MEGGITT smart engineering for extreme environments



Wilcoxon Research products short-form catalog

Sensors and solutions from Meggitt Sensing Systems

Meggitt Sensing Systems

Wilcoxon Research vibration sensors and solutions

Short-form catalog



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Industry-leading sensors

Meggitt Sensing Systems is a leading innovator and manufacturer of vibration sensing products and systems. Meggitt's Wilcoxon Research products offer world-class vibration sensors and systems to customers with industrial applications. Our reputation for industry-leading product quality and reliability is backed by more than 50 years of innovation and experience.

The early detection of changes in the vibration signature of machinery can be critical in preventing damage to equipment and the resulting costly delays. Meggitt Sensing Systems makes hundreds of Wilcoxon Research products used primarily for industrial condition monitoring. The quality and performance of Wilcoxon Research sensors ensure accurate and timely detection of the changing vibration signature, enabling condition based maintenance of both critical and balance of plant assets.

One sensor for life

Meggitt's Wilcoxon Research sensors offer affordable reliability for industrial condition monitoring. Wilcoxon Research vibration monitoring products have extremely low failure rates and long-term, consistent performance due to ISO-9001-certified manufacturing operations that exceed the industry's best practices. Hermetic welds are verified by helium leak testing to eliminate contaminants from entering the sensor and ensure a long sensor life. The highest quality 316L stainless steel is used to withstand harsh plant environments. Sensing crystals undergo piezoelectric stabilization to minimize signal drift over the long life of the sensor. Electromagnetic and radio frequency interference are blocked so the sensor only outputs an accurate vibration signal.

Smart engineering for extreme environments

Wilcoxon Research products offer the widest selection of hazardous area rated sensors for industrial condition monitoring. Options include top exit, side exit and integral cable sensors; dynamic vibration output or 4-20 mA overall vibration output; standard and compact size sensors; dual output of vibration and temperature data; Class I Division 1 (Zone 0) and Class I Division 2 (Zone 2) ratings, and explosion proof models. FM, CSA, ATEX, IECEx, and other certifications make Wilcoxon Research sensors available for use in hazardous areas around the world (see page 13).

Custom engineering

Meggitt Sensing Systems is dedicated to developing new technologies and vibration solutions. Whether it is a custom product to meet a specific application or new materials or design technology, we bring over 50 years of experience as a company known for its innovation and quality. Meggitt Sensing Systems has hundreds of Wilcoxon Research standard products that meet our customers' most common needs, and our experienced engineers and research scientists will also work with you to develop a custom product. These "specials" are designed and built using the same superior workmanship you've come to expect in all Wilcoxon Research products. Whether you need minor modifications to a standard product or an entirely new sensor, <u>Wilcoxon provides the technology to enable your success</u>.



Why Wilcoxon Research?

- Industry standard for quality vibration sensors, at a competitive price
- Strategic supplier to many major vibration system OEMs
- World-class customer service and support
- Over 50 years of innovation and experience in vibration sensors and systems

Sensors | General purpose accelerometers

General purpose accelerometers

- Vibration measurements across a broad frequency range for monitoring most industrial machinery
- Predictive maintenance systems for all rotating equipment to include:
 - Motors, fans, pumps
 - Moderate speed gearboxes
 - Machine tool spindles
 - Paper machine rolls
 - Compressors



Model	786A	786A-M12	786F	787A	787B
Description	Standard accelerometer	Standard accelerometer with M12 connector	Integral cable accelerometer	Standard side exit accelerometer	Standard side exit accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Tolerance (±)	5%	5%	5%	5%	10%
Frequency response @ ±3dB	0.5 - 14,000 Hz	0.5 - 14,000 Hz	0.5 - 13,000 Hz	0.7 - 10,000 Hz	0.7 - 10,000 Hz
Resonance frequency	30 kHz	30 kHz	30 kHz	22 kHz	22 kHz
Electrical noise @ 100 Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C	120° C
Bias output voltage	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 captive screw
Output connector	2 pin, MIL-C-5015 style	4 pin M12 style	Integral cable	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style
Hazardous area options and additional information	Optional certifications: CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0, IECEx Class I Zone 0 and Class I Zone 2.	New product!	Optional certifications: CSA Class I Div 1 and Class I Div 2, ATEX Class I Zone 0, IECEx Class I Zone 0 and Class I Zone 2. Submersible down to 30 feet (10 meters).	Optional certifications: CSA Class I Div 1 and Class I Div 2, ATEX Class I Zone 0, IECEx Class I Zone 0 and Class I Zone 2. Optional M6 and M8 captive mounting screw. Optional M12 connector.	New product! Optional M6 and M8 captive mounting screw.

Sensors | General purpose accelerometers

Industries served

- Machinery
- Pharmaceutical
- Food and beverage
- High tech fabrication
- Water and waste water
- Petrochemical
- Pulp and paper
- Power generation







Model	787F	785A	780A	780B	780C
Description	Side exit integral cable accelerometer	Compact side exit accelerometer	Compact accelerometer	Compact accelerometer	Compact accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Tolerance (±)	5%	10%	5%	10%	15%
Frequency response @ ±3dB	0.7 - 10,000 Hz	1 - 12,000 Hz	0.4 - 14,000 Hz	0.4 - 14,000 Hz	0.4 - 14,000 Hz
Resonance frequency	22 kHz	30 kHz	30 kHz	30 kHz	30 kHz
Electrical noise @ 100 Hz	5 µg/√Hz	6 µg/√Hz	4 µg/√Hz	4 µg/√Hz	4 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C	120° C
Bias output voltage	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	1/4-28 captive screw	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole
Output connector	integral cable	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style
Hazardous area options and additional information	Optional M8 and M6 captive mounting screw, low profile. Submersible down to 30 feet (10 meters).	Upturned standard 2 pin, MIL-C-5015 connector for easy installation in the field.	Convenient size for walk around programs and permanent mount applications. Optional certifications: CSA Class I Div 1 and Class I Div 2, ATEX Class 1 Zone 0, IECEx Class I Zone 0 and Class I Zone 2.	Convenient size for walk around programs and permanent mount applications.	Convenient size for walk around programs and permanent mount applications, excellent value.

Sensors | High performance accelerometers

The 793 and 797 accelerometer series offer a variety of high performance options

- General purpose vibration sensors with additional over-voltage protection
- High temperature vibration sensors for extra protection in hot industrial environments
- Low frequency accelerometers to monitor slow turning machinery like wind turbines and cooling towers
- PiezoVelocity sensors internally integrated to output velocity
- Dual output sensors to measure vibration and temperature



Model	793	793-6	793L	793V	793T-3
Description	Premium accelerometer	High temperature, internally amplified accelerometer FireFET®	Premium low frequency accelerometer	Premium PiezoVelocity® transducer	Premium dual output vibration and 10mV/°K temperature sensor
Sensitivity	100 mV/g	100 mV/g	500 mV/g	100 mV/ips 3.94 mV/mm/s	100 mV/g
Tolerance (±)	5%	10%	5%	10%	5%
Frequency response @ ±3dB	0.5 - 15,000 Hz	1 - 12,000 Hz	0.2 - 2,300 Hz	2.5 - 7,000 Hz	0.5 - 15,000 Hz
Resonance frequency	25 kHz	20 kHz	15 kHz	15 kHz	24 kHz
Electrical noise @ 100 Hz	5 µg/√Hz	10 µg/√Hz Թ 150° C	0.2 µg/√Hz	1 µin/sec/√Hz	5 µg/√Hz
Max temperature	120° C	150° C	120° C	120° C	120° C
Bias output voltage	12 VDC	11 VDC @ 150° C	10 VDC	10 VDC	12 VDC
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole
Output connector	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	3 pin MIL-C-5015 style
Hazardous area options and additional information	Optional certifications: FM Class I Div 1, CSA Class I Div 1, ATEX Class I Zone 0. Optional radiation rated units.	Ideal for industrial high temperature applications such as chemical reactors, steam turbines, metals processing, and paper machine dryer section.	Optional certifications: FM Class I Div 1, CSA Class I Div 1.	Optional certifications: FM Class I Div 1, CSA Class I Div 1, ATEX Class I Zone 0.	Vibration and temperature data may be important when monitoring paper machines, pumps, motors, compressors, and fans.

Sensors | High performance accelerometers

The exceptional features of the 793 and 797 series have made these sensors the industry standard for performance and reliability for more than a quarter of a century

- More than 25 years of reliable installation in the field
- Helped to pioneer CBM in industrial settings
- Miswiring protection prevents damage to the sensor if the power supply is not properly attached





Model	797	797-6	797L	797V	797T-1
Description	Premium center mount accelerometer	High temperature, center mount accelerometer FireFET®	Premium low frequency center mount accelerometer	Premium center mount PiezoVelocity® transducer	Premium dual output, center mount, vibration and 10mV/°K temperature sensor
Sensitivity	100 mV/g	100 mV/g	500 mV/g	100 mV/ips 3.94 mV/mm/s	100 mV/g
Tolerance (±)	5%	10%	5%	10%	5%
Frequency response @ ±3dB	1 - 12,000 Hz	1 - 11,000 Hz	0.2 - 3,700 Hz	1.6 - 7,000 Hz	1 - 12,000 Hz
Resonance frequency	26 kHz	20 kHz	18 kHz	18 kHz	26 kHz
Electrical noise @ 100 Hz	5 µg/√Hz	10 µg/√Hz Թ 150° C	0.2 µg/√Hz	0.8 µin/sec/√Hz	5 µg/√Hz
Max temperature	120° C	150° C	120° C	120° C	120° C
Bias output voltage	12 VDC	11 VDC @ 150° C	10 VDC	10 VDC	12 VDC
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	1/4-28 captive screw	1/4-28 captive screw	1/4-28 captive screw	1/4-28 captive screw	1/4-28 captive screw
Output connector	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	3 pin MIL-C-5015 style
Hazardous area options and additional information	Optional certifications: FM Class I Div 1, CSA Class I Div 1, ATEX Class I Zone 0. Optional radiation rated units.	Low profile sensors ideal for industrial high temperature applications such as chemical reactors, steam turbines, and paper machine dryer section.	Optional certifications: FM Class I Div 1, CSA Class I Div 1, ATEX Class I Zone 0.	Optional certifications: FM Class I Div 1, CSA Class I Div 1.	Vibration and temperature data may be important when monitoring paper machines, pumps, motors, compressors, and fans.

Sensors | Specialty accelerometers

Wilcoxon Research specialty accelerometers enable vibration monitoring in a variety of industrial settings and applications

- High frequency accelerometers for monitoring machinery with high frequency gear mesh or early bearing failure
- High output sensors provide a wide broadband frequency response for multi-use applications
- High temperature vibration sensors for extra protection in hot industrial environments
- Low frequency accelerometers to monitor slow turning machinery like wind turbines and cooling towers



Model	997	376/CC701	786-500	799LF	731A
Description	High frequency ring type accelerometer with integral cable	High temperature accelerometer and in-line charge amplifier system	High output accelerometer	Low frequency accelerometer	Ultra quiet, ultra low frequency seismic accelerometer
Sensitivity	10 mV/g	100 mV/g	500 mV/g	500 mV/g	10 V/g
Tolerance (±)	10%	10%	5%	5%	10%
Frequency response @ ±3dB	0.5 - 29,000 Hz	1 - 15,000 Hz	0.2 - 14,000 Hz	0.1 - 2,500 Hz	0.05 - 450 Hz
Resonance frequency	>45 kHz	30 kHz	30 kHz	18 kHz	750 Hz
Electrical noise @ 100 Hz	9 µg/√Hz	7 µg/√Hz	1.5 µg/√Hz	1 µg/√Hz	0.004 µg/√Hz
Max temperature	125° C	260° C	120° C	120° C	65° C
Bias output voltage	12 VDC	12 VDC	12 VDC	8 VDC	9 VDC
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	8-32 captive screw	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 tapped hole	3/8-16 tapped hole
Output connector	Integral cable	Male BNC (CC701)	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style
Hazardous area options and additional information	High frequency applications such as high speed machine tool spindles and compressors.	Optional certification: FM Class I Div 1.	High output broadband frequency response minimizes electronic noise and maximizes voltage output to provide a stronger, cleaner signal in low frequency and high speed applications.	Low frequency applications such as wind turbine monitoring, machine tool, paper machines, slow speed agitators, semiconductor lithography, and structural testing.	Seismic monitoring applications such as earthquake detection, geophysics, geothermal development, and structural analysis. Optional P31 power amplifier system.

Sensors | Specialty accelerometers

- Seismic accelerometers measure vibration to the sub micro-g level
- Underwater accelerometers for deep water vibration measurements
- Biaxial and triaxial sensors measure vibration in multiple perpendicular directions
- Zerkometer $\ensuremath{^{\text{TM}}}$ mounts where zerk fittings exist to grease bearings





Model	731-207	746	757	993B-7	222A
Description	Low frequency and low noise seismic accelerometer	Integral cable underwater accelerometer	Biaxial low profile, underwater accelerometer	Triaxial accelerometer	Zerkometer™ accelerometer with grease fit mount
Sensitivity	10 V/g	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Tolerance (±)	10%	5%	10%	10%	10%
Frequency response @ ±3dB	0.2 - 1,300 Hz	1 - 15,000 Hz	1 - 4000 Hz	2 - 7,000 Hz	0.5 - 8,500 Hz
Resonance frequency	2.4 kHz	30 kHz	30 kHz	40 kHz	23 kHz
Electrical noise @ 100 Hz	0.03 µg/√Hz	0.8 µg/√Hz	1 µg/√Hz	1.4 µg/√Hz	5 µg/√Hz
Max temperature	80° C	80° C	80° C	120° C	120° C
Bias output voltage	10 VDC	10 +2 VDC	12 VDC	11 VDC	12 VDC
Grounding	Case grounded	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	10-32 tapped hole	10-32 tapped hole	Two 10-32 x 7/16 screws	10-32 captive screw	1/8-27 NPT integral stud
Output connector	10-32 coaxial	Integral cable	Stainless steel braided integral cable	Integral armored cable	2 pin MIL-C-5015 style
Hazardous area options and additional information	Seismic monitoring applications such as earthquake detection, geophysics, geothermal development, and structural analysis. Optional radiation rated units.	Designed for continuous submersion down to 1,500 feet (450 meters).	Designed for continuous submersion down to 1,500 feet (450 meters).	Optional certification: CSA Class I Div 1. Versions with sensitivities of 25 mV/g and 50 mV/g available.	Designed to be mounted where zerk fittings exist. Usually located very close to the bearing, they provide an ideal location for accelerometers to acquire dynamic vibration data.

Sensors | 4-20 mA Loop Powered Sensors (LPS[™])

- Output signal proportional to overall vibration, peak, RMS, peak-to-peak, or true peak-to-peak, within frequency range
- Vibration data for direct interface to existing PLC, DCS, or SCADA networks
- Process control applications
- Vibration trending for basic condition based maintenance applications
- Online vibration calculator to compare sensor output to the ISO 10816 vibration standard
- Applications include motors, fans, pumps, gearboxes, and reciprocating compressors
- Optional dual output of dynamic vibration data







Model	PC420	PCC421	PCC423	PC425	PC427
Description	LPS, top exit connector	LPS, side exit connector	LPS, side exit integral cable	LPS, with temperature sensor and side exit connector	LPS, with temperature sensor and side exit integral cable
Loop output options	RMS, peak, true peak, true peak to peak	RMS, peak	RMS, peak	RMS, peak, true peak	RMS, peak, true peak
Signal output scaling options	Acceleration, velocity, or displacement	Acceleration, velocity	Acceleration, velocity	Acceleration, velocity	Acceleration, velocity
Full scale, acceleration versions	5, 10, 20, 50 g	5, 10, 20 g	5, 10, 20 g	5, 10, 20 g	5, 10, 20 g
Full scale, velocity versions	0.5, 1.0, 2.0, 3.0, 5.0 ips	0.5, 1.0, 2.0, 3.0, 5.0 ips	0.5, 1.0, 2.0, 3.0, 5.0 ips	0.5, 1.0, 2.0, 3.0, 5.0 ips	0.5, 1.0, 2.0, 3.0, 5.0 ips
Frequency range, ±10%	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz
Frequency range, ±3dB	Accel: 1 Hz - 2.0 kHz Velocity: 3.5 Hz - 2.0 kHz	Accel: 1 Hz - 2.0 kHz Velocity: 3.5 Hz - 2.0 kHz	Accel: 1 Hz - 2.0 kHz Velocity: 3.5 Hz - 2.0 kHz	4 Hz - 2 kHz	4 Hz - 2 kHz
Temperature output	-	-	-	10 mV/°K	10 mV/°K
Max temperature	105° C*	105° C	105° C	85° C	85° C
Grounding	Case isolated	Case isolated	Case isolated	Case isolated	Case isolated
Mounting	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 captive screw	1/4-28 captive screw	1/4-28 captive screw
Output connector	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style or 4 pin M12 style	Integral cable	6 pin MIL-C-5015 style	Integral cable
Hazardous area options and additional information	40 mils (1.0 mm) full scale on displacement version. Optional certifications: CSA Class I Div 1 and Explosion Proof, ATEX Class I Zone 0 and Explosion Proof. *Specifications for some models may differ, check data sheet	Optional certifications: CSA Class I Div 1, ATEX Class I Zone 0.	Optional certifications: CSA Class I Div 1, ATEX Class I Zone 0.	Vibration and temperature data may be important when monitoring paper machines, pumps, motors, compressors, and fans.	Vibration and temperature data may be important when monitoring paper machines, pumps, motors, compressors, and fans.

The Intelligent Vibration Transmitter series

Meggitt's Intelligent Transmitter series starts with a vibration transmitter to convert the dynamic sensor data to a 4-20 mA signal proportional to overall vibration. This 4-20 mA signal interfaces directly with a PLC, DCS, or SCADA system for cost effective 24/7 condition based maintenance. Pair the Intelligent Transmitter with the programmable iT Alarm for continuous alarming capability or add the iT Communication module to interface with a PC or laptop. The Intelligent Transmitter series, complete with power accessories and mounting options, is ideal for balance of plant monitoring or critical assets that currently go unmonitored.

iT Transmitter

- Converts traditional accelerometer signals to 4-20 mA output in terms of acceleration, velocity, or displacement
- Output of RMS or peak, or Wilcoxon's exclusive true peak or true peak-to-peak
- Available in English or metric units
- Custom ordered with low pass and high pass filters to suit your application
- Filter settings can be modified in the field to address your changing needs
- Buffered dynamic output available for more extensive analysis
- A portable vibration analyzer can be attached to the BNC on the front of the unit to analyze the raw vibration data
- CE approved

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, sensor BOV level
- Front panel LED readout and push button face
- Programmable delay timers prevent false alarms and hysteresis levels prevent untimely resetting
- Automatically exchanges data with the iT Transmitter via a TBUS connection, eliminating the need for external wiring between units
- CE approved

iT Series Communication Module

- Transmits input from the iT Transmitter to a computer or laptop via a standard RS232 serial interface
- Trend vibration data using the included VibeLink[™] program or import the digital data stream into any standard spreadsheet or data logging program
- Automatically exchanges signal with the iT Transmitter via a TBUS connection, eliminating the need for external wiring between units







Cables and connectors

The cables, connectors, and mounting accessories featured are a selection of the most popular Wilcoxon Research products. A more extensive selection of accessories can be found at www.wilcoxon.com

- Multiconductor cables
- Radiation resistant cables
- Low noise cables
- BNC connectors
- Multi-socket connectors
- Microdot connectors
- Right angle connectors



Model	R6Q	R6W
Description	MIL-C-5015 style 2 socket	MIL-C-5015 style 2 socket
Max temperature	200° C	125° C
Field assembly	Yes	No, molded
Ingress protection	IP68	IP67









Model	J88C	J9F	J9T2	J9T2A	J10
Description	Twisted pair, shielded, black Polyurethane jacket, coiled with 6" straight ends	Twisted pair, foil shielded with drain wire, red Teflon® jacket	Twisted pair, shielded, white Tefzel® jacket	Twisted pair, shielded, yellow Teflon® jacket	Twisted pair, shielded, gray Enviroprene® (Santoprene®) jacket
Max temperature	80° C	200° C	150° C	200° C	125° C
Diameter (inches)	0.175	0.125	0.190	0.190	0.190
pF/ft	30	51	27	27	30

MaxFlex[™] cable assemblies for data collectors

MaxFlex[™] cables assemblies are available as replacements for most industrial data collectors, including those from SKF, Emerson (CSI), Rockwell (Entek IRD), and Commtest.

- Extended life
- Reinforced for strength and maximum flexibility
- Pull tested to over 100-plus pounds
- Excellent EMI/RFI shielding
- Optional safety connector breaks away if the sensor or cable becomes entangled at the monitoring point



Mounting and accessories

Model	Image	Drawing	Description
B3		0.42	Rare earth magnetic mounting base, 1/4-28 stud, non-isolated, 0.95" diameter, 40 lbs force. B3-1 available with 1/4-28 tapped hole.
В5		1.50° → removable 1/4-28 mounting stud 1.38° 1.38° 0.75° ← ↓	Two-pole magnetic mounting base, 1.5" diameter, 30 lbs force. Removable mounting stud for use with bolt thru sensors. Can be used with SF6 mounting stud or SF3 adaptor stud (10-32 to 1/4-28).
B13	WILDTON WILDTON		Two pole magnetic mounting base, 1" diameter, 35 lbs force. Designed with a high pull strength, knurled edges and a convenient- to-handle size, for walk around programs and permanent mount applications. 1/4-28 tapped hole fits a variety of threaded stud adapter sizes such as M6, M8, 3/8, and 10-32 making it compatible with most industrial accelerometers. Alternative model: B12 with .875" diameter and 20 lbs force.
SF6			SF6 mounting stud, 1/4-28 UNF both ends, stainless steel, recommended mounting torque 24 in-lbs. SF6M mounting stud, 1/4-28 UNF to M8 x 1.25 (metric), stainless steel, recommended mounting torque 33 Nm. SF6M-1 mounting stud, 1/4-28 UNF to M6 x 1.00 (metric), stainless steel, recommended mounting torque 9 Nm.
SF8		1/4-28 UNF-2A 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Cementing pad, 1/4-28 integral stud, 1" diameter, stainless steel, recommended mounting torque 24 in-lbs. SF8-2 includes tapped hole and key notch for consistent axis orientation; use with 993B series triaxial accelerometers.
SF11	San Andrews		Cementing pad, 1" diameter provides surface for sensor attachment using a B3 style magnetic mounting base.
SF21			Isolator mounting base, 1" hex across the flats, 1/4-28 to 1/4-28 integral stud. Protects a vibration sensor from up to 1,500 Volts of electricity by electrically isolating it from the case of the machine. Alternative models: SF22 with 1" diameter and 1/4-28 to M8 integral stud, SF23 with 1.125" diameter and 1/4-28 to 1/4-28 integral stud, SF24 with 1.125" diameter and 1/4-28 to M8 integral stud.
TC1B			Triaxial mounting cube, 1" on each side. Three 1/4-28 tapped holes fits a variety of threaded stud adapter sizes such as M6, M8, 3/8, and 10-32 making it compatible with most industrial accelerometers.
ST101		N/A	Spot face tool, 1.25" diameter, pilot drill for 1/4-28 hole. Drill depth adjustable.
VERSIL406		N/A	Mounting epoxy. Package contains both epoxy components in a single, enclosed plastic bag. User removes red divider to allow mixing. Maximum temperature 149°C/300°F.

Termination boxes

By providing a convenient termination for cables and easy connectivity, these boxes enable safe and fast data collection when using portable acquisition systems. Switch boxes are a cost-effective method to manage data from a network of permanently mounted accelerometers.

Features unique to Wilcoxon Research switch and termination boxes

- Differential switching to achieve greater noise immunity
- Radio frequency interference filtering
- NEMA 4 or 4X ratings
- Optional bias output meter
- Optional cord grips/conduit fittings



VL12BL

Model	CB2	CB4	JB06-1H	VL6B/VL12B	VL Expandable
Channels	2	4	6	6/12	12-48
Output	Single BNC per channel	Single BNC per channel	Single BNC per channel	Switch selectable	Switch selectable

Power and signal conditioning

Accelerometers require a constant current DC power source, also known as IEPE powering.



P703B

Model	P702B	P703B	P704B
Channels	1	3	1
Power	(3) 9 VDC	(3) 9 VDC	(3) 9 VDC
Filter	Selectable	-	-
Gains	1, 10, or 100	-	-
Output	Acceleration or velocity	Acceleration	Acceleration

Hazardous area sensors and products

Meggitt's Wilcoxon Research line of vibration sensors includes a large selection of hazardous area rated sensors for industrial condition monitoring. With **FM, CSA, ATEX, IECEx** and other certifications, Wilcoxon Research sensors are available for use in hazardous areas around the world.

Class I Division 1 (Zone 0) options

The following sensors have optional **FM** or **CSA** Intrinsically Safe certification, for use in the US and Canada, and **ATEX** certification, for use worldwide.

- 376/CC706 general purpose, high temperature operation up to 500 °F (260 °C)
- 766* general purpose, bayonet connector
- 780A general purpose, compact size
- 786A general purpose
- 786F general purpose, integral cable
- 786T general purpose, dual output of vibration and temperature data
- 787A general purpose, side exit
- 787A-M8 general purpose, side exit, M8 captive mounting stud
- 793* general purpose
- 793L low frequency
- 793V* velocity integrated
- 797* general purpose, side exit
- 797L* low frequency, side exit
- 797V velocity integrated, side exit
- 993B-5** 25 mV/g triaxial accelerometer
- 993B-6** 50 mV/g triaxial accelerometer
- 993B-7** 100 mV/g triaxial accelerometer
- PC420A 4-20 mA output, overall acceleration
- PC420V 4-20 mA output, overall velocity
- PC421A 4-20 mA output, overall acceleration, side exit
- PC421V 4-20 mA output, overall velocity, side exit
- PC423A 4-20 mA output, overall acceleration, side exit integral cable
- PC423V 4-20 mA output, overall velocity, side exit integral cable
- *These models are also available with **SIMTARS** certification for use in Australia.

** These models are only available with CSA certification for operation in Canada.

Class I Zone 0 options

The following sensors have optional **IECEx** certification, for use internationally.

- 780A general purpose, compact size
- 786A general purpose
- 786F general purpose, integral cable
- 786T general purpose, dual output of vibration and temperature data
- 787A general purpose, side exit
- 787A-M8 general purpose, side exit, M8 captive mounting stud

Class I Division 2 (Zone 2) options

The following sensors have optional certification to be nonincendive in Class I Division 2 (Zone 2) hazardous areas from **FM** or **CSA**, for use in the US and Canada; **ATEX** for use in Europe; and **IECEx**, for use internationally.

- 780A general purpose, compact size
- 786A general purpose
- 786F general purpose, integral cable
- 786T general purpose, dual output of vibration and temperature data
- 787A general purpose, side exit
- 787A-M8 general purpose, side exit, M8 captive mounting stud



To view specifications for these models, visit the quick view sensor chart on pages 16 and 17. When ordering or requesting a quotation, tell your customer care and service representative that you want a hazardous area certified version of the model. The base versions of the models do not carry any certifications.

Vibration monitoring solutions

PVM 100 Portable Vibration Meter

On hand when you need it

Carry this highly portable vibration meter in your shirt pocket. Its one-button operation switches between acceleration, velocity, and displacement – or click and hold for a digital reading. The PVM 100 is supplied in a convenient carrying case with all the necessary accessories:

- Portable vibration meter
- 780C accelerometer
- Connection cable
- PT2 probe tip (stinger)
- B3 magnet mount
- SF6 mounting stud
- Available in English or metric units



The Sensor Solution Kit

The SK104 comes complete with sensors, cabling, mounting and termination box

This 15-piece kit provides the all-in-one solution you've been asking for, and off the shelf delivery:

- (4) 786A, 100mV/g, top exit accelerometers
- (4) R6Q-0-J9T2A-32, 32 foot (10 meter) cable assemblies
- CB4, 4 channel termination box
- ST101, spot facing tool
- (4) SF8, cement mounting pads
- VERSIL406, mounting epoxy

Includes mounting instructions and technical notes.



Customer service

Our customer care and service department is available to assist you with everything from product selection to quote preparation to order processing and fulfillment to aftermarket support. Help is available directly from our factory location by one of our customer care and service representatives. You can contact us in the following ways:

Mail	20511 Seneca Meadows Parkway						
	Germantown, Maryland 20876						
Phone	1-800-WILCOXON (945-2696)						
	301-330-8811						
Fax	301-330-8873						
Email	wilcoxon@meggitt.com						
Website	www.wilcoxon.com						

Alternatively, local representation is available worldwide from a network of independent manufacturer's representatives, and our authorized resellers. Please contact your customer care and service representative or visit our website to locate the representative or reseller closest to you.

To assist you with product selection, your customer care and service representative or local representative or reseller will thoroughly review your needs with you to help you decide what combination of sensors, cables, junction boxes, accessories, or other products will best suit your application.

For complex applications requiring advanced technical capabilities, highly qualified applications engineers are available to discuss your needs in more detail and provide suitable recommendations. Contact Wilcoxon technical support at wilcoxon.techasst@meggitt.com.

We strive to provide solutions, not just sell sensors.

Online resources - www.wilcoxon.com

Meggitt's www.wilcoxon.com website is a valuable resource for both vibration and process control engineers. You will find everything from product information to industry best practices at www.wilcoxon.com.

Product information

- Online searchable and downloadable catalogs
- Detailed data sheets for a wide range of products
- Product descriptions and images

Company information

- Sales representatives across the world
- Calendar of events
- Press releases

Industry tools

- Applications solutions
- Technical notes
- A downloadable vibration calculator
- 4-20 mA converter allows easy comparison between sensor output and published ISO standards
- Frequently asked questions
- Product presentations

Export information

Consistent with its multilateral commitments to the European Union and other nations, the United States regulates the export of US origin items and technical data. In order for Meggitt to fulfill your request, Meggitt is required to obtain specific information about the end use of all exports to ensure compliance with these regulations. Your order cannot be processed without this information. Meggitt is committed to outstanding corporate citizenship in our markets.

Model	Sensitivity	Sensitivity tolerance ±	Frequency response @ ±3db	Resonance	Exit type / connector	Max temp	Mounting thread	Psd noise @ 100 Hz	Acceleration range	Weight	Haz area option	Page
			Hz	kHz		С		/√Hz	g peak	grams		
General purpose accele	rometers											
775A	100 mV/g	20%	0.5 - 10k	26	top, R35	120°	1/4-28	5 µg	80	45		-
780A NEW!	100 mV/g	5%	0.4 - 14k	30	top, R6 2 pin	120°	1/4-28	5 µg	80	62	Y	3
780B NEW!	100 mV/g	10%	0.4 - 14k	30	top, R6 2 pin	120°	1/4-28	5 µg	80	62		3
780C NEW!	100 mV/g	15%	0.4 - 14k	30	top, R6 2 pin	120°	1/4-28	5 µg	80	62		3
785A	100 mV/g	10%	1 - 12k	30	side, R6 2 pin	120°	1/4-28	6 µg	80	85		3
786A	100 mV/g	5%	0.5 - 14k	30	top, R6 2 pin	120°	1/4-28	5 µg	80	90	Y	2
786A-M12 NEW!	100 mV/g	5%	0.5 - 14k	30	top, M12	120°	M8	5 µg	80	90		2
786F	100 mV/g	5%	0.5 - 13k	30	top, integral cable	120°	1/4-28	5 µg	80	90	Y	2
787A	100 mV/g	5%	0.7 - 10k	22	side, R6 2 pin	120°	1/4-28	5 µg	80	145	Y	2
787AM8-M12 NEW!	100 mV/g	5%	0.7 - 10k	22	side, M12	120°	M8	5 µg	80	145		-
787B	100 mV/g	10%	0.7 - 10k	22	side, R6 2 pin	120°	1/4-28	5 µg	80	145		2
787F NEW!	100 mV/g	10%	0.7 - 10k	22	side, integral cable	120°	1/4-28	5 µg	80	145		3
793	100 mV/g	5%	0.5 - 15k	25	top, R6 2 pin	120°	1/4-28	5 µg	80	112	Y	4
793R (radiation environment suitable)	100 mV/g	5%	1 - 15k	26	top, R6 2 pin	120°	1/4-28	5 µg	50	110		-
797	100 mV/g	5%	1.0 - 12k	26	side, R6 2 pin	120°	1/4-28	5 µg	50	135	Y	5
797R (radiation environment suitable)	100 mV/g	5%	1 - 12k	26	side, R6 2 pin	120°	1/4-28	5 µg	50	135		-
Low frequency accelero	meters											
786-500 NEW!	500 mV/g	5%	0.2 - 14k	30	top, R6 2 pin	120°	1/4-28	1.5 µg	10	90		6
793L	500 mV/g	5%	0.2 - 2.3k	15	top, R6 2 pin	120°	1/4-28	0.2 µg	10	142	Y	4
797L	500 mV/g	5%	0.2 - 3.7k	18	side, R6 2 pin	120°	1/4-28	0.2 µg	10	148	Y	5
799LF	500 mV/g	5%	0.1 - 2.5k	18	top, R6 2 pin	120°	1/4-28	1 µg	10	205		6
799M	1000 mV/g	5%	0.2 - 2.5k	18	top, R6 2 pin	80°	1/4-28	1 µg	5	205		-
High frequency accelero	ometers											
712F	100 mV/g	10%	3.0 - 25k	>45	side, integral cable	120°	8-32	10 µg	60	35		-
726/726T	100 mV/g	5%	0.6 - 15k	32	side/top, 10-32 coaxial	120°	10-32	0.8 µg	80	30-34		-
728A/728T	500 mV/g	5%	1.0 - 10k	24	side/top, 10-32 coaxial	120°	10-32	0.3 µg	15	45		-
732A/732AT	10 mV/g	5%	0.5 - 25k	60	side, R1 10-32, coaxial	120°	10-32	3 µg	500	13		-
736/736T	100 mV/g	5%	2.0 - 25k	60	side, R1 10-32, coaxial	120°	10-32	2 µg	50	13		-
997	10 mV/g	10%	0.5 - 29k	50	side, integral cable	125°	8-32	9 µg	600	35		6
PiezoVelocity transduce	rs											
793V	100 mV/in/ sec	10%	1.5 - 7k	15	top, R6 2 pin	120°	1/4-28	1µin/ sec	50 in/sec	145	Y	4
793VR (radiation environment suitable)	100 mV/in/ sec	10%	2 - 7k	15	top, R6 2 pin	120°	1/4-28	1 μin/ sec	50 in/sec	133		-
797V	100 mV/in/ sec	10%	1.6 - 7k	18	side, R6 2 pin	120°	1/4-28	0.8 µin/ sec	50 in/sec	148	Y	5

For additional information on products that are not in our short-form catalog, please visit our website or call +1 301 330 8811 or 800-WILCOXON.

Model	Sensitivity	Sensitivity tolerance ±	Frequency response @ ±3db	Resonance	Exit type / connector	Max temp	Mounting thread	Psd noise @ 100 Hz	Acceleration range	Weight	Haz area option	Page
			Hz	kHz		С		/√Hz	g peak	grams		
Triaxial accelerometers												
993A	100 mV/g	10%	2 - 2k	N/A	side, R9W 4 pin	120°	1/4-28	2 µg	50	88		-
993B Series	25, 50 or 100 mV/g	10%	2 - 10k (z axis) 2 - 7k (x, y axis)	N/A	top, integral cable	120°	10-32	3.2, 2.0, 1.4 µg	40	134	Y	7
High temperature accel	erometers											
376	25 pC/g	10%	1 - 12k	30	top, R1 10-32 coaxial	260°	1/4-28	N/A	N/A	75	Y	-
376/CC701	100 mV/g	10%	1 - 12k	30	inline, 10-32 coaxial	260°	1/4-28	7 µg	50	75	Y	6
793-6	100 mV/g	10%	1 - 12k	20	top, R6 2 pin	150°	1/4-28	3 µg	50	135		4
797-6	100 mV/g	10%	1 - 11k	20	side, R6 2 pin	150°	1/4-28	3 µg	50	145		5
4-20 mA vibration outpu	ıt sensors											
PC420A acceleration, RMS and peak NEW!	4-20 mA	5%	1 - 2k	N/A	top, R6 2 pin	105°	1/4-28	N/A	5,10,20 g	162	Y	8
PC420A acceleration, true peak	4-20 mA	5%	4 - 2k	N/A	top, R6 2 pin	85°	1/4-28	N/A	5,10,20 g	162	Y	8
PC420V velocity, RMS and peak NEW!	4-20 mA	5%	3.5 - 2k	N/A	top, R6 2 pin	105°	1/4-28	N/A	0.5,1,2,3,5 ips	162	Y	8
PC420V velocity, true peak	4-20 mA	5%	4 - 2k	N/A	top, R6 2 pin	85°	1/4-28	N/A	0.5,1,2,3,5 ips	162	Y	8
PC420D displacement	4-20 mA	5%	10 - 1k	N/A	top, R6 2 pin	85°	1/4-28	N/A	40 mils	162		8
PCC421 low profile NEW!	4-20 mA	5%	4 - 2k	N/A	side, R6 2 pin	105°	1/4-28	N/A	5,10,20 g	140	Y	8
PCC423 integral cable, low profile NEW!	4-20 mA	5%	4 - 2k	N/A	side, integral cable	105°	1/4-28	N/A	5,10,20 g	135 excl. cable	Y	8
Dual output vibration (4	-20 mA) and te	mperature sei	nsors									
PC425 low profile	4-20 mA	5%	4 - 2k	N/A	side, R19 6 pin	85°	1/4-28	N/A	5,10,20 g	320		8
PC427 integral cable, low profile	4-20 mA	5%	4 - 2k	N/A	side, integral cable	85°	1/4-28	N/A	5,10,20 g	320		8
Dual output vibration ar												
786T	100 mV/g	5%	0.5 - 12k	30	top, R6G 3 pin	120°	1/4-28	5 µg	60	90	Y	-
793T-3	100 mV/g	5%	0.5 - 15k	24	top, R6G 3 pin	120°	1/4-28	5 µg	80	115		4
797T-1	100 mV/g	5%	1 - 12k	26	side, R6G 3 pin	120°	1/4-28	5 µg	80	135		5
797LT	500 mV/g	5%	0.2 - 3.7k	18	side, R6G 3 pin	120°	1/4-28	0.2 µg	10	160		-
Specialty sensors 222A Zerkometer™	100 mV/g	20%	0.5 - 8.5k	23	top, R6 2 pin	120°	1/8-27 NPT	5 µg	80	76		7
996LD leak detection sensor	12 V/g	3dB	10 - 4k	14	top, R6 2 pin	80°	1/4-28	0.08 µg	0.2	-		-
Seismic sensors												
731A	10 V/g	10%	0.05 - 500	0.750	top, R6 2 pin	65°	3/8-16	0.004 µg	0.5	670		6
731A/P31	10-1,000 V/g	10%	0.05 - 500	0.750	BNC	65°	3/8-16	0.004 µg	0.5	670		-
731-207	10 V/g	10%	0.2 - 1.3k	2.4	top, 10-32 coaxial	80°	10-32	0.03 µg	0.5	50		7
731-207R (radiation environment suitable)	10 V/g	10%	0.2 - 1.3k	2.4	top, 10-32 coaxial	80°	10-32	0.03 µg	0.5	77		-
Underwater accelerome	ters and hydro	phones										
746	100 mV/g	5%	1.0 - 15k	30	top, integral cable	80°	10-32	0.8 µg	50	45		7
754	10 mV/g	10%	2.0 - 25k	60	side, integral cable	80°	Adhesive	4 µg	250	4		-
757 biaxial	100 mV/g	10%	2.0 - 2k (at 10%)	30	side, integral cable	80°	10-32	1 µg	50	110		7



Meggitt Sensing Systems

We specialize in sensing and monitoring systems that measure physical parameters in the extreme environments of aircraft, space vehicles, power generators, nuclear, oil and gas installations and test laboratories. In addition to vibration sensors for industrial machinery health monitoring, product lines from Meggitt Sensing Systems include

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- A wide range of extreme temperature, vibration, dynamic pressure, and leading-edge microwave sensors and designs
- Innovative software and electronics systems for monitoring aerospace and land-based turbomachinery

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- Aircraft fuel quality gauging systems, fuel flow sensors, engine oil level sensors and oil pressure sensors, chip detectors and collectors
- Optical fire detectors for energy and hazardous area flame detection applications

Ignition systems, temperature sensors and speed probes

- Ignition systems for aerospace engines, power generation gas turbines, petrochemical installations and industrial burners
- Temperature and rotational speed sensors as well as RPM speed, static pressure, pressure and thermal switches, and electronic control unit and onboard indicators for aerospace applications

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Meggitt Sensing Systems, a division of Meggitt PLC (www. meggitt.com), is a leading supplier of high-performance sensing and monitoring systems for physical parameter measurements in extreme environments. It has operated since 1927 through its antecedents—ECET, Endevco, Ferroperm Piezoceramics, Lodge Ignition, Sensorex, Vibro-Meter and Wilcoxon Research —whose portfolios form the basis of product lines offered by today's Meggitt Sensing Systems.

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