

# Wilcoxon Research® short-form catalog

## Vibration monitoring sensors and accessories for your industry



**MEGGITT**  
smart engineering for  
extreme environments

# Table of contents

Why Wilcoxon . . . . .	1
Industries . . . . .	2
Products . . . . .	3
General purpose accelerometers. . . . .	4
General purpose accelerometers compact size . . . . .	5
Specialty high performance accelerometers . . . . .	6-7
Low frequency accelerometers . . . . .	8
Premium accelerometers . . . . .	9
Cables and connectors . . . . .	10
Cable assembly ordering guide . . . . .	11
Mounting accessories . . . . .	12
Mounting considerations . . . . .	13
Enclosures . . . . .	14
VibraLINK series enclosure configurations . . . . .	15
Portable power supplies . . . . .	16
Vibration reference sources - portable meters. . . . .	17
Hazardous area sensors . . . . .	18-19
Process 4-20 mA loop powered sensors . . . . .	20
Process Digital Intelligent Transmitter (iT) series . . . . .	21
Sensor selection chart . . . . .	22-23
Meggitt Sensing Systems . . . . .	24
Service and support. . . . .	25

## Why Wilcoxon

# 1

Meggitt knows that the key to selling quality vibration monitoring sensors is to provide unbeatable reliability from our extensive product range backed by exceptional industry experience and support.

Employ our high performing accelerometers, cables, enclosures, power supplies and a wide range of accessories in your condition monitoring program and you will see **Why Wilcoxon** is number one.



### Customer support

**Fast** and responsive turnaround on quotations to keep your project on schedule

**Global** network of partners to assist you with quoting, ordering and customer service

**Dedicated** customer account representatives provide personal attention to each order

**Outstanding** applications support to ensure you get the right product for the job

**Expertise** in engineering to the PhD level and over 200 years of combined industry experience

**98% on-time delivery** and the shortest lead times in the industry

**Guaranteed In-Stock** program promises select products ship the next business day

**Knowledge** about export compliance laws to ensure international shipments are not delayed

### Reliability

**Highest MTBF** (mean time between failure) in the industry, average 25 years

**Certified** ISO 9000 Quality Management and ISO 14000 Environmental Management

**State of the art** manufacturing facility in Maryland, USA ensures precise control of all assembly and testing

**True hermetic** seal, backed by helium leak testing of sensors to  $1 \times 10^{-8}$  cc He/sec. What does this mean to you: 1 helium molecule escapes every 3.2 years compared to weak bubble tests that allow 1 helium molecule to escape every 2.78 hours resulting in 10,000 times more leakage

**Ensured** contamination-free sensor: final weld is completed in an inert atmosphere inside a drybox

**Consistent** product performance from piezoelectric crystal stabilization, ensuring accelerometer sensitivity doesn't drift over time, <1% sensitivity drift over 10 years

**Lifetime Warranty** ensures commitment to continuous product performance

### Broad offering for one-stop-shopping

**Extensive** variety of accelerometer designs for any application

**Comprehensive** selection of 4-20 mA sensors and transmitters for simplified condition based maintenance

**Widest selection** of hazardous area certifications including FM, CSA, ATEX, IECEx, SIMTARS ratings of Class I Division 1 (Zones 0 and 1), Class I Division 2 (Zone 2) and Explosion Proof

**Complete offering** of cables, enclosures, power supplies, installation tools, cable assemblies, to transmitters and alarms, plus all the accessories your project could need

**Time-saving** handheld instrumentation

**Custom** designed products

**Competitive** pricing on sensors, accessories, cables

**Cutting edge** technology keeps you ahead of the curve

# Industries

Machines are a critical part of your manufacturing process, and proactive maintenance based on condition monitoring can provide savings up to 30% compared to conventional maintenance practices. Understand the condition of your rotating machines including pumps, motors, compressors, gearboxes and fans throughout your facility using the Wilcoxon Research® range of reliable, high performing vibration monitoring sensors and accessories.

From wind turbines and pulp and paper plants, through to steel mills and power generation, tens of thousands of Wilcoxon Research sensors are currently in service around the world. Take a look at our website to explore the industries where our vibration sensors and accessories are put to use. And remember if you need help discussing your vibration monitoring requirements, and how we can help you succeed, we are a convenient email or phone call away.



Cement



Condition monitoring



Food and beverage



Machine tool



Metals processing



Mining



Nuclear



Oil and gas



Pharmaceutical



Power generation



Pulp and paper



Rail



Water and wastewater



Wind power

# Products

Vibration sensors improve machine reliability, reduce operating costs and minimize downtime as part of condition-based maintenance. Wilcoxon Research® products have set the industry standard since 1960. We supply a wide range of highly reliable sensors and everything that goes with them, to protect and monitor all types of rotating machinery, reduce unexpected failures and improve machine reliability.

We are your one stop shop for vibration analysis and condition monitoring solutions. Explore our broad range of products including accelerometers, 4-20 mA sensors, intelligent transmitters and instrumentation that provide accurate and reliable vibration measurements for many industries and applications. Whether you're purchasing just a few, hundreds or even thousands of sensors, we are ready to meet your needs.



Vibration sensors



Cables



Accessories



Enclosures



Vibration reference sources



Supportive instrumentation



Hazardous area sensors



Process 4-20 mA loop powered sensors



Vibration sensors (HART)



Vibration transmitters

# General purpose accelerometers

Long-lasting sensors measure vibration across a broad frequency range for monitoring of most industrial machinery

- Motors, fans, pumps 600 - 7,200 RPM (10 - 120 Hz)
- Moderate speed gearboxes 60 - 60,000 RPM (1.0 - 1,000 Hz)
- Machine tool spindles 1,000 - 840,000 RPM (16.6 - 14,000 Hz)
- Paper machine rolls 30 - 600 RPM (0.5 - 10 Hz)
- Compressors 1,500 - 600,000 RPM (25 - 10,000 Hz)



Wilcoxon® model	786A/786B-10	787A/787B	777/777B	786F	787F
<b>Description</b>	Standard accelerometer	Standard side-exit accelerometer	Standard accelerometer	Integral cable accelerometer	Low profile accelerometer
<b>Sensitivity mV/g</b>	100	100	100	100	100
<b>Sensitivity tolerance</b>	± 5% / ± 10%	± 5% / ± 10%	± 10%	± 5%	± 5%
<b>Frequency response ±3 dB Hz</b>	0.5 - 14,000	0.5 - 10,000	0.5 - 12,000	0.5 - 13,000	0.7 - 10,000
<b>Resonance frequency kHz</b>	30	22	30	30	22
<b>Electrical noise 100 Hz</b>	5 µg/VHz	5 µg/VHz	5 µg/VHz	5 µg/VHz	5 µg/VHz
<b>Max temperature</b>	120° C	120° C	85° C	120° C	120° C
<b>Temperature response</b>	-25°C / -10 % +120°C / +10%	-25°C / -10 % +120°C / +10%	-50°C / -10 % +85°C / +5%	-25°C -10 % +120°C / +10%	-25°C -10 % +120°C / +10%
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw
<b>Output connector</b>	2 pin MIL-C-5015	2 pin MIL-C-5015	2 position terminal block/BNC coaxial	integral cable, blunt cut	integral cable, blunt cut
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	*786A only CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 IECEX Class I Zone 0/1	*787A only CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 IECEX Class I Zone 0/1	No	CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 IECEX Class I Zone 0/1	No
<b>Additional information</b>	Usable for most industrial machine monitoring	Captive screw mount allows 360° exit direction	General purpose	General purpose	General purpose

# General purpose accelerometers, compact size

## Industries served

- Automotive
- Pharmaceutical
- Food and beverage
- High tech fabrication
- Extrusion
- Water and water treatment
- Petrochemical
- Pulp and paper
- Power generation
- Process monitoring



Wilcoxon® model	780A/780B	785A	786A-M12	726/726T	997
<b>Description</b>	Compact accelerometer	Economy side-exit low profile accelerometer	General purpose accelerometer	Small size accelerometer	High frequency, integral cable accelerometer
<b>Sensitivity mV/g</b>	100	100	100	100	10
<b>Sensitivity tolerance</b>	± 5% / ± 10%	± 10%	± 5%	± 5%	± 10%
<b>Frequency response ±3 dB Hz</b>	0.5 - 14,000	1 - 12,000	0.5 - 14,000	0.6 - 15,000	0.5 - 29,000
<b>Resonance frequency kHz</b>	30	30	30	32	45
<b>Electrical noise 100 Hz</b>	5 µg/VHz	6 µg/VHz	5 µg/VHz	0.8 µg/VHz	5 µg/VHz
<b>Max temperature</b>	120° C	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25°C / -10 % +120°C / +10%	-50°C / -10 % +120°C / +7%	-25°C / -10 % +120°C / +10%	-50°C / -10 % +120°C / +5%	-50°C / -10 % +125°C / +10%
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	726 case grounded 726T base isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	10-32 tapped hole	8-32 captive screw
<b>Output connector</b>	2 pin MIL-C-5015	2 pin MIL-C-5015	4 pin, M12	10-32 coaxial	2 pin MIL-C-5015
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	*780A only CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 IECEx Class I Zone 0/1	No	CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 IECEx Class I Zone 0/1	No	No
<b>Additional information</b>	Tight tolerance sensor, compact size for walkaround programs, permanent mount and multichannel applications	Upward angled connector for easy cable installation in the field	Vibration and temperature in a single housing at affordable price. M12 connector commonly used for process control applications	Ultra low-power consumption. Ideal for wireless, battery-operated, energy harvesting applications	Ideal for applications involving high speed components

## Speciality high performance accelerometers

- Dual output to measure vibration and temperature
- Measurement range to 500g
- 6000 volt isolation
- Velocity output
- Tri-Ax



New!



Wilcoxon® model	786A-I	786T	HV200	793V / 893V	993B-7-M12
<b>Description</b>	Top-exit broadband sensor	Affordable dual-output vibration and temperature sensor	Isolated sensor with high EMI resistance	Premium PiezoVelocity transducer	Triaxial accelerometer with M12 connector
<b>Sensitivity mV/g</b>	10	100	100	100	100
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 10% / ± 5%	± 10%
<b>Frequency response ±3 dB Hz</b>	0.5 - 14,000	0.5 - 12,000	0.5 - 12,000	2.5 - 7,000 / 4.5 - 5,000	2-7,000 (x,y axes) 2 -10,000 (z-axis)
<b>Resonance frequency kHz</b>	30	30	25	15	>35
<b>Electrical noise 100 Hz</b>	23 µg/√Hz	5 µg/√Hz	5 µg/√Hz	1 µg/√Hz	2 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25°C / -10 % +120°C / +10%	-25°C / -10 % +120°C / +10%	-40°C / -10 % +120°C / +10%	-50°C / ± 5 % +120°C / ± 5%	-50°C - +120°C
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	10 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 integral stud	1/4-28 tapped hole	10-32 captive screw
<b>Output connector</b>	2 pin MIL-C-5015	3 pin MIL-C-5015	2 pin MIL-5015	2 pin MIL-C-5015	4 pin, M12
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	No	CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0/1 and I Zone 2 IECEx Class I Zone 0/1	No	*793V only FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0	CSA Class I Div 1
<b>Additional information</b>	Ideal for high amplitude vibration monitoring	Accurate measurements even in demanding environments	Designed to withstand arcing between sensor base and internal electronics up to 6,000 volts	Intrinsic safety certified options. Ultra low-noise electronics for clear signals at very low vibration levels	3 axis simultaneous monitoring from a single sensor providing horizontal, vertical, axial vibration levels, speeds route data collection



## Speciality high performance accelerometers

- Up to 25 years of reliable product lifetime
- 500g measurement range
- 20 kHz frequency response
- Stable output to 150°C
- Miniature sizes



Wilcoxon® model	793-10	732A / 732AT	HT786A	HT787A	HT780A
<b>Description</b>	Premium accelerometer with 500g level	High frequency compact accelerometer	High temperature accelerometer	High temperature side-exit accelerometer	High temperature compact accelerometer
<b>Sensitivity mV/g</b>	10	10	100	100	100
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 5%	± 5%
<b>Frequency response ±3 dB Hz</b>	1 - 15,000	0.5 - 25,000	0.5 - 14,000	0.7 - 10,000	0.5 - 14,000
<b>Resonance frequency kHz</b>	25	60	30	15	30
<b>Electrical noise 100 Hz</b>	40 µg/√Hz	3 µg/√Hz	7 µg/√Hz	7 µg/√Hz	2 µg/√Hz
<b>Max temperature</b>	120° C	120° C	150° C	150° C	150° C
<b>Temperature response</b>	-50°C / -10 % +120°C / +5%	-50°C / -10 % +120°C / +5%	-25°C / -10 % +150°C / +15%	-25°C / -10 % +150°C / ± 15%	-25°C / -10 % +150°C / ± 15%
<b>Bias output voltage</b>	12 VDC	10 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	10-32 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	2 pin MIL-C-5015	10-32 coaxial	2 pin MIL-5015	2 pin MIL-C-5015	2 pin MIL-C-5015
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	ATEX Class I Zone 0	No	No	No	No
<b>Additional information</b>	Useful in high g applications such as gearbox, turbine and compressor monitoring	Wide dynamic and frequency range. Compact construction to fit in tight spaces	High temperature capability offers continuous monitoring in high temp environments	Side-exist sensor ideal for applications requiring operation in extremely high temperatures	High temperature performance in compact size for multichannel applications

# Low frequency accelerometers

Our sensors have been the industry standard for performance and reliability for over 60 years

- Low frequency accelerometers to monitor slow turning machinery like wind turbines and cooling towers
- Pioneered condition monitoring for industrial applications
- Reverse wiring protection prevents damage to the sensor if the power supply is not properly connected
- Seismic sensors measure vibration to the sub micro-g level



New!



Wilcoxon® model	786LF-500	787-500	793L	799LF	731A / 731A/P31
<b>Description</b>	Extremely low frequency accelerometer	Side-exit low frequency accelerometer	Premium low frequency vibration sensor	Premium low frequency filtered accelerometer	Ultra quiet, ultra low frequency seismic accelerometer
<b>Sensitivity mV/g</b>	500	500	500	500	10 V/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 5%	± 10%
<b>Frequency response ±3 dB Hz</b>	0.1 - 13,000	0.2 - 10,000	0.2 - 2,300	0.1 - 2,500	0.05 - 450
<b>Resonance frequency kHz</b>	30	22	15	18	750 Hz
<b>Electrical noise 100 Hz</b>	2 µg/√Hz	1.5 µg/√Hz	0.2 µg/√Hz	1 µg/√Hz	0.004 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C	65° C
<b>Temperature response</b>	-25°C / -10% +120°C / +15%	-25°C / -10% +120°C / +10%	-50°C / -10% +120°C / +10%	-50°C / -7% +120°C / +5%	-10°C / -12% +65°C / +5%
<b>Bias output voltage</b>	13 VDC	12 VDC	10 VDC	8 VDC	9 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole	3/8-16 tapped hole
<b>Output connector</b>	2 pin MIL-C-5015	2 pin MIL-C-5015	2 pin MIL-C-5015	2 pin MIL-C-5015	2 pin MIL-C-5015
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	No	No	FM Class 1, II, III, T4 Div 1 Group A B C D E F G, Nonincendive Div 2 Group A B C D, Suitable for Class II Div 2, Groups F, G, Ex ia CL I, Div 1 Groups A B C D	No	No
<b>Additional information</b>	250 mV and 100 mV options available: 786LF-250 and 786LF	Low frequency, low noise sensor for demanding low speed applications	For low frequency measurements	Ultra low frequency, low noise sensor ideal for wind turbine applications	Low noise sensor ideal for wind turbine applications and seismic monitoring including earthquake detection, perimeter monitoring, structural analysis. Optional P31 amplifier system

# Premium accelerometers

- Proven design with additional over voltage protection
- Radiation tested units available for monitoring in nuclear environments
- High temperature sensors with flat  $\Delta T$  response



Wilcoxon® model	793	797	793-6	797-6	793T-3
<b>Description</b>	Premium PiezoFET accelerometer	Premium side-exit PiezoFET low profile IsoRing accelerometer	High temperature, internally amplified FireFET accelerometer	High temperature low profile FireFET general purpose accelerometer	Premium dual-output vibration and 10 mV/°K temperature sensor
<b>Sensitivity mV/g</b>	100	100	100	100	100
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 10%	± 10%	± 5%
<b>Frequency response ±3 dB Hz</b>	0.5 - 15,000	1.0 - 12,000	1.0 - 12,000	1.0 - 11,000	0.5 - 15,000
<b>Resonance frequency kHz</b>	25	26	20	18.5	24
<b>Electrical noise 100 Hz</b>	5 µg/√Hz	5 µg/√Hz	10 µg/√Hz @ 150° C	10 µg/√Hz @ 150° C	5 µg/√Hz
<b>Max temperature</b>	120° C	120° C	150° C	150° C	120° C
<b>Temperature response</b>	-50°C / -15% +120°C / +20%	-50°C / -15% +120°C / +15%	-50°C / -5% +150°C / -5%	-50°C / -5% +150°C / -5%	-50°C / -10% +120°C / +5%
<b>Bias output voltage</b>	12 VDC	12 VDC	11 VDC @ 150° C	11 VDC @ 150° C	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive socket head screw	1/4-28 tapped hole	1/4-28 captive socket head screw	1/4-28 tapped hole
<b>Output connector</b>	2 pin MIL-C-5015	2 pin MIL-C-5015	2 pin MIL-C-5015	2 pin MIL-C-5015	3 pin MIL-C-5015
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0, SIMTARS	FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0	No	No	No
<b>Additional information</b>	Premium PiezoFET accelerometer	Side-exit legacy accelerometer specified in many mission critical applications	Premium high temperature, sensor for the most demanding applications	Premium high temperature sensor for the most demanding applications	Vibration and temperature signal in a single housing

# Cables and connectors

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



Wilcoxon® model	6	6D2	6GD2	6GQ/GQI*	6GSL/GSLI*	6Q/6QI*	6QN/QNI*	6SL/SLI*	6W
	MIL-C-5015 style								
Connector	2 socket	2 socket	3 socket	3 socket			2 socket		
Description	Amphenol, metallic	Class I, Div 2 suitable		High temp Viton® B boot		High temp Viton® B boot	Radiation resistant, Neoprene boot	Viton® B boot	Isolated shield, molded
Max temperature	125° C	125° C	125° C	200° C	125° C	200° C	105° C	125° C	125° C
Field assembly	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
IP rating	50	67	67	68	67	68	68	67	67

\*I indicates electrical isolation between shield and transducer housing



Wilcoxon® model	1	1A	2/2F/2T	M12P	M12S	9W	20
Connector	Microdot 10-32 coaxial		BNC plug	M12		4 socket	7 pin
Description	Straight plug	Right angle	Male/ female/ twin axial	4 pin	5 socket	Threaded, weatherproof Bendix	LEMO
Max temperature	200° C	200° C	165° C	85° C	85° C	125° C	200° C
Field assembly	No	No	No	No	No	No	No
IP rating	50	50	50	67	67	50	50



Wilcoxon® model	J3	J84	J88C	J9F	J9T2	J9T2A	J9T4A	J10
Description	Coaxial, low noise, Teflon® jacket	4 conductor, shielded, Kevlar® reinforced, polyurethane jacket	Twisted pair, shielded					
			2 conductor, coiled, polyurethane jacket	Foil shield w/ drain wire, Teflon® jacket	Tefzel® jacket, braided shield	Teflon® jacket, braided shield	Four conductor, Teflon® jacket	Enviroprene® jacket, braided shield
Max temperature	260° C	80° C	80° C	200° C	150° C	200° C	200° C	125° C
Diameter (in)	0.085	0.210	0.175	0.125	0.190	0.190	0.190	0.190
Capacitance (pF/ft)	30	44	30	51	27	27	27	30

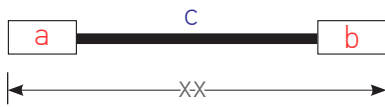
# Cable assembly ordering guide

Custom assembly identification: Ra-b-c-xx-d

R signifies cable assembly, for example: R6Q-0-J9T2A-16 [16 ft yellow Teflon® cable, 2 pin MIL-5015 IP68 connector to blunt cut].



- a** Find connector that mates to sensor
- 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)



## a b Connector options

Model	Description
ST	Stripped and tinned
0	Blunt cut
1	Microdot 10-32 coaxial, IP50
1A	Microdot 10-32 coaxial, right angle, IP50
2/2F/2T	BNC plug, IP50, male / female / twin-axial
M12	5 socket, molded, IP68
9W	4 socket, threaded, weatherproof, Bendix, IP50
20	LEMO, 7 pin, IP50
6	2 socket, Amphenol, metallic, IP50
6D2	2 pin, suitable for use in Class I Div 2/Zone 2, factory assembled
6GD2	3 pin, suitable for use in Class I Div 2/Zone 2, factory assembled
6GQ/6GQI*	3 socket, high temp, Viton® B boot, IP68
6GSL/6GSLI*	3 socket, Viton® B boot, IP67
6Q/6QI*	2 socket, high temp, Viton® B boot, IP68
6QA/6QAI*	2 socket, high temp, Viton® B boot, IP68
6QN/6QNI*	2 socket, radiation resistant, Neoprene boot/Tefzel® insert, IP68
6SL/6SLI*	2 socket, Viton® B boot, IP67
6W	2 socket, molded, IP67, factory assembled
6WR	2 socket, molded, right angle, IP67, factory assembled











MIL-C-5015 style

\* I indicates electrical isolation between shield and transducer housing

## c Cable options

	Model	Description	Max temp	Diameter	Compatible connectors
Coaxial	J3	Low noise, high temp, red Teflon® jacket	500° F 260° C	0.085 in 0.216 cm	1, 1A, 2, 6
	J5A	RG58, black PVC jacket	221° F 105° C	0.190 in 0.483 cm	2, 2F, 6, 6Q/6QI, 6SL/6SLI, 6W
	J93	RG316/U, high temp, clear Teflon® jacket	392° F 200° C	0.098 in 0.249 cm	1, 2F, 6
	J9	Grey PVC jacket	176° F 80° C	0.231 in 0.587 cm	2T, 6, 6SL/6SLI
Shielded, twisted pair	J9T	RG59, black Teflon® jacket	302° F 150° C	0.190 in 0.483 cm	2, 2F, 20, 6, 6Q/6QI, 6SL/6SLI
	J9T2	White Tefzel® jacket, radiation resistant	302° F 150° C	0.190 in 0.483 cm	6QN/6QNI
	J9T2A	Yellow Teflon® jacket	392° F 200° C	0.190 in 0.483 cm	2, 20, 6, 6D2, 6Q/6QI, 6SL/6SLI, 6W, 6WR
	J9T2AS	Yellow Teflon® jacket with stainless steel braid	392° F 200° C	0.210 in 0.533 cm	6SL/6SLI
	J9T2S	White Tefzel® jacket with stainless steel braid	302° F 150° C	0.210 in 0.533 cm	9W, 6QN, 6QNI, 6SL/6SLI
	J88	Black polyurethane jacket	176° F 80° C	0.210 in 0.533 cm	2, M12, 20, 6, 6Q/6QI, 6WR
	J10	Gray Enviroprene jacket	257° F 125° C	0.190 in 0.483 cm	2, M12, 20, 6, 6D2, 6Q/6QI, 6SL/6SLI, 6W, 6WR
J9F	Foil shield with drain wire, red Teflon® jacket	392° F 200° C	0.125 in 0.318 cm	6QA/6QAI, 6W, 6WR	
Shielded, multi conductor	J9T3	3 conductor, white Tefzel® jacket	302° F 150° C	0.190 in 0.483 cm	6GSL/6GSLI, 6SL/6SLI
	J9T3A	3 conductor, yellow Teflon® jacket	392° F 200° C	0.190 in 0.483 cm	2, 6GD2, 6GQ/6GQI, 6GSL/6GSLI, 6SL/6SLI
	J9T4	4 conductor, red Teflon® jacket	392° F 200° C	0.190 in 0.483 cm	2, 9W, 6GSL/6GSLI, 6SL/6SLI
	J9T4A	4 conductor, yellow Teflon® jacket	392° F 200° C	0.190 in 0.483 cm	9W
	J84	4 conductor, black polyurethane, Kevlar reinforced	176° F 80° C	0.210 in 0.533 cm	2, M12, 20, 6, 6GQ/6GQI, 9W

## Mounting accessories

Wilcoxon® model	Image	Description and additional models			
MD series		<b>Two-pole magnetic mounting bases</b>			
		<b>MD020</b> 0.75" diameter, 20 lb force, 1/4-28 tapped hole, non-isolated	<b>MD035</b> 1.00" diameter, 35 lb force, 1/4-28 tapped hole, non-isolated	<b>MD055</b> 1.25" diameter, 55 lb force, 1/4-28 tapped hole, non-isolated	<b>MD0130</b> 2.00" diameter, 130 lb force, 1/4-28 tapped hole, non-isolated
MF series		<b>Flat magnetic mounting bases</b>			
		<b>MF015</b> 0.75" diameter, 15 lb force, 10-32 tapped hole, non-isolated	<b>MF040</b> 1.00" diameter, 40 lb force, 1/4-28 tapped hole, non-isolated	<b>MF075</b> 1.25" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated	<b>MF120</b> 1.50" diameter, 120 lb force, 1/4-28 tapped hole, non-isolated
MT series		<b>Two-pole magnetic mounting bases for triaxial sensors</b>			
		<b>MT075</b> 1.50" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated		<b>MT075A</b> 1.50" diameter, 75 lb force, 10-32 tapped hole, non-isolated	
SF6		<b>SF6 mounting stud</b> 1/4-28 UNF both ends Stainless steel	<b>SF6M mounting stud</b> 1/4-28 UNF to M8 x 1.25 Stainless steel	<b>SF6M-1 mounting stud</b> 1/4-28 UNF to M6 x 1.00 Stainless steel	
SF8		<b>SF8 cementing pad</b> 1/4-28 integral stud 1.00" diameter Stainless steel		<b>SF8-2 cementing pad</b> Includes tapped hole and key notch for consistent axis orientation Use with 993A triaxial sensors	
SF11		<b>Cementing pad</b> 1.00" diameter provides surface for sensor attachment using a MF040 style magnetic mounting base			
SF21		<b>SF21 isolator mounting base</b> 1.00" hex across the flats Isolation protection up to 1,500 volts 1/4-28 to 1/4-28 integral stud		<b>SF22</b> 1.000" diameter, 1/4-28 to M8 integral stud	
				<b>SF23</b> 1.125" diameter, 1/4-28 to 1/4-28 integral stud	
				<b>SF24</b> 1.125" diameter, 1/4-28 to M8 integral stud	
TC1B		<b>Triaxial mounting cube</b> 1.00" on each side Three 1/4-28 tapped holes fit a variety of threaded stud adapter sizes such as M6, M8, 3/8 and 10-32 Additional sizes available for different sized sensors			
VERSIL406		<b>Mounting epoxy</b> Enough glue for up to 5 sensors/mounting pads Package contains both epoxy components separated by a pull tab Max temperature 150° C			
ST101		<b>Spot face tool</b> 1.25 in 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 more intimate 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.

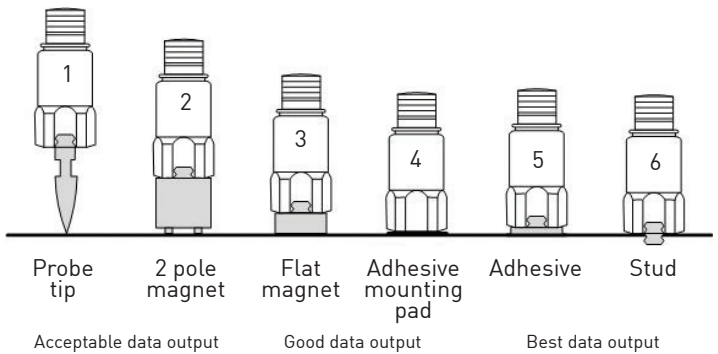
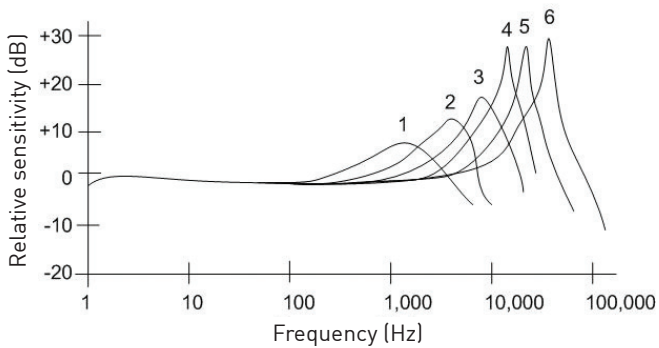
Cementing pads approach the high frequency capabilities of stud mounts when used properly, without the need of drilling into the structure. Adhesive selection is critical for long-term reliability.

## 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.

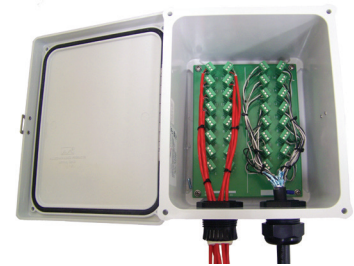


# Enclosures

Meggitt's enclosures are designed with the user in mind, enabling quick and safe data acquisition in the harshest industrial environments. Our cost-effective enclosures are rugged and backed by lifetime warranty.

- VibraLINK® (VL) switchboxes feature industry exclusive data ready LEDs indicating stable BOV levels, decreasing collection time
- Differential switching for greater noise immunity
- Radio frequency interference filtering
- Rugged and built to last - NEMA 4/4X ratings, corrosion resistant
- Oversized enclosures for up to 48 channels with spacious interiors for easy wiring
- Models available for every application
- Over 450 user configurable models available
- Available in fiberglass, thermoplastic and stainless steel

Model	Description
<b>Reduction Boxes - RB Series</b>	
RB16BFG	16 channel reduction box, fiberglass, base size, cable grips
RB32EFG	32 channel reduction box, fiberglass, expandable, cable grips
RB16BSG	16 channel reduction box, stainless steel, base size, cable grips
RB32ESG	32 channel reduction box, stainless steel, expandable, cable grips



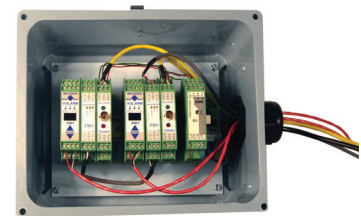
Reduction boxes

Model	Description
<b>Cable Termination Boxes - CB Series</b>	
CB2	2 channel BNC, termination junction box, cable grips
CBT2-M12-G	2 channel M12, triaxial termination junction box, cable grips
CB4	4 channel BNC, termination junction box, cable grips



Cable termination boxes

Model	Description
<b>Transmitter Enclosures - IT Series</b>	
IT051	DIN-box, single-rail, holds approximately seven IT Transmitters and power supply
IT051C	DIN-box, single-rail, clear cover, same size as iT051
IT052	DIN-box, dual-rail, holds approximately 25 IT Transmitters and power supply



Online continuous monitoring



# VibraLINK (VL) Series enclosure configurations



Switchbox - Base  
Single and Dual output enclosure

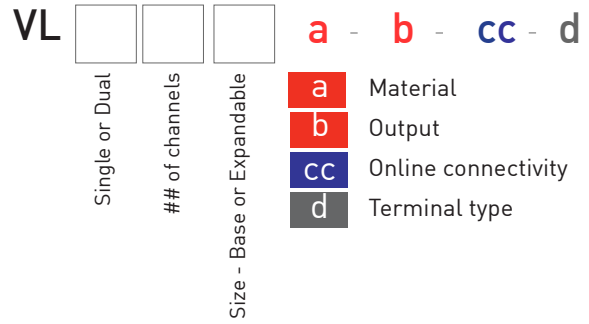


Switchbox - Expandable  
Single and Dual output enclosure

VL Series - Switchbox Single and Dual output enclosures		
Model	Description	
<b>Switchbox</b>		
VLS = Single output enclosure		
VLD = Dual output enclosure		
Size	10 x 8 x 6 = B (Base)	20 x 16 x 8 = E (Expandable)
##	6, 8, 12	12, 24, 36, 48
a	F: fiberglass S: stainless steel	
b	C: conduit G: cable grip	
cc	N: none OC: yes, conduits OG: yes, cable grips OP: yes, plug	
d	S: screw Q: quick connect	

## VL Series enclosure configuration ordering guide

Custom assembly identification



Model	Description
<b>Switchboxes - VLT Series - for use with Triaxial Sensors</b>	
Triaxial switchboxes - VLT series	
VLT6FG	6 channel triaxial switchbox, fiberglass, cable grips
VLT6SG	6 channel triaxial switchbox, stainless steel, cable grips
VLT6FM12	6 channel triaxial switchbox, fiberglass, M12 connectors
VLT6SM12	6 channel triaxial switchbox, stainless steel, M12 connectors



Switchboxes VLT series

## Portable power supplies

Dynamic sensors requiring IEPE power utilize industry standard constant current diode (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, integration, gain or triaxial configurations.



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

## Complete solutions to meet your needs

### Wilcoxon Research product line

Whether you are working in the field or at the plant, we provide complete solutions to meet your needs.

Our products are known for quality and reliability to keep your critical machinery operating safely and efficiently.

We are your one stop shop for vibration monitoring solutions and accessories for all types of rotating machinery including

Motors, pumps, fans, compressors, gearboxes, cooling towers, and much more



## Vibration reference sources - portable meters

### ReferenceMate® portable handheld shaker

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 at the push of a button.

ReferenceMate		Specifications
REF2510	REF2510R	
X	X	User selectable operating frequencies: 61.4 Hz, 100 Hz, 159.2 Hz
X	X	Max/min load: 8.8 oz (250 grams)/none
X	X	Operating temperature range: -15 to +130°F (-10 to +55°C)
X	X	4x standard AA batteries
X	X	Up to 40 hours battery life
X	X	DC power input
X	X	6061 aluminum, hard-coat anodized case
X	X	IP54 rating
	X	Protective thermoplastic boot



ReferenceMate portable handheld shaker

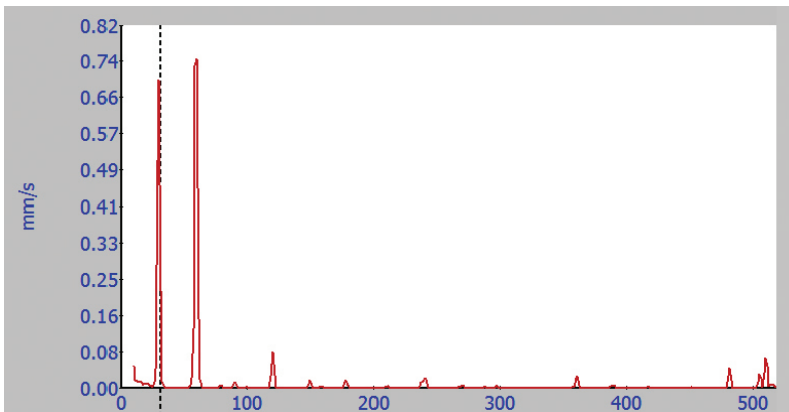
### MachineryMate® vibration meters

Easy-to-use meters record, analyze and display bearing conditions and vibration values color coded to ISO 10816-3 alarm levels enable quick and reliable machinery health monitoring. Built-in filter bands provide a clear picture of machine problems including unbalance, misalignment and looseness.

MachineryMate kits			Accessories
MAC800	MAC810	MAC820	
X	X	X	MAC800 meter and DataMate software
X	X	X	USB docking cradle
X	X	X	Protective boot
X	X	X	Carrying case
	X	X	Strobelight attachment
	X	X	DataMate Pro software
		X	Bluetooth headphones
		X	Headphones case



MachineryMate vibration monitoring and analysis meters



### DataMate® software

DataMate is the extremely powerful vibration and analysis software tool designed to be used with the MachineryMate 800 (MAC800) handheld vibration meter.

DataMate Pro works across computer networks to allow access to remote databases and readings that are stored on other computers. This powerful feature enables users to monitor machinery at more than one site.

# Hazardous area sensors



Meggitt offers the widest selection of hazardous area rated sensors for industrial condition monitoring. Certifications including FM, CSA, ATEX and IECEx offer compliance to customers worldwide. Industrial plants are divided into zones (European and IEC method) or divisions (North American method) according to the likelihood of a potentially explosive atmosphere being present.

Model	CSA certification	ATEX certification	IECEx certification	FM certification
780A-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
786A-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 AEx/Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
786F-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 AEx/Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
786T-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 AEx/Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
787A-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
787A-M8-IS	CL 1 Div 1-Groups A B C D; CL II Div 1-Groups E F G; CL III Div 1; CL I Zone 0 Ex ia IIC T4 Ta = -50° to 120°C	II 1 G Ex ia IIC T4 Ta=120°C	CL I Zone 0 Ex ia IIC T4 Ta=120°C	
780A-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
786A-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 AEx/Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
786F-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 AEx/Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
786T-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 AEx/Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
787A-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
787A-M8-D2	CL 1 Div 2-Groups A B C D; CL 1 Zone 2 Ex na II T4 Ta = -50° to 120°C	II 3 G Ex nA II T4 Ta=120°C	II 3 G Ex nA II T4 Ta=120°C	
PC420-IS	CL I Div 1-Groups A B C D T3C Ta = 85°C max	EEx ia IIC T3		
PC421-IS	CL I Div 1-Groups A B C D T3C Ta = 85°C max	EEx ia IIC T3		
PC423-IS	CL I Div 1-Groups A B C D T3C Ta = 85°C max	EEx ia IIC T3		
PC420-EX	CL I Div 1, 2-Groups A B C D T3C Ta = 85°C max	EEx d IIC T3		
PCH420	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 Zone 2 -40°C < Ta < +105°C	nA nC IIC T4 Gc Zone 2 -40°C < Ta < +105°C	

# Hazardous area sensors



Model	CSA certification	ATEXcertification	IECEX certification	FM certification
766-33	Ex ia CL I, Div 1 Groups A B C D			
766-35		Ex ia IIC T4		
766E				
793E				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
793LE				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
793VE				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
793V-5E				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
793-33	Ex ia CL I, Div 1 Groups A B C D			
793L-33	Ex ia CL I, Div 1 Groups A B C D			
793V-33	Ex ia CL I, Div 1 Groups A B C D			
793V-5-33	Ex ia CL I, Div 1 Groups A B C D			
797-33	Ex ia CL I, Div 1 Groups A B C D			
797L-33	Ex ia CL I, Div 1 Groups A B C D			
793-10-35		Ex ia IIC T4		
793-35		Ex ia IIC T4		
793V-35		Ex ia IIA T4		
797E				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
797LE				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
797VE				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G
797-35		Ex ia IIC T4		
797-5-35		Ex ia IIC T4		
797L-35		Ex ia IIC T4		
376E/ CC726E				CL I, II, III, T4, Div 1 Group-A B C D E F G Nonincendive for Div 2 Group A B C D Suitable for Class II Div 2, Groups F, G

European & IEC classification	Definition of zone/division	North American classification
Zone 0 (gases) Zone 20 (dusts)	An area in which an explosive mixture is continuously present or present for long periods	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 1 (gases) Zone 21 (dusts)	An area in which an explosive mixture is likely to occur in normal operation	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 2 (gases) Zone 22 (dusts)	An area in which an explosive mixture is not likely to occur in normal operation, and if it occurs it will exist only for a short time	Class I Division 2 (gases) Class II Division 2 (dusts) Class III Division 1 (fibers) Class III Division 2 (fibers)

## Process 4-20 mA Loop Powered Sensors

We offer digital vibration solutions that simplify the collection of vibration information from machinery, bringing actionable data directly into the control room.

We've developed a HART sensor which can exchange information directly with distributed control systems, and runs on just 3% of the power required by a standard analog unit, freeing up power for digital processing.

Our iT300 Intelligent Transmitter is a simple interface between your existing sensors and the Cloud. It collects and processes vibration information from your plant, delivering actionable data such as alerts to PLC or SCADA systems. We always look ahead, investing in R&D to make sure you can use vibration analysis to capitalize on the smart manufacturing breakthroughs that will become increasingly standard.



Wilcoxon® model	PC420	PCC421	PC420PP	PC420-EX	PCH420V
<b>Description</b>	Top-exit, loop powered sensor, 4-20 mA output	Side-exit, loop powered sensor	Loop powered sensor, 4-20 mA output	Explosion proof velocity loop powered sensor	Digital vibration solution. Programmable vibration transmitter with HART protocol
<b>Loop output options</b>	RMS, peak, true peak	RMS, peak, true peak	RMS	RMS, peak, true peak	RMS, peak, true peak
<b>User configurable</b>	No	No	No	No	Yes
<b>Acceleration scaling, g</b>	5, 10, 20, 50	5, 10, 20	Displacement only 40 mils	5, 10, 20	5, 10, 20, 50
<b>Velocity scaling, ips</b>	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	0.5 - 5.0, user config
<b>Frequency range</b>	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	Vel: 3.0 Hz - 1.95 kHz
<b>Programmable filter bands</b>	No	No	No	No	Yes, three
<b>Max temperature</b>	105° C	105° C	85° C	85° C	105° C
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	3/8-24 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	2 pin MIL-C 5015	2 pin MIL-C-5015 or 4 pin M12	2 pin MIL-C-5015	18 AWG flying leads	2 pin MIL-C 5015 or 4 pin M12
<b>Hazardous area options</b> *see pages 18-19 for full certification requirements	CSA Class I Div 1, ATEX Class I Zone 0	CSA Class I Div 1, ATEX Class I Zone 0	No	CSA Class I, Div 1, Class II, Div 1, Class III, Div 1, 2 EEx d IIC T3	CSA Class I, Div 2 and Class I, Zone 2, ATEX nA nC, Zone 2 IECEx nA nC, Zone 2
<b>Additional information</b>	Acceleration and velocity 4-20 mA signals for process control applications	Compact size, side-exit loop powered sensor for space limited applications	Displacement 4-20 mA signal for slow speed machine monitoring	Explosion proof, acceleration loop powered sensor	3 user configurable vibration bands, single/multi-drop loop installation

# Process Digital Intelligent Transmitter series (iT100/200/300)

Meggitt's iT series vibration transmitters convert dynamic sensors' output to a 4-20 mA signal proportional to overall vibration. The 4-20 mA signal interfaces directly with a PLC, DCS or SCADA system for cost effective 24/7 condition monitoring. Pair the Intelligent Transmitter with the programmable iT Alarm for continuous alarming capability. The iT series offers flexibility, and DIN rail mounted units are ideal for balance of plant monitoring of critical assets that currently go unmonitored.

## iT Transmitter

- Converts traditional IEPE sensor signals to 4-20 mA output in terms of acceleration, velocity or displacement
- Output RMS, peak or Meggitt's exclusive true peak signal
- English or metric units
- Custom ordered with low pass and high pass filters to suit your application
- Buffered dynamic output for extensive online system compatibility
- BNC front panel connector supports portable vibration analyzers
- CE approved



New! iT300

## iT Alarm

- Accepts input from an iT Transmitter or any 4-20 mA loop sensor: vibration, temperature, pressure, level, flow, force and speed
- 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
- CE approved



iT Alarm

# HART-enabled field configurable vibration sensor

## HART PCH420V

Vibration measurements optimized for process control. Digital vibration measurement for plant managers. PCH420V programmable transmitter allows vibration data to be accessed using existing HART-enabled process automation and condition monitoring infrastructure.

- Field configurable vibration sensor
- Three user configurable bands offer flexibility of condition-based maintenance
- Multi-drop installations enable monitoring of up to 16 sensors through a single address port
- Powered by the network for continuous coverage, and easy integration without extra infrastructure and cable costs
- CE approved



New! HART PCH420V

# 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
	mV/g		Hz	kHz		°C		/√Hz	g peak		
<b>General purpose accelerometers</b>											
777/777B	100	10%	0.5 - 12k	30	top, R2/term	85	1/4-28	5 µg	80	75	
780A	100	5%	0.4 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	Y
780B	100	10%	0.4 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	
785A	100	10%	1.0 - 12k	30	side, R6	120	1/4-28	6 µg	80	85	
786A	100	5%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	90	Y
786A-I	10	5%	0.5 - 14k	30	top, R6	120	1/4-28	23 µg	500	90	
786A-M12	100	5%	0.5 - 14k	30	top, M12	120	1/4-28	5 µg	80	90	
786B-10	100	10%	0.5 - 14K	30	top, R6	120	1/4-28	5 µg	80	90	Y
786F	100	5%	0.5 - 13k	30	top, integral cable	120	1/4-28	5 µg	80	90	Y
787A	100	5%	0.7 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	Y
787B	100	10%	0.7 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	
787F	100	5%	0.7 - 10k	22	side, integral cable	120	1/4-28	5 µg	80	145	
793	100	5%	0.5 - 15k	25	top, R6	120	1/4-28	5 µg	80	112	Y
793-10	10	5%	1.0 - 15k	25	top, R6	120	1/4-28	40 µg	500	110	Y
793R - radiation resistant	100	5%	1.0 - 15k	26	top, R6	120	1/4-28	5 µg	50	110	
797	100	5%	1.0 - 12k	26	side, R6	120	1/4-28	5 µg	50	135	Y
797R - radiation resistant	100	5%	1.0 - 12k	26	side, R6	120	1/4-28	5 µg	50	135	
HV200	100	5%	0.5 - 12k	25	top, R6	120	1/4-28	5 µg	80	120	
<b>Low frequency accelerometers</b>											
786LF	100	5%	0.1 - 13k	30	top, R6	120	1/4-28	3.0 µg	50	90	
786LF-500	500	5%	0.1 - 13k	30	top, R6	120	1/4-28	2 µg	10	90	
787-500	500	5%	0.2 - 10k	22	side, R6	120	1/4-28	1.5 µg	10	145	Y
793L	500	5%	0.2 - 2.3k	15	top, R6	120	1/4-28	0.2 µg	10	142	Y
797L	500	5%	0.2 - 3.7k	18	side, R6	120	1/4-28	0.2 µg	10	148	Y
799LF	500	5%	0.1 - 2.5k	18	top, R6	120	1/4-28	1.0 µg	10	205	
<b>High frequency accelerometers</b>											
712F	100	10%	3.0 - 25K	>45	side, integral cable	120	8-32	10 µg	60	35	Y
726/726T	100	5%	0.6 - 15K	32	side/top, R1	120	10-32	0.8 µg	80	30-34	
732A/732AT	10	5%	0.5 - 25K	60	side/top, R1	120	10-32	3.0 µg	500	13	
736/736T	100	5%	2.0 - 25K	60	side/top, R1	120	10-32	2.0 µg	50	13	
997	10	10%	0.5 - 29K	50	side, integral cable	125	8-32	9.0 µg	600	35	
<b>Triaxial accelerometers</b>											
993A	100	10%	2.0 - 2k	N/A	side, R9W	120	1/4-28	2.0 µg	50	88	
993B series	25, 50 or 100	10%	Z: 2 - 10k X,Y: 2 - 7k	N/A	top, integral cable	120	10-32	3.2, 2.0, 1.4 µg	40	134	Y
993B-7-M12	199	10%	Z: 2 - 10k X,Y: 2 - 7k	>35	top, M12	120	10-32	10, 2.0, 1.5	60	124	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	Haz area option
			Hz	kHz		° C		/VHz	g peak	grams	
<b>Piezovelocity transducers</b>											
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
793VR- radiation resistant	100 mV/in/sec	10%	2.0 - 7k	15	top, R6	120	1/4-28	1.0 µin/sec	50 in/sec	133	
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	Y
<b>High temperature accelerometers</b>											
376/CC701	100 mV/g	10%	1.0 - 12k	30	top R1/ inline, R6F	260	1/4-28	5 µg	80	90	Y
793-6	100 mV/g	10%	1.0 - 12k	20	top, R6	150	1/4-28	5 µg	80	90	
797-6	100 mV/g	10%	1.0 - 11k	20	side, R6	150	1/4-28	5 µg	80	90	Y
HT780A	100 mV/g	5%	0.5 - 14k	30	top, R6	150	1/4-28	2 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	
<b>4-20 mA vibration output sensors</b>											
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
PC420D 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 - 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	Y
PCH420	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
<b>Dual output vibration (4-20 mA) and temperature sensors</b>											
PC425 series acceleration, velocity RMS and peak	4-20 mA	5%	4.0 - 2k	N/A	side, R19	85	1/4-28	N/A	5, 10, 20 g	320	
PC427 series acceleration, velocity RMS and peak	4-20 mA	5%	4.0 - 2k	N/A	side, integral cable	85	1/4-28	N/A	5, 10, 20 g	320	
<b>Dual output vibration and temperature sensors</b>											
786T	100 mV/g	5%	0.5 - 12k	30	top, R6G	120	1/4-28	5 µg	60	90	Y
793T-3	100 mV/g	5%	0.5 - 15k	24	top, R6G	120	1/4-28	5 µg	80	115	
797T-1	100 mV/g	5%	1.0 - 12k	26	side, R6G	120	1/4-28	5 µg	80	135	
797LT	100 mV/g	5%	0.2 - 3.7k	18	side, R6G	120	1/4-28	5 µg	10	160	
<b>Seismic sensors</b>											
731A	10 V/g	10%	0.05 - 500	0.75	top, R6	65	3/8-16	0.004 µg	0.05	670	
731A/P31	10 - 1,000 V/g	10%	0.05 - 500	0.75	BNC	65	3/8-16	0.004 µg	0.05	670	
731-207	10 V/g	10%	0.2 - 1.3k	2.4	top, R1	80	10-32	0.03 µg	0.05	50	
<b>Underwater accelerometers</b>											
746	100 mV/g	5%	1.0 - 15k	30	top, integral cable	80	10-32	0.8 µg	50	45	
754	100 mV/g	10%	2.0 - 25k	60	side, integral cable	80	Adhesive	4.0 µg	250	4	

# Meggitt Sensing Systems

## The world's leading provider of high performance sensing and condition monitoring solutions for extreme environments

Meggitt Sensing Systems, a Meggitt group division, has operated through its antecedents since 1927 under the names of Endeveco, Wilcoxon Research, Sensorex, ECET, Vibro-Meter, Lodge Ignition and Ferroperm Piezoceramics. Today their operations are integrated under one strategic business unit called Meggitt Sensing Systems to provide complete systems with these renowned product brands from a single supply base.

We are leaders in the aerospace, power generation, nuclear, oil and gas, industrial, laboratory measurement, automotive and medical markets: in fact anywhere where sensing and condition monitoring are deployed in difficult environments. Meggitt Sensing Systems employs a wide array of technologies, including piezoelectric, piezoresistive, capacitive, resistive, inductive, magnetic, microwave and optical, to address our customers' key challenges in high temperature, high shock, limited space and weight, biocompatibility and communications.

With our nine development and manufacturing sites located in Switzerland, France, the UK, Denmark, Germany and the USA, we have unmatched capabilities to deliver more critical sensing solutions. An extensive sales and support network extends across Europe, Asia and the Americas, to serve our customers worldwide.

## Monitoring and sensing solutions for high value machinery

Our facilities in Fribourg, Switzerland, in Rugby and Basingstoke, UK, in Angoulême, France and in Londonderry, New Hampshire, were all formerly known as Vibro-Meter. These facilities specialize in ignition, sensing and condition monitoring equipment for gas and steam turbines, hydro turbines and auxiliary machines. Our facility in Basingstoke supplies integrated sensor packages and sensors for aerospace.

## Industrial sensing and simplified condition-based maintenance

Our facility in Germantown, Maryland, formerly known as Wilcoxon Research, specializes in highly reliable industrial vibration sensors for condition monitoring and predictive maintenance applications. The facility produces a wide range of vibration sensors for industrial, energy, process control, military and test and measurement applications.

## Displacement sensors and inertial systems

Our facility in Archamps, France, formerly known as Sensorex, specializes in linear and rotary displacements, inertial sensors and systems, hybrids and (micro) electronics for aerospace and industrial markets.

## Sensing for challenging measurement applications

Our facility in Irvine, California, formerly known as Endeveco, specializes in mission-critical measurements in the aerospace, defense, automotive, industrial and medical sectors.

## Piezoceramic components production

Our facility in Kvistgaard, Denmark, formerly known as Ferroperm Piezoceramics, specializes in manufacturing advanced piezoelectric ceramic components and integrated piezoelectric thick film devices.



## Service and support

Meggitt expert engineers, knowledgeable technicians and responsive, well-informed customer support team are all here to help you make the most of our reliable vibration monitoring products and accessories for your application and environment.

From start to finish our experts, with decades of industry experience, are ready to guide and support you. When you purchase Wilcoxon Research® product range of vibration sensors and accessories, you should feel completely confident that you have a dependable supplier staffed by a dedicated team.



### Calibration

All Wilcoxon Research® sensors are fully calibrated before they leave our factory. Our high-quality sensors maintain stable performance and typically do not require calibration over the life of the product. For certain applications requiring additional calibration, our experienced team provides calibrations conforming to NIST standards in accordance with ISO 9001:2000.



### Quality approvals

Our quality policy guides everything we do, from supplier relationships and customer satisfaction, to product development, environmental health and safety. We strive to supply on time, reliable, safe, cost-effective and innovative products and services. If you have any quality certificates and product certifications questions, please contact us.



### Custom-designed products

Meggitt's capabilities provide the perfect fit for your unique vibration application. We offer custom vibration monitoring solutions for many industries and important applications. If you have a unique vibration application, our experienced engineering team and research scientists can work with you to produce a new and customized product to meet your vibration monitoring need. Call 1-800-WILCOXON to discuss your requirement with one of our experts, or email your requirement directly to CustomSolutions@meggitt.com.



### Product modification

Meggitt offers thousands of standard Wilcoxon Research® range of products for a variety of vibration applications. Our technical services department performs simple to complex modifications to existing products. With our extensive expertise and technical advice, we provide complete monitoring solutions from rapid prototypes to manufacturing and delivery. Common product modifications include packaging, output sensitivity, connector type, frequency response, custom bias output voltage, output type, added temperature sensor, radiation resistance, underwater protection. Products for customization include industrial accelerometers, 4-20 mA sensors and transmitters, cable assemblies, vibration shakers, hazardous area sensors, hydrophones, underwater and seismic sensors, enclosures including switch, junction and termination boxes.



### Repair

Wilcoxon Research® product range of sensors have the highest mean time between failure (MTBF) in the industry - greater than 25 years. We stand by each of the tens of thousands of units currently installed and monitoring vibration of critical machines running important manufacturing processes across industries around the world. If any product should ever fail within five years, we will repair or replace it at no charge. In the unlikely event that a repair is needed, our experienced RMA professionals are ready to help. We want to ensure your sensor is everything that you need to get the job done. Remember we are always a convenient email or phone call away. Contact our customer service team for a Return Material Authorization (RMA) number.

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smart engineering for  
extreme environments