° C: +3% +120° C: -5%	-50° C: -15% +120° C: +10%	-50° to +120° C: ± 5%
Bias output voltage	10 VDC	10 VDC	10 VDC	12 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole
Output connector	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015



Note: Model 793V is available with ± 5% sensitivity tolerance as model 793V100-5.

- Hazardous area options available on models 793V and 797V
-  Radiation resistant option available on model 793V (see page 29 for full certification requirements)

FAST FACT





Piezoelectric velocity sensors employ traditional accelerometer structure with internal signal conditioning to transduce mechanical motion into an electrical signal proportional to velocity.

Traditional

These legacy products provide a way to retain your long-standing test procedures without the need for rewrites or specification changes.




Wilcoxon model	 • 793	 • 797	793-6	797-6
Description	PiezoFET® accelerometers		High temperature FireFet accelerometers	
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity tolerance	± 5%	± 5%	± 10%	± 10%
Frequency response ± 3 dB, Hz	0.5 - 15,000	1 - 12,000	1 - 12,000	1 - 11,000
Resonance frequency	25 kHz	26 kHz	25 kHz	18.5 kHz
Electrical noise 100 Hz	5 µg/√Hz	5 µg/√Hz	at 25° C: 3 µg/√Hz at 150° C: 10 µg/√Hz	at 25° C: 3 µg/√Hz at 150° C: 10 µg/√Hz
Max temperature	120° C	120° C	150° C	150° C
Temperature response	-50° C: -15% +120° C: +20%	-50° C: -15% +120° C: +15%	-50° C: -5% 0° C: +2% +150° C: -5%	-50° C: -5% 0° C: +2% +150° C: -5%
Bias output voltage	12 VDC	12 VDC	at 25° C: 12 VDC at 150° C: 11 VDC	at 25° C: 12 VDC at 150° C: 11 VDC
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw
Output connector	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015



GET STARTED

Built for long use, performance and reliability.
Get started, shop now. See more options online
and order anytime!

- Hazardous area options available on models 793 and 797
-  Radiation resistant options available on models 793 and 797
(see page 29 for full certification requirements)

Cable assemblies

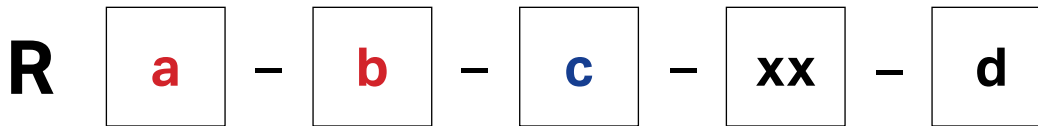


APPLICATION SUPPORT

Selecting the right cable assembly is highly dependent on the environment in which the sensor will operate. Wilcoxon offers a wide variety of rugged cables and connectors to ensure data reliability.

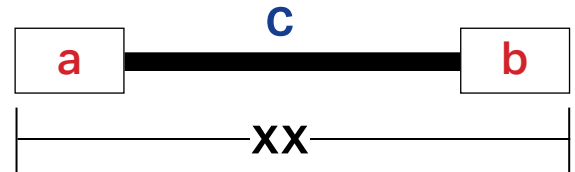
Not sure what your requirements are? We can help. Email info@wilcoxon.com or call (301) 330-8811 for technical assistance.

How to order



CUSTOM CABLE ASSEMBLY CHECKLIST

- a** Find the correct mating connector*
- b** Choose termination connector*
- c** Select compatible cable type
- xx** Cable length (ft or m), including connectors
- d** Optional:
 - armor (A)
 - stainless steel braid (S)
 - safety connector (SC)



* See pages 16-17 for details on connector specifications.



CUSTOM CABLES

Wilcoxon offers custom cable assemblies to meet your individual needs. Visit buy.wilcoxon.com/cables to learn more.

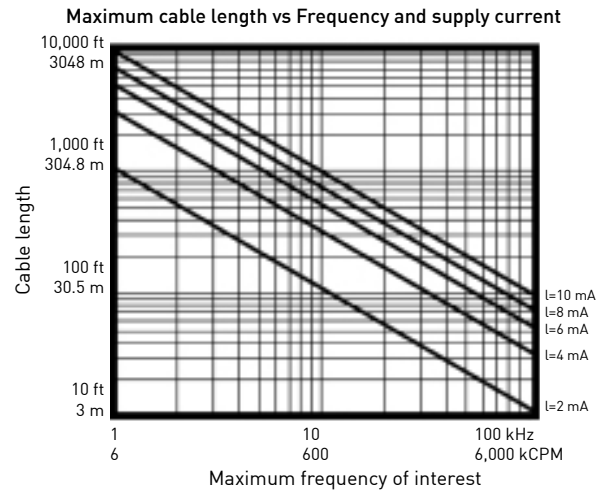
C	Cable options	
	Cable model	Compatible connectors
Coaxial	J1	1, 1A, 2
	J3	1, 1A, 2, 6
	J5A	2, 2F, 6, 6Q/6QI, 6SL/6SLI, 6W
Shielded, twisted pair	J9T2	6QN/6QNI
	J9T2A	2, 20, 6, 6D2, 6H/6HI, 6HD2 6Q/6QI, 6SL/SLI, 6W, 6WR
	J9T2AS	6SL/6SLI
	J9T2S	9W, 6QN, 6QNI, 6SL/SLI
	J88	2, M12, 20, 6, 6Q/6QI, 6WR
	J88C	2, M12, 20, 6, 6Q/6QI, 6WR
	J10	2, M12, 20, 6, 6D2, 6H/6HI, 6HD2, 6Q/6QI, 6SL/6SLI, 6W, 6WR
	J9F	6QA/6QAI, 6W, 6WR
Shielded, multi-conductor	J9T3	6GSL/6GSLI, 6SL/6SLI
	J9T3A	2, 6GD2, 6GQ/6GQI, 6GSL/6GSLI, 6SL/6SLI
	J9T4	2, 9W, 6GSL/6GSLI, 6SL/6SLI
	J9T4A	9W
	J95	19SL/19SLI
	J84	2, M12, 20, 6, 6GQ/6GQI, 9W
	J84C	2, M12, 20, 6, 6GQ/6GQI, 9W

Cables & connectors – considerations



CABLE LENGTH

An accelerometer cable can be run 100 feet without losing signal content. The maximum length is a function of supply current and the highest frequency of interest. The chart to the right helps determine maximum cable lengths.

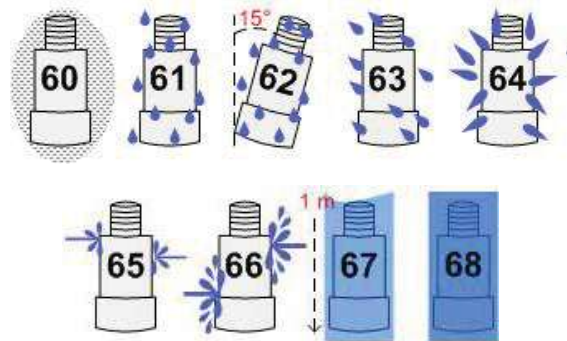


Note: Graph values assume cable capacities of 30 pF/ft and an available swing of 5 V p-p. The current available is represented by I.

IP RATINGS



Protection against solids	Protection against liquids	
No protection	0	No protection
Objects >50 mm	1	Vertically dripping water
Objects >12.5 mm	2	Angled dripping water
Objects >2.5 mm	3	Sprayed water
Objects >1.0 mm	4	Splashed water
Dust-protected	5	Water jets
Dust-tight	6	Pressure jets
	7	Immersion to 1 meter
	8	Indefinite immersion



IP ratings – protection against liquids

Connector tool kits

Wilcoxon provides High Temperature Crimp (HTC) and High Temperature Solder (HTS) toolkits for field assembly of the 6Q series of connectors. The HTC kit is used to make a crimp connection to a socket, while the HTS kit is for applications where the socket will be soldered to the wire.



Our connector toolkits come with everything you need to prepare connectors and cables in the field, including

- high temperature epoxy
- epoxy applicator gun, plunger and nozzles
- plastic and metal socket insertion tools
- crimp tool

Connectors



Wilcoxon model	Connector	Description	Max temperature	Field assembly	IP rating
6	2 socket	Amphenol, metallic	125° C	Yes	50
6D2	2 socket	Class I, Div 2 suitable	125° C	No	67
6GD2	3 socket		125° C	No	67
6GQ/GQI*	3 socket	High temp Viton® B boot	200° C	Yes	68
6GSL/GSLI*			125° C	Yes	67
6H/6HI*	2 socket	potted backshell, HART-compatible	125° C	No	67
6HD2		HART-compatible, Class I, Div 2 suitable	125° C	No	67
6Q/6QI*		High temp Viton® B boot	200° C	Yes	68
6QN/QNI*		Radiation resistant, Neoprene boot	105° C	Yes	68
6SL/SLI*		Viton® B boot	125° C	Yes	67
6W		Isolated shield, molded	125° C	No	67
1		Microdot 10-32 coaxial	straight plug	200° C	No
1A	right angle		200° C	No	50
2/2F/2T	BNC	male/female/twin axial	165° C	No	50
M12P	M12	4 pin	85° C	No	67
M12S		5 socket	85° C	No	67
45		5 pin	85° C	No	67
9W		4 socket	threaded, waterproof Bendix	125° C	No

* I indicates electrical isolation between shield and transducer housing.



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Cables



Model	J9T2A	J9T2AS	J9T2S	J9T2	J9T3	J9T3A
Description	Twisted, shielded pair				Three conductor	
	Yellow Teflon® jacket	Yellow Teflon® jacket with stainless steel braid	White Tefzel® jacket with stainless steel braid	White Tefzel® jacket	White Tefzel® jacket	Yellow Teflon® jacket
Max temperature	200° C	200° C	150° C	150° C	150° C	200° C
Diameter (in.)	0.190	0.210	0.210	0.190	0.190	0.190
Capacitance (pF/ft)	27	27	27	27	27	27



Model	J9T4	J9T4A	J84	J84C	J88	J88C
Description	Four conductor, shielded			Twisted, shielded pair		
	Red Teflon® jacket	Yellow Teflon® jacket	Kevlar® reinforced, black polyurethane jacket	Coiled, Kevlar® reinforced, polyurethane jacket	Black polyurethane jacket	Black polyurethane jacket, coiled with 6" straight ends
Max temperature	200° C	200° C	80° C	80° C	80° C	80° C
Diameter (in.)	0.190	0.190	0.210	0.210	0.175	0.175
Capacitance (pF/ft)	30	27	44	44	60	60



Model	J1	J3	J5A	J95	J9F	J10
Description	Coaxial			Five conductor	Twisted, shielded pair	
	Low noise, orange PVC jacket	Low noise, high temperature, red Teflon® jacket	RG 58, black PVC jacket	Shielded, black polyurethane jacket	Foil shielded with drain wire, red Teflon® jacket	Gray Enviroprene jacket
Max temperature	80° C	260° C	105° C	90° C	200° C	125° C
Diameter (in.)	0.088	0.085	0.190	0.240	0.174	0.190
Capacitance (pF/ft)	30	30	30	22	51	30



Wilcoxon model		Description and available models			
MD series		Two-pole magnetic mounting bases			
		MD020 0.75" diameter, 20 lb force, 1/4-28 tapped hole, non-isolated	MD035 1.00" diameter, 35 lb force, 1/4-28 tapped hole, non-isolated	MD055 1.25" diameter, 55 lb force, 1/4-28 tapped hole, non-isolated	MD130 2.00" diameter, 130 lb force, 1/4-28 tapped hole, non-isolated
MF series		Flat magnetic mounting bases			
		MF015 0.75" diameter, 15 lb force, 10-32 tapped hole, non-isolated	MF040 1.00" diameter, 40 lb force, 1/4-28 tapped hole, non-isolated	MF075 1.25" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated	MF120 1.50" diameter, 120 lb force, 1/4-28 tapped hole, non-isolated
MT series		Two-pole magnetic mounting bases for triaxial sensors			
		MT075 1.50" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated		MT075A 1.50" diameter, 75 lb force, 10-32 tapped hole, non-isolated	
SF6		SF6 mounting stud 1/4-28 UNF both ends Stainless steel	SF6M mounting stud 1/4-28 UNF to M8 x 1.25 Stainless steel	SF6M-1 mounting stud 1/4-28 UNF to M6 x 1.00 Stainless steel	
SF8		SF8 cementing pad 1/4-28 integral stud 1.00" diameter Stainless steel		SF8-2 cementing pad Includes tapped hole and key notch for consistent axis orientation Use with 993A triaxial sensors	
SF11		Magnet landing pad 1.00" diameter provides surface for sensor attachment using a magnetic mounting base			
SF21		SF21 isolator mounting base 1.00" hex across flats Isolation protection up to 1,500 volts 1/4-28 to 1/4-28 integral stud		SF22 1.000" diameter, 1/4-28 to M8 integral stud	
				SF23 1.125" diameter, 1/4-28 to 1/4-28 integral stud	
				SF24 1.125" diameter, 1/4-28 to M8 integral stud	
TC1B		Triaxial mounting cube 1.00" on each side Three 1/4-28 tapped holes fit a variety of threaded adapter stud sizes, including M6, M8, 3/8 and 10-32 Additional sizes available for different sized sensors			
VERSIL406		Mounting epoxy Enough glue for up to 5 sensors/mounting pads Package contains both epoxy components separated by a pull tab Max temperature: 150° C			
ST101		Spot face tool 1.25" diameter, pilot drill for 1/4-28 hole, drill depth adjustable			

Mounting considerations

Evaluation of the mounting location of each sensor must be based on the specific machine and vibration source to be monitored. The mounting configuration depends primarily upon dynamic measurement requirements, such as frequency and amplitude range. The closer the contact between sensor and machine, the better the ability to couple and measure high frequency signals.

Permanent mounting: threaded stud, cementing pad

Threaded stud mounting allows the widest dynamic measurement range and is recommended for permanent monitoring systems, high frequency testing and harsh environments.

Cementing pads approach the high frequency capabilities of stud mounts when used properly, without the need for drilling into the structure. Adhesive selection is critical for long-term reliability.

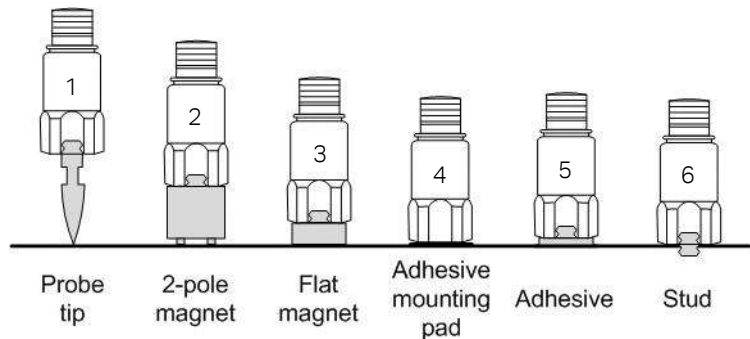
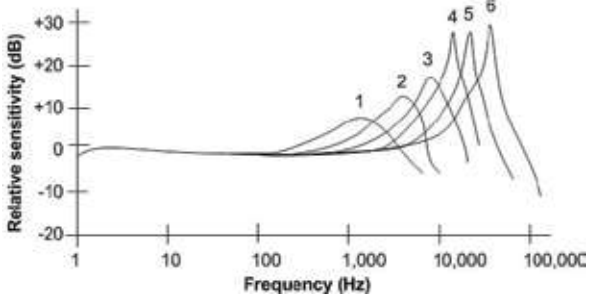


TECH TIP

Use a silicon grease with permanently mounted sensors to increase mounting stiffness and enhance frequency response.

Adhesives

If the machine cannot be drilled, adhesive mounting can be used, although this method will usually damage the accelerometer if removal is required. An adhesive mounting pad is the best alternative to stud mounting.



Magnets and probe tips

Magnetic mounts and probe tips can be used for walkaround monitoring programs. The frequency range of using either mounting method is dramatically reduced when compared to stud or adhesive mounts.

Magnetic mounts are available with flat surfaces for flat locations or two-pole configurations for curved surfaces.

Probe tips should be made of steel and be no longer than six inches.



PROBE TIP

The PT2 probe tip can be used to take readings in hard-to-reach areas or on surfaces that aren't conducive to mounting, and connects to any vibration meter via 1/4-28 integral stud.



Instrumentation

ReferenceMate® portable reference source



ReferenceMate
REF2510R

Quickly and easily check operation and set-up of accelerometers and velocity sensors in the field. Check acceleration and velocity measurements with no imperial-metric conversions. Frequency and measurement type can be selected with the push of a button.

Features

- User selectable operating frequencies: 61.4 Hz, 100 Hz, 159.2 Hz
- Max load: 8.8 oz (250 grams)
- Switch-selectable RMS or peak
- Operating temperature range: -15 to +130° F (-10 to +55° C)
- 4x standard AA batteries
- Up to 40 hours of battery life
- DC power input
- Protective thermoplastic boot
- Threaded base for magnet

Accessories



Triaxial adapter
TAA01



Metric mounting kit
REF001



Metric mounting kit
REF002

Portable power supplies

Wilcoxon model	P702B	P703B	P704B
Channels	1	3	1
Power	(3) 9 VDC	(3) 9 VDC	(3) 9 VDC
Filter	Selectable	-	-
Amplifier gains	1, 10, or 100	-	-
Output	Acceleration or velocity	Acceleration	Acceleration

Dynamic sensors requiring IEPE power utilize industry-standard CCD power supplies. The power supply contains a voltage source with CCD sufficient to support sensor installations using several hundred feet of cable. Options include battery- or AC-operated, selectable integration, gain or triaxial configurations.



P702B



P703B

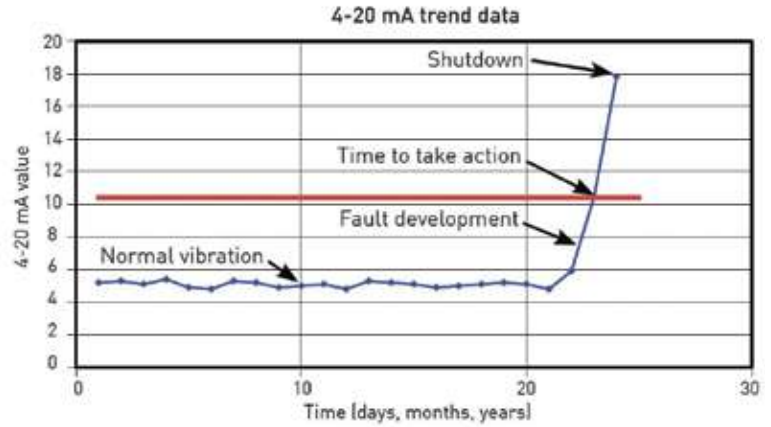


P704B

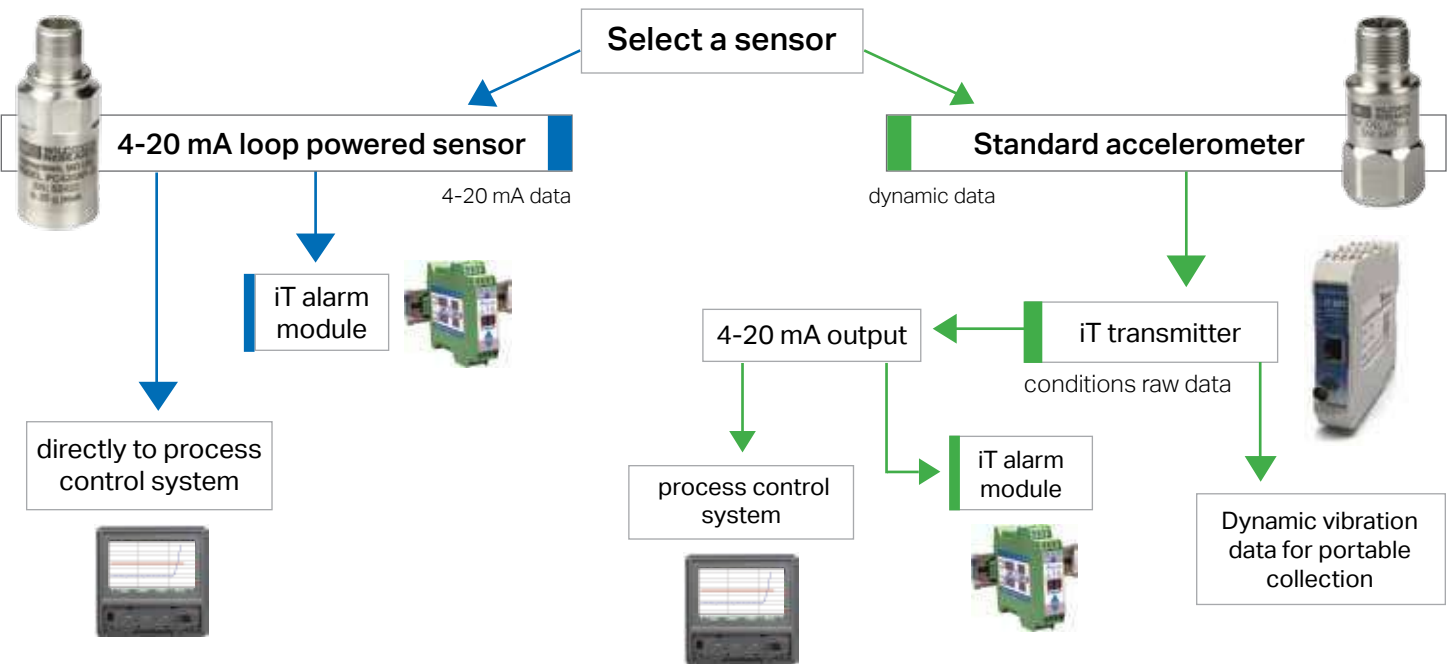
Complete process solutions

Vibration monitoring is essential to predictive maintenance, providing 24/7 trend data for fault detection. It allows you to monitor machinery more effectively. Many process control systems already accept 4-20 mA inputs, making it easy to integrate vibration data into condition-based monitoring programs.

- 4-20 mA outputs directly to process control system for clearly visible trend data
- Changing vibration levels provide warning prior to equipment failure
- Optimize plant efficiency by focusing only on problematic machines



4-20 mA monitoring options



BENEFITS

- Lower total cost of monitoring set-up
- Simple trend data for continuous monitoring
- Multiple output types (RMS, peak, true peak)

BENEFITS

- More detailed information on machine condition
- Enables accessibility to dynamic data
- Wider sensor selection for a more varied range of applications

4-20 mA sensors

- Hazardous area options available on PC420 and PC420-EX models (see page 29 for full certification requirements)



Wilcoxon model	• PC420	PCC421	PC420DPP	• PC420-EX
Description	Top-exit loop powered sensor	Side-exit loop powered sensor	Loop powered displacement sensor	Explosion-proof loop powered sensor
Loop output options	RMS, peak, true peak*	RMS, peak	RMS	RMS, peak, true peak
Acceleration scaling, g	5, 10, 20, 50	5, 10, 20	Displacement only 40 mils	5, 10, 20
Velocity scaling, ips	0.5, 1.0, 2.0, 3.0, 5.0	0.5, 1.0, 2.0, 3.0, 5.0		0.5, 1.0, 2.0, 3.0, 5.0
Frequency range	Accel: 1.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz	Accel: 1.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz	4.0 Hz - 2.0 kHz	Accel: 4.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz
Max temperature	105° C	105° C	85° C	85° C
Grounding	case isolated	case isolated	case isolated	case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw or M6 captive screw	1/4-28 tapped hole	3/8-24 tapped hole
Output connector	2 pin MIL-C-5015	2 pin MIL-C-5015 or 4 pin M12	2 pin MIL-C-5015	18 AWG flying leads

* 50 g scaling not available on true peak models; max temperature on true peak models is 85° C.



NEW, industry exclusive

Digital sensor with HART protocol



PCH420V-M12

Features

- Field-configurable parameters
- 3 programmable filter bands
- Allows for multi-drop installation
- Greater control over fault monitoring



Rugged 6H/6HI and 6HD2 connectors are designed for use with PCH420V sensors.

• PCH420V	
Models	PCH420V-R6, PCH420V-M12, PCH420V-R6-HZ, PCH420V-M12-HZ
Loop output options	RMS, peak, true peak
User configurable	Yes
Velocity scaling, ips	0.5 - 5.0, user configurable
Frequency range	Vel: 3.0 Hz - 1.95 kHz
Programmable filter bands	3
Max temperature	105° C
Grounding	case isolated
Mounting	1/4-28 tapped hole
Output connector	2-pin MIL-C-5015 or 4-pin M12

- Hazardous area options available (see page 29 for full certification requirements)

Intelligent transmitters



PRODUCT SPOTLIGHT

Wilcoxon's intelligent vibration transmitters measure and process dynamic vibration signals. iT modules are a powerful means to connect standard vibration sensors to process control systems.

Get more information on our intelligent transmitters at wilcoxon.com/vibration-transmitters-it-series.



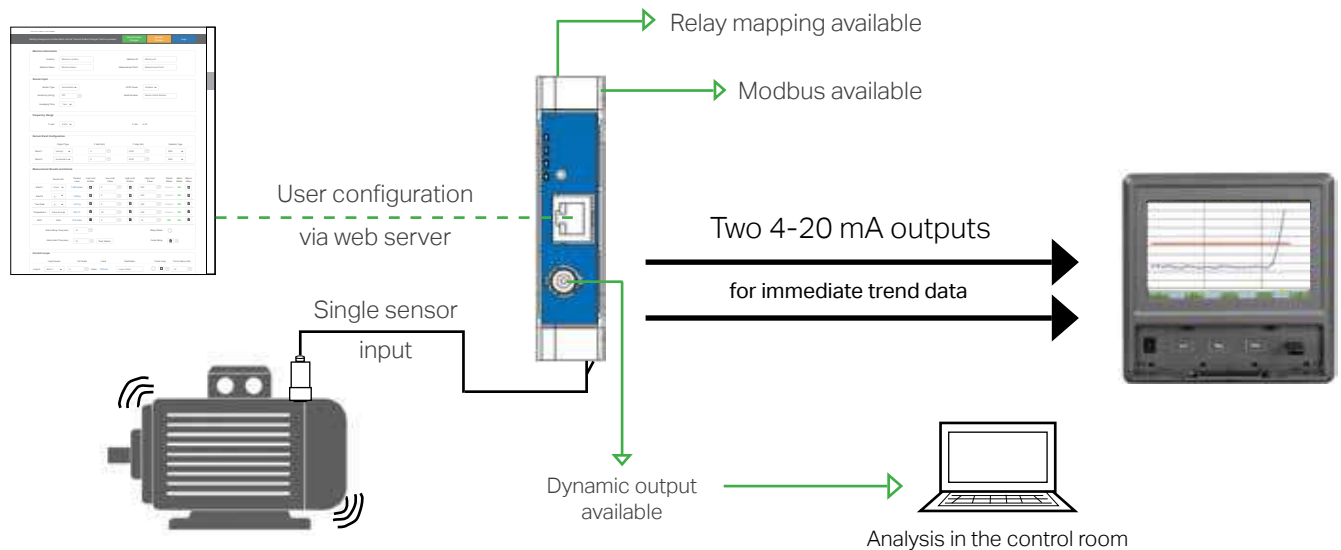
iT300

NEW, industry exclusive

The next generation transmitter for your vibration monitoring needs.

- Easily configurable in the field via internal web server – no stand-alone software needed
- Two processing bands for optimized frequency ranges, more control over fault monitoring and greater flexibility
- Dual mappable 4-20 mA outputs provide access to more information from single sensor input

How iT works



iT301

NEW, industry exclusive

All the features of the iT300, plus:

- Modbus/RS-485 enabled, allowing multiple communication methods to plant infrastructure
- Configurable high/low alarms for better control over fault monitoring
- Low and high alarms are mappable to a single NC/NO relay

Intelligent transmitters and alarm modules



iT150

NEW PRODUCT

New cost-effective transmitter with easy plug-and-play capability.

- Multiple pre-configured units to choose from, tailored to the most common applications
- Compatible with dual output sensors to measure both vibration and temperature
- True peak detection band measures acceleration signals out to 25 kHz

iT series comparison

Feature	iT150	iT300	iT301
DIN-rail mountable	X	X	X
Accepts accelerometers, velocity sensors	X	X	X
20V peak-peak sensor input	X	X	X
Primary 4-20 mA output	X	X	X
0.2 Hz - 20 kHz bandwidth	X	X	X
24-bit A/D converter	X	X	X
Accepts dual-output sensors	X	X	X
Secondary 4-20 mA output	X	X	X
Field configurable full-scale range		X	X
Field configurable vibration bands (2X)		X	X
Modbus TCP/RS-485			X
Low alarm limits (5X)			X
High alarm limits (5X)			X
Relay/alarm source mapping			X

TECH TIP



iT150 models must be factory configured. Go to buy.wilcoxon.com or call for more information.



iT401 alarm module

Compares 4-20 mA input against configurable alarm limits to provide local notification of potential problems.

- Accepts input from iT transmitter or 4-20 mA sensor
- Three field-programmable relays: high or low setpoints with time delay
- Front panel LED readout and push button softkeys
- Programmable time and hysteresis delay prevent false alarms
- Back panel TBUS connection eliminates external wiring between units



Hazardous area sensors



Model	North American certification	ATEX certification	IECEx certification
780A-IS, 786-500-IS, 786-500-M12-IS, 786A-IS, 786A-M12-IS, 786F-IS, 786T-IS, 787-500-IS, 787-500-M12-IS, 787A-IS, 787A-M12-IS, 787A-M8-IS	CL I Div 1 Groups A B C D; CL II Div 1 Groups E F G; CL III; CL I Zone 0 Ex ia IIC T4; CL I Zone 0 AEx/Ex ia IIC T4 Ta = -50° to +120° C	II 1 G Ex ia IIC T4 Ga Ta = 120° C	Ex ia IIC T4 Ga Ta = 120° C
780A-D2, 786-500-D2, 786-500-M12-D2, 786A-D2, 786A-M12-D2, 786F-D2, 786T-D2, 787-500-D2, 787-500-M12-D2, 787A-D2, 787A-M12-D2, 787A-M8-D2	CL I Div 2 Groups A B C D; CL I Zone 2 Ex na II T4 Ta = -50° to +120° C	II 3 G Ex na IIC T4 Gc Ta = 120° C	
LPA100T-D2	CL I Div 2 Groups A B C D; CL II Div 2 Groups E F G; CL III; CL I Zone 2 AEx/Ex nL IIC T5 Ta = -50° to +85° C	II 3 G Ex na nC IIC T5 Gc Ex ic IIC T5 Gc Ta = -50° to +85° C	
PC420xx-yy-IS PC421xx-yy-IS PC423xx-yy-IS	CL I Div 1 Groups A B C D T3C Ta = 85° C max	II 1 G Ex ia IIC T4 Ga -40° < Tamb < +85°	Ex ia IIC T4 Ga
PC420xx-yy-EX (Updated certifications pending)	CL I Div 1, 2 Groups A B C D T3C Ta = 85° C max	II 3 G Ex na nC II T3	
PCH420V-R6-HZ, PCH420V-M12-HZ	CL I Div 2-Groups A B C D CL I Zone 2 AEx/Ex na nC T4 Ta = 105° C max	II 3 G Ex na nC IIC T4 Gc -40° C < Ta < +105° C	Ex na nC IIC T4 Gc -40° C < Ta < +105° C

Model	US certification	Canadian certification	ATEX certification
793E, 793LE, 797E, 797LE	CL I, II, III, T4, Div 1 Groups A B C D E F G; Nonincendive for Div 2 Groups A B C D F G		
793VE, 797VE	CL I, II, III, T4, Div 1 Groups C D F G; Nonincendive for Div 2 Groups A B C D F G		
793-33, 793L-33, 793V-33, 793V-5-33, 797-33, 797L-33		Ex ia CL I, Div 1 Groups A B C D	
993B-5-33, 993B-6-33, 993B-7-33, 993B-7-M12 [CERT]		CL I Div 1 Groups A, B, C, D T4A Ta = 85° C max	
793-10-35, 793-35, 797-35, 797L-35			II 1 G Ex ia IIC T4 Ga Tamb = -50° to +120° C
793V-35			II 1 G Ex ia IIA T4 Ga Tamb = -50° to +120° C

Sensor selection chart

*Due to continued research and product development, the manufacturer reserves the right to amend this specification without notice.

Wilcoxon model	Sensitivity	Sensitivity tolerance, ±	Frequency response @ ±3 dB	Resonance	Exit type / connector	Max temp	Mounting thread	psd noise @ 100 Hz	Acceleration range	Weight grams	Haz. area option
			Hz	kHz		°C		/Hz	g peak		
Premium high performance											
780A	100 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	Y
786A	100 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	90	Y
786LF	100 mV/g	5%	0.1 - 13k	30	top, R6	120	1/4-28	3 µg	50	90	
787A	100 mV/g	5%	0.5 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	Y
General purpose											
780B	100 mV/g	10%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	
785A	100 mV/g	10%	1.0 - 12k	30	side, R6	120	1/4-28	6 µg	80	85	
786B-10	100 mV/g	10%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	90	
787B	100 mV/g	10%	0.7 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	
Extended temperature range											
HT780A	100 mV/g	5%	0.5 - 14k	30	top, R6	150	1/4-28	7 µg	80	62	
HT786A	100 mV/g	5%	0.5 - 14k	30	top, R6	150	1/4-28	7 µg	80	90	
HT787A	100 mV/g	5%	0.7 - 10k	22	side, R6	150	1/4-28	7 µg	80	145	
376/CC701HT	100 mV/g	10%	1.0 - 15k	30	top, R1/ inline, R2	260	1/4-28	broadband: 0.001 g	50	75 / 40	
Integral cable											
786F	100 mV/g	5%	0.5 - 13k	30	top, integral cable	120	1/4-28	5 µg	80	90	Y
787F	100 mV/g	5%	0.7 - 10k	22	side, integral cable	120	1/4-28	5 µg	80	145	
712F	100 mV/g	10%	3.0 - 25k	>45	side, integral cable	120	8-32	10 µg	60	35	
780FM-2-J88C	100 mV/g	15%	0.4 - 12k	30	top, integral cable	120	1/4-28	4 µg	80	150.5	
High sensitivity / low frequency											
786-500	500 mV/g	5%	0.2 - 14k	30	top, R6	120	1/4-28	1.5 µg	10	90	Y
786LF-500	500 mV/g	5%	0.1 - 13k	30	top, R6	120	1/4-28	2 µg	10	90	
787-500	500 mV/g	5%	0.2 - 10k	22	side, R6	120	1/4-28	1.5 µg	10	145	Y
793L	500 mV/g	5%	0.2 - 2.3k	15	top, R6	120	1/4-28	0.2 µg	10	142	Y
797L	500 mV/g	5%	0.2 - 3.7k	18	side, R6	120	1/4-28	0.2 µg	10	148	Y
799LF	500 mV/g	5%	0.1 - 2.5k	18	top, R6	120	1/4-28	1 µg	10	205	
High g sensors											
786A-I	10 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	23 µg	500	90	
732A/732AT	10 mV/g	5%	0.5 - 25k	60	side/top, R1	120	10-32	3 µg	500	13	
793-10	10 mV/g	5%	1.0 - 15k	25	top, R6	120	1/4-28	40 µg	500	110	Y
997	10 mV/g	10%	0.5 - 29k	>45	side, integral cable	120	8-32	9 µg	600	35	
Specialty sensors											
HV100/200	100 mV/g	5%	0.5 - 12k	25	top, R6	120	1/4-28, M6 or M8	5 µg	80	122 - 126	
HV100LF/200LF	100 mV/g	5%	0.1 - 11k	28	top, R6	120		5 µg	80		
732-1D	10 mV/g	5%	0.4 - 22k	28	top, BNC	120	10-32	4 µg	500	28	
LPA100T	50 mV/g	5%	0.3 - 15k	30	top, M12	120	1/4-28	16 µg	25	90	Y

Wilcoxon model	Sensitivity	Sensitivity tolerance, ±	Frequency response @ ±3 dB	Resonance	Exit type / connector	Max temp	Mounting thread	psd noise @ 100 Hz	Acceleration range	Weight grams	Haz. area option
			Hz	kHz		°C		/√Hz	peak		
Seismic											
731A	10 V/g	10%	0.05 - 450	0.75	top, R6	65	3/8-16	0.004 µg	0.5 g	760	
731A/P31	10 - 1,000 V/g	10%	0.05 - 450	0.75	BNC	65	3/8-16	0.004 µg	0.5 g	760 / 600	
735T	10 V/g	10%	0.01 - 350	0.7	top, M12	65	M6x1	0.0035 µg	0.5 g	380	
731-207	10 V/g	10%	0.2 - 1.3k	2.4	top, R1	70	10-32	0.03 µg	0.5 g	50	
799M	1 V/g	5%	0.2 - 2.5k	18	top, R6	80	1/4-28	1 µg	5 g	205	
Dual output (vibration + temperature) and triaxial sensors											
786T	100 mV/g	5%	0.5 - 12k	30	top, R6G	120	1/4-28	5 µg	80 g	90	Y
787T	100 mV/g	5%	0.5 - 12k	22	side, R6G	120	1/4-28	5 µg	80 g	145	
793T-3	100 mV/g	5%	0.5 - 15k	24	top, R6G	120	1/4-28	5 µg	80 g	115	
797T-1	100 mV/g	5%	1.0 - 12k	26	side, R6G	120	1/4-28	5 µg	80 g	135	
797LT	100 mV/g	5%	0.2 - 3.7k	18	side, R6G	120	1/4-28	5 µg	10 g	160	
993B series	25, 50 or 100 mV/g	10%	Z: 2 - 10k X, Y: 2 - 7k	>35	top, integral cable	120	10-32	3.2, 2.0, 1.4 µg	160, 80 or 40 g	134	Y
993B-7-M12	100 mV/g	10%	Z: 2 - 10k X, Y: 2 - 7k	>35	top, M12	120	10-32	2 µg	60 g	124	Y
Piezovelocity transducers											
793V	100 mV/in/sec	10%	2.5 - 7k	15	top, R6	120	1/4-28	1.0 µin/sec	50 in/sec	145	Y
793V-5	500 mV/in/sec	10%	5.0 - 7k	15	top, R6	120	1/4-28	0.4 µin/sec	10 in/sec	145	
797V	100 mV/in/sec	10%	1.6 - 7k	18	side, R6	120	1/4-28	0.8 µin/sec	50 in/sec	148	Y
893V	100 mV/in/sec	5%	4.5 - 5k	15	top, R6	120	1/4-28	1.5 µin/sec	50 in/sec	145	
Traditional											
793	100 mV/g	5%	0.5 - 15k	25	top, R6	120	1/4-28	5 µg	80 g	112	Y
797	100 mV/g	5%	1.0 - 12k	26	side, R6	120	1/4-28	5 µg	80 g	135	Y
793-6	100 mV/g	10%	1.0 - 12k	25	top, R6	150	1/4-28	10 µg	50 g	135	
797-6	100 mV/g	10%	1.0 - 11k	18.5	side, R6	150	1/4-28	10 µg	50 g	145	
Underwater accelerometers											
746	100 mV/g	5%	1.0 - 15k	30	top, integral cable	80	10-32	0.8 µg	50 g	45	
754	100 mV/g	10%	2.0 - 25k	60	side, integral cable	90	adhesive	4 µg	250 g	4	
4-20 mA output vibration sensors											
PC420 series acceleration, velocity, RMS and peak	4-20 mA	5%	1.0 - 2k	N/A	top, R6	105	1/4-28	N/A	5, 10, 20 g	162	Y
PC420DPP displacement, peak-to-peak	4-20 mA	5%	10 - 1k	N/A	top, R6	85	1/4-28	N/A	40 mils	162	
PC420-EX	4-20 mA	5%	4.0 - 2k	N/A	flying leads	85	3/8-24	N/A	5, 10, 20 g	380	Y
PCC421 acceleration, velocity, RMS and peak	4-20 mA	5%	4.0 - 2k	N/A	side, R6	105	1/4-28	N/A	5, 10, 20 g	140	
PCH420, HART-enabled	4-20 mA	5%	3.0 - 1.95k	N/A	top, M12	105	1/4-28	N/A	5, 10, 20, 50 g	115	Y