

Meggitt Sensing Systems vibration monitoring solutions

Wilcoxon Research® 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. Our reputation as an industry leader of quality products is backed by more than 60 years of experience providing innovative, reliable sensors.

The early detection of changes in the vibration signature of machinery is critical in preventing damage to equipment and the resulting costly delays. Meggitt offers the industry standard Wilcoxon Research® products for condition monitoring of rotating machinery. The quality and performance of our sensors ensure accurate signals for timely detection of changing vibration levels, enabling successful condition based maintenance of critical and balance-of-plant assets.



One sensor for life

Meggitt sensors offer total lower cost of ownership through extremely low failure rates and long-term, consistent performance. Hermetic welds verified by helium leak testing eliminate contaminants from entering the sensor and ensure a long life. Sensing crystals undergo piezoelectric stabilization to minimize signal drift over the entire life of the sensor. The highest quality 316L stainless steel is used for housings to withstand harsh plant environments. Electromagnetic and radio frequency interference are blocked by Faraday cages so the sensor outputs noise-free vibration signals. The stable performance of Meggitt sensors means that once installed, you can expect a lifetime of trouble free monitoring, eliminating costly replacements.



Custom engineering

Meggitt Sensing Systems is dedicated to advancing new technologies and vibration detection solutions. Whether customizing a product to meet a specific application, or developing new technology, we bring over 60 years of experience in quality and innovation. For additional requirements, our experienced engineers and research scientists will work with you to develop a custom product. Whether you need minor modifications to a standard product or an entirely new sensor concept, Meggitt has the technology to enable your success.



Meggitt Advanced Sensing Technologies (MAST)

MAST excels in high performance sensing and monitoring systems for military, energy and industrial applications. Our diverse research and development staff has extensive experience in creating products for complex monitoring systems. From concept to production, MAST delivers cutting-edge solutions using the latest advancement in technologies for extreme environments. For more information to see how MAST can help you with your advanced monitoring needs, contact AdvSensTech@meggitt.com.



General purpose accelerometers

Longlasting 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)













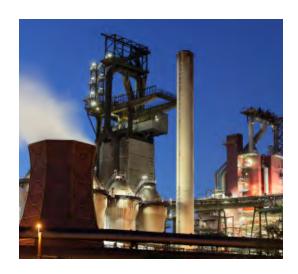
Wilcoxon® model	786A	786A-M12	786-500	787A	787B
Description	Standard accelerometer	Standard accelerometer with M12 connector	High sensitivity accelerometer	Standard side-exit accelerometer	Standard side-exit accelerometer
Sensitivity mV/g	100	100	500	100	100
Sensitivity tolerance	± 5%	± 5%	± 5%	± 5%	± 10%
Frequency response ±3 dB Hz	0.5 - 14,000	0.5 - 14,000	0.2 - 14,000	0.7 - 10,000	0.7 - 10,000
Resonance frequency kHz	30	30	30	22	22
Electrical noise 100 Hz	5 μg/√Hz	5 μg/√Hz	1.5 µg/√Hz*	5 μg/VHz	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 scre		1/4-28 captive screw
Output connector	2 pin MIL-C-5015 style	4 pin M12 style	2 pin MIL-C-5015 style 2 pin MIL-C-5015 style		2 pin MIL-C-5015 style
Hazardous area options	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	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	ss I Div 2, ss 1 Zone 0/1, ass I Zone 2 Class I Div 2, ATEX Class 1 Zone 0/1, and Class I Zone 2 and Class I Zo		N/A
Additional information	Usable for most industrial machine monitoring	M12 connector commonly used for process control applications	Broadband low frequency sensor for demanding low speed applications including wind turbine monitoring. Optional M12 connector	Optional: M6 or M8 captive mounting screw, M12 connector	Optional: M6 or M8 captive mounting screw

General purpose accelerometers

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	780A 780B 785		786F	787F
Description	Description Compact accelerometer		Compact side-exit accelerometer	Integral cable accelerometer	Side-exit integral cable accelerometer
Sensitivity mV/g	100	100	100	100	100
Sensitivity tolerance	± 5%	± 10%	± 10%	± 5%	± 5%
Frequency response ±3 dB Hz	0.4 - 14,000	0.4 - 14,000	1 - 12,000	0.5 - 13,000	0.7 - 10,000
Resonance frequency kHz	30	30	30	30	22
Electrical noise 100 Hz	4 μg/√Hz*	4 μg/VHz*	6 μg/√Hz	5 μg/VHz	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 captive screw	1/4-28 tapped hole	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 integral cable		integral cable
Hazardous area options	CSA Class Div 1 and Class Div 2, ATEX Class 1 Zone 0/1, and Class Zone 2 IECEx Class Zone 0/1	N/A	N/A	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	N/A
Additional information	Tight tolerance sensor, compact size for multichannel applications			Submersible to 30 ft (10 m)	Submersible to 30 ft (10 m) Optional: M6 or M8 captive mounting screw

* typical

High performance accelerometers

793 and 797 series sensors offer a variety of options

- General purpose sensors with additional over-voltage protection
- Dual output to measure vibration and temperature
- Radiation rated units available for monitoring in nuclear environments
- Up to 25 years of reliable product lifetime













Wilcoxon® model	Nilcoxon® model 793 793-10		793T-3	797	797T-1
Description	Premium accelerometer	Premium accelerometer with high g level	accelerometer with vibration and 10 mV/°K		Premium dual-output, side-exit vibration and 10 mV/°K temperature sensor
Sensitivity mV/g	100	10	100	100	100
Sensitivity tolerance	± 5%	± 5%	± 5%	± 5%	± 5%
Frequency response ±3 dB Hz	0.5 - 15,000	1 - 15,000	0.5 - 15,000	1 - 12,000	1 - 12,000
Resonance frequency kHz	25	25	24	26	26
Electrical noise 100 Hz	5 μg/√Hz	40 μg/VHz 5 μg/VHz		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 scr		1/4-28 captive screw
Output connector	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	3 pin MIL-C-5015 style 2 pin MIL-C-5015 style		3 pin MIL-C-5015 style
Hazardous area options	FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0, SIMTARS	ATEX Class 1 Zone 0	N/A	FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0	N/A
Additional information	Legacy accelerometer specified in many mission critical applications. Radiation rated units available	Useful in high g applications such as gearbox, turbine, and compressor monitoring	Vibration and temperature signal in a single housing	Side-exit legacy accelerometer specified in many mission critical applications. Radiation rated units available	Side-exit model with vibration and temperature signal in a single housing

Low frequency accelerometers

Our sensors have been the industry standard for performance and reliability for over $60 \, \text{years}$

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













Wilcoxon® model	731A	786LF	787-500	797L	799LF
Description	Ultra quiet, ultra low frequency seismic accelerometer	uency low frequency high output		Premium low frequency side-exit accelerometer	Premium low frequency accelerometer
Sensitivity mV/g	10 V/g	100	500	500	500
Sensitivity tolerance	± 10%	± 5%	± 5%	± 5%	± 5%
Frequency response ±3 dB Hz	0.05 - 450	0.1 - 13,000	0.2 - 10,000	0.2 - 3,700	0.1 - 2,500
Resonance frequency kHz	750 Hz	30	22	18	18
Electrical noise 100 Hz	0.004 μg/√Hz	3 μg/√Hz	1.5 μg/VHz 0.2 μg/VHz		1 μg/√Hz
Max temperature	65° C	120° C	120° C 120° C		120° C
Bias output voltage	9 VDC	13 VDC	12 VDC 10 VDC		8 VDC
Grounding	case isolated	case isolated	case isolated case isolated		case isolated
Mounting	3/8-16 tapped hole	1/4-28 tapped hole	1/4-28 captive screw 1/4-28 captive screw		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	2 pin MIL-C-5015 style
Hazardous area options	N/A	N/A	CSA Class Div 1 and Class Div 2, ATEX Class Zone 0/1, and Class Zone 2 IECEx Class Zone 0/1		N/A
Additional information	Used for seismic monitoring including earthquake detection, perimeter monitoring and structural analysis. Optional: P31 power amplifier system	Unique circuitry prevents washover distortion, a condition that can occur when both high amplitude, slow and fast frequencies are present.	Low frequency, low noise sensor for demanding low speed applications	Ultra low noise, low frequency, side-exit sensor ideal for cooling tower applications	Ultra low frequency, low noise sensor ideal for wind turbine applications

High temperature accelerometers

Rugged design and durable components enable vibration monitoring in extremely hot plant environments

- Specialty electronics enable continuous monitoring without sensor degradation
- ullet Separate sensor with remote amplifier for applications up to 260° C
- Exclusive FireFET® design
- Affordable options for cost-effective monitoring













Wilcoxon® model	376-CC701	HT786A	HT787A	793-6	797-6	
Description	High temperature accelerometer and in-line charge amplifier system	High temperature accelerometer	High temperature side-exit accelerometer	High temperature, internally amplified FireFET accelerometer	High temperature, side-exit FireFET accelerometer	
Sensitivity mV/g	100	100	100	100	100	
Sensitivity tolerance	± 10%	± 5%	± 5%	± 10%	± 10%	
Frequency response ±3 dB Hz	1 - 15,000	0.5 - 14,000	0.7 - 10,000	1 - 12,000	1 - 11,000	
Resonance frequency kHz	30	30	22	20	20	
Electrical noise 100 Hz	7 μg/√Hz	7 μg/√Hz @ 150° C	7 μg/VHz @ 150° C	10 μg/√Hz @ 150° C	10 μg/VHz @ 150° C	
Max temperature	260° C	150° C	150° C	150° C	150° C	
Bias output voltage	12 VDC	12 VDC @ 150° C	12 VDC @ 150° C	11 VDC @ 150° C	11 VDC @ 150° C	
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 captive screw	
Output connector	male BNC (CC701)	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	FM Class I Div 1	N/A	N/A	N/A	N/A	
Additional information	Charge output accelerometer can be used in high temperature environments such as steam turbine applications	Ideal for high temperature applications especially paper machine dryer sections	Side-exit sensor ideal for high temperature applications especially paper machine dryer sections	Premium high temperature sensor for the most demanding applications	Premium high temperature, side-exit sensor for the most demanding applications	

Specialty accelerometers

Monitoring solutions for unique applications

- PiezoVelocity Transducers (PVT) output velocity signals for monitoring critical assets
- Isolated accelerometers for high EMI environments
- Triaxial sensors measure in three mutually perpendicular directions
- Low power, low voltage sensor for wireless applications













Wilcoxon® model	HV200	793V	797V	993B-7-M12	997
Description	Isolated accelerometer with high EMI resistance	Premium PiezoVelocity transducer	Premium side-exit PiezoVelocity transducer	Triaxial accelerometer with M12 connector	High frequency, ring type accelerometer with integral cable
Sensitivity mV/g	100	100 mV/ips 3.94 mV/mm/s	100 mV/ips 3.94 mV/mm/s	100 mV/axis	10
Sensitivity tolerance	± 5%	± 10%	± 10%	± 10%	± 10%
Frequency response ±3 dB Hz	0.5 - 12,000	2.5 - 7,000	1.6 - 7,000	x, y axes 2 - 7,000 z axis 2 - 10,000	0.5 - 29,000
Resonance frequency kHz	25	15	18	-	>45
Electrical noise 100 Hz	5 μg/√Hz	1 μin/sec/√Hz	0.8 μin/sec/VHz 2.0 μg/VHz		9 μg/√Hz
Max temperature	120° C	120° C	120° C 120° C		125° C
Bias output voltage	12 VDC	10 VDC	10 VDC 12 VDC		12 VDC
Grounding	case isolated	case isolated	case isolated case isolated		case isolated
Mounting	1/4-28 integral screw	1/4-28 tapped hole	1/4-28 captive screw 10-32 captive screw		8-32 captive screw
Output connector	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style	2 pin MIL-C-5015 style M12		integral cable
Hazardous area options	N/A	FM Class I Div 1, CSA Class I Div 1, ATEX Class 1 Zone 0	FM Class I Div 1, CSA Class I Div 1	CSA Class I Div 1	N/A
Additional information	Designed to withstand arcing between sensor base and internal electronics up to 6,000 volts.	Internally integrated to provide clear velocity signals	Side-exit internally integrated sensor to provide clear velocity signals	3 axis simultaneous monitoring from a single sensor, speeds route data collection	Compact size, hermetic case, ideal for internal gearbox monitoring

4-20 mA Loop Powered Sensors (LPS®)

Wilcoxon Research® 4-20 mA vibration sensors include an accelerometer and vibration transmitter combined in one rugged, industrial housing for cost-effective continuous monitoring.

- Output signal proportional to overall vibration
- RMS and peak versions available
- Optional dual output of dynamic vibration data
- 4-20 mA output for direct interface to existing PLC, DCS or SCADA networks
- Used in process control applications
- Vibration trending for basic condition monitoring applications
- · Common monitored machinery: motors, fans, pumps, gearboxes, and reciprocating compressors











Wilcoxon® model	Wilcoxon® model PC420 PC420DPP		PCC421	PC425	PC420ATP-05-B3223
Description	Loop powered sensor, 4-20 mA output	Loop powered sensor, 4-20 mA output	Side-exit LPS	Side-exit LPS with 10 mV/°K temperature sensor	Loop powered, band limited sensor
Loop output options	RMS, peak, true peak	Peak-to-peak (calc)	RMS, peak	RMS, peak, true peak	True peak
Signal output scaling options	Acceleration, velocity	Displacement	Acceleration, velocity	Acceleration, velocity	Acceleration
Full scale acceleration versions	5, 10, 20, 50 g	Full scale	5, 10, 20 g	5, 10, 20 g	5 g
Full scale velocity versions	0.5, 1.0, 2.0, 3.0, 5.0 ips	displacement value: 40 mils	0.5, 1.0, 2.0, 3.0, 5.0 ips	0.5, 1.0, 2.0, 3.0, 5.0 ips	N/A
Frequency range ± 10%	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	10 Hz - 1.0 kHz	400 Hz - 1.4 kHz
Frequency range ± 3 dB			Accel: 1.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz		300 Hz - 2.0 kHz
Max temperature	105° C	85° 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 tapped hole	1/4-28 captive screw	1/4-28 captive screw	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 or 4 pin M12 style	6 pin MIL-C-5015 style	2 pin MIL-C-5015 style
Hazardous area options	CSA Class I Div 1 and explosion proof, ATEX Class I Zone 0 and explosion proof	N/A	CSA Class I Div 1, ATEX Class I Zone 0	N/A	N/A
Additional information	Acceleration and velocity 4-20 mA signals for process control applications	Displacement 4-20 mA signal for slow speed machine monitoring	Compact size, side-exit loop powered sensor for space limited applications	Provides both 4-20 mA vibration and mV temperature signals. Integral cable units available	Used for cavitation detection and reciprocating compressor monitoring

Intelligent Transmitter series (iT100/200)

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 flexible, DIN rail mounted units 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
- (€ 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 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
- (€ approved











Hazardous area sensors

Meggitt offers the widest selection of hazardous area rated sensors for industrial condition monitoring. A variety of certifications including FM, CSA, ATEX and IECEx offers 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.



Intrinsically safe

Class I Division 1 (Zone 0) options

Sensors with FM or CSA certification for use in the US and Canada, and ATEX certified for use in Europe:

- 376-CC706 general purpose, high temp (500° F)
- 766* general purpose, bayonet connector
- 780A general purpose, compact size
- 786A general purpose
- 786A-M12 general purpose, M12 connector
- 786-500 broadband low frequency
- 786-500-M12 broadband low frequency, M12 connector
- 786F general purpose, integral cable
- 786T general purpose, dual output temperature and vibration
- 787A general purpose, side-exit
- 787A-M8 general purpose, side-exit, M8 stud
- 787A-M12 general purpose, side-exit, M12 connector
- 787-500 broadband low frequency, side-exit
- 787-500-M12 broadband low frequency, side-exit, M12 connector

- 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 series** triaxial accelerometers
- 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
- * Also available with SIMTARS certification for use in Australia
- ** Only available with CSA certification for use in Canada

IECEx (Zone 0/1) certified sensors for use worldwide:

- 780A general purpose, compact size
- 786A general purpose
- 786A-M12 general purpose, M12 connector
- 786-500 broadband low frequency
- 786-500-M12 broadband low frequency, M12 connector
- 786F general purpose, integral cable
- 786T general purpose, dual output temperature and vibration
- 787A general purpose, side exit
- 787A-M8 general purpose, side exit, M8 stud
- 787A-M12 general purpose, side exit, M12 connector
- 787-500 broadband low frequency, side exit
- 787-500-M12 broadband low frequency, side exit, M12 connector

Hazardous area sensors

Non-incendive

Class I Division 2 (Zone 2) options

Sensors with CSA certification for use in the US or Canada, and ATEX certified for use in Europe:

- 780A general purpose, compact size
- 786A general purpose
- 786A-M12 general purpose, M12 connector
- 786-500 broadband low frequency
- 786-500-M12 broadband low frequency, M12 connector
- 786F general purpose, integral cable
- 786T general purpose, dual output temperature and vibration
- 787A general purpose, side-exit
- 787A-M8 general purpose, side-exit, M8 stud
- 787A-M12 general purpose, side-exit, M12 connector
- 787-500 broadband low frequency, side-exit
- 787-500-M12 broadband low frequency, side-exit, M12 connector
- LPA100T low power, low voltage, with temperature output

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)







Connectors and cables

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	
Witcoxoli illouet	MIL-C-5015 style			/le	vle					
Connector	2 socket	2 socket	3 socket	3 so	cket		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	200° C 125° C		105° C	125° C	125° C	
Field assembly	Yes	No	No	Yes Yes		Yes	Yes	Yes	No	
Ingress protection	50	67	67	68 67		68	68	67	67	

* I indicates electrical isolation between shield and transducer housing



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).



- Find connector that mates to sensor
- b Choose termination connector
- C Select compatible cable type
- XX Cable length (ft or m), including connectors
 - 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	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				
el de	6GQ/6GQI*	3 socket, high temp, Viton® B boot, IP68				
ე ე	6GSL/6GSLI*	3 socket, Viton® B boot, IP67				
00-	6Q/6QI*	2 socket, high temp, Viton® B boot, IP68				
MIL-0-0010 Styte	6QA/6QAI*	2 socket, high temp, Viton® B boot, IP68				
Σ	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				

^{*} I indicates electrical isolation between shield and transducer housing

C Cable options

		oubte options					
	Model	Description Max temp			Diar	neter	Compatible connectors
	J3	Low noise, high temp, red Teflon® jacket	500° F	260° C	0.085 in	0.216 cm	1, 1A, 2, 6
xial	J5A	RG58, black PVC jacket	221° F	105° C	0.190 in	0.483 cm	2, 2F, 6, 6Q/6QI, 6SL/6SLI, 6W
Coaxial	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
	J9T	RG59, black Teflon® jacket	302° F	150° C	0.190 in	0.483 cm	2, 2F, 20, 6, 6Q/6QI, 6SL/6SLI
pair	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
twisted	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
Shielded,	J88	Black polyurethane jacket	176° F	80° C	0.210 in	0.533 cm	2, M12, 20, 6, 6Q/6QI, 6WR
Shie	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
_	J9T3	3 conductor, white Tefzel® jacket	302° F	150° C	0.190 in	0.483 cm	6GSL/6GSLI, 6SL/6SLI
d, ucto	J9T3A	3 conductor, yellow Teflon® jacket	392° F	200° C	0.190 in	0.483 cm	2, 6GD2, 6GQ/6GQI, 6GSL/6GSLI, 6SL/6SLI
Shielded, multi conductor	J9T4	4 conductor, red Teflon® jacket	392° F	200° C	0.190 in	0.483 cm	2, 9W, 6GSL/6GSLI, 6SL/6SLI
Shi ulti o	J9T4A	4 conductor, yellow Teflon® jacket	392° F	200° C	0.190 in	0.483 cm	9W
Ε	J84	4 conductor, black polyurethane, Kevlar reinforced	176° F	80° C	0.210 in	0.533 cm	2, M12, 20, 6, 6GQ/6GQI, 9W

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 ruggedly designed and backed by lifetime warranty.

- VibraLink® switchboxes feature Industry exclusive data ready LEDs indicating stable BOV levels, decreasing collection time
- Differential switching for greater noise immunity
- Radio frequency interference filtering
- NEMA 4/4X ratings
- Oversized enclosures for up to 48 channels with spacious interiors for easy wiring
- Models available for every application







Termination boxes Single, dual-output, triaxial switchboxes

Online continuous monitoring

Power and signal conditioning

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

Handheld instrumentation

ReferenceMate® portable shaker

The REF2500 handheld shaker quickly and easily checks operation and set-up of accelerometers and velocity sensors in the field. Check acceleration and velocity measurements with no imperial-metric conversions – no extra steps and no calculations. Frequency and measurement type (peak or RMS) can be selected at the push of a button.

- 61.4 Hz for imperial measurements
- 100 Hz to simulate standard calibration conditions
- 159.2 Hz for metric measurements

ReferenceMate is designed with multiple features that ensure accurate readings and proper operation. LED indicators activate if battery levels are low or if the unit is overloaded. A built-in reference accelerometer maintains a 1 g test level for sensors weighing up to 250 grams. The cost-effective shaker enables fast verification of operation, eliminating the need for costly tests and calibrations.



MachineryMate® vibration meters

The easy-to-use meters record, analyze and display bearing conditions and vibration values color coded to ISO 10816-3 alarm levels enabling quick and reliable machinery health monitoring. Built-in filter bands provide a clear picture of machine problems, including unbalance, misalignment and looseness. An 800 line FFT spectrum identifies complex issues.

The advanced diagnostic capabilities of the MAC800 offers enhanced vibration monitoring:

- DataMate trending software
- Strobelight attachment to view run speed
- · Bluetooth headphones for auditory monitoring of bearing noise



TempMate® IR thermometers

Increased temperature levels can often be indicative of equipment problems such as lubrication, bearing wear, or misalignment. TempMate® meters take temperature readings up to 1,832° F of hard-to-reach or moving equipment. Laser sighting enables users to safely take readings of critical machinery including pumps, motors, fans and bearings. The MAC100 has user selectable emissivity and Bluetooth capability for continuous streaming of data.

- K-type thermocouple included for contact readings
- Backlit display
- Low cost monitoring solution



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.

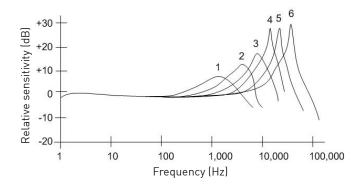
Cementing pads approach the high frequency capabilities of stud mounts when used properly, without the need of drilling into the structure. Adhesive selection is critical for long-term reliability.

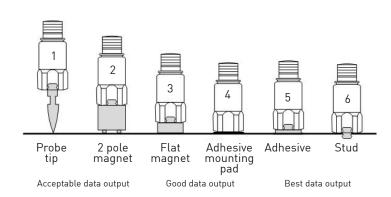
Adhesives

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 probetips

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.





Mounting accessories

Wilcoxon® model	lmage	Description and additional models								
В1А		Rare earth magnetic mounting base 0.95" diameter, 40 lb force 10-32 stud, isolated								
		Two-pole magnetic mounting bases								
MD series	MODEL MOISE	MD020 0.75" diameter, 20 lb force, 1/4-28 tapped hole, non-isolated MD035 1.00" diameter, 35 lb force, 1/4-28 tapped hole, non-isolated		rce, apped hole,	MD055 1.25" diameter, 55 lb force, 1/4-28 tapped hole, non-isolated		MD0130 2.00" diameter, 130 lb force, 1/4-28 tapped hole, non-isolated			
		Flat magnetic mounting b	ases							
MF series	MF040	15 lb force, 40 lb for		apped hole,	MF075 1.25" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated		MF120 1.50" diameter, 120 lb force, 1/4-28 tapped hole, non-isolated			
	•	Two-pole magnetic mount	ing bases	for triaxial sensor	S					
MT series	MODEL MT075	MT075 1.50" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated		MT075 1.50" diameter, 75 lb force, 10-32 tapped hole, non-isolated						
SF6		SF6 mounting stud 1/4-28 UNF both ends Stainless steel SF6M mount 1/4-28 UNF to Stainless steel			<u> </u>					
SF8		SF8 cementing pad 1/4-28 integral stud 1.00" diameter Stainless steel		SF8-2 cementing pad Includes tapped hole and key notch for consistent axis orientation Use with 993A triaxial sensors						
SF11	Seminorial	Cementing pad 1.00" diameter provides surface for sensor attachment using a B3 style magnetic mounting base								
SF21	Wicosop Moder east	SF21 isolator mounting ba		SF22 1.000" diameter, 1/4-28 to M8 integral stud						
		1.00" hex across the flats Isolation protection up to 1,500 volts			SF23 1.125" diameter, 1/4-28 to 1/4-28 integral stud					
	1		1/4-28 to 1/4-28 integral stud			SF24 1.125" diameter, 1/4-28 to M8 integral stud				
TC1B		Triaxial mounting cube 1.00" on each side Three 1/4-28 tapped holes fit a variety of threaded stud adapter sizes such as M6, M8, 3/8 and 10-32 Additional sizes available for different sized sensors								
VERSIL406		Mounting epoxy Enough glue for up to 5 sensors/mounting pads Package contains both epoxy components separated by a pull tab Max temperature 150° C								

Why Wilcoxon

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Meggitt Sensing Systems 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 accelerometers in your condition monitoring program and you will see Why Wilcoxon is number one.

Customer support

Fast two-day 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, 25 years

Certified ISO 9000 Quality Management and ISO 14000 Environmental Management

Registered AS9100 quality management system for the demanding aerospace industry

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 1×10^{-8} cc He/sec, compared to weak bubble tests that allow 10,000 times more leakage

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

Consistant 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 accessories, from installation tools, cable assemblies, enclosures, and power supplies, to transmitters and alarms

Time-saving handheld instrumentation eliminates expensive tests

Custom designed products for unique applications

Competitive pricing on sensors, accessories, cables, and network packages

Cutting edge technology keeps you ahead of the curve

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 Endevco, 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, specialises 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, specialises 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 Endevco, specialises 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, specialises in manufacturing advanced piezoelectric ceramic components and integrated piezoelectric thick film devices.



Sensor selection chart

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
	mV/g		Hz	kHz		° C		/√Hz	g peak	grams	
General purpose											
775A	100	20%	0.5 - 10k	26	top, R35	120	1/4-28	5 µg	80	45	
780A	100	5%	0.4 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	Υ
780B	100	10%	0.4 - 14k	30	top, R6	120	1/4-28	5 μg	80	62	
780C	100	15%	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	Υ
786A-M12	100	5%	0.5 - 14k	30	top, M12	120	M6	5 μg	80	90	
786F	100	5%	0.5 - 13k	30	top, integral cable	120	1/4-28	5 μg	80	90	Υ
787A	100	5%	0.7 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	Y
787AM8-M12	100	5%	0.7 - 10k	22	side, M12	120	M8	5 μg	80	145	
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	Υ
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	Υ
797R - radiation resistant	100	5%	1.0 - 12k	26	side, R6	120	1/4-28	5 μg	50	135	
Low frequency a	ccelerometer	'S									
786LF	100	5%	0.1 - 13k	30	top, R6	120	1/4-28	3.0 µg	50	90	
786-500	500	5%	0.2 - 14k	30	top, R6	120	1/4-28	1.5 µg	10	90	Υ
787-500	500	5%	0.2 - 10k	22	side, R6	120	1/4-28	1.5 µg	10	145	Υ
793L	500	5%	0.2 - 2.3k	15	top, R6	120	1/4-28	0.2 μg	10	142	Υ
797L	500	5%	0.2 - 3.7k	18	side, R6	120	1/4-28	0.2 μg	10	148	Υ
799LF	500	5%	0.1 - 2.5k	18	top, R6	120	1/4-28	1.0 µg	10	205	
799M	1,000	5%	0.2 - 2.5k	18	top, R6	120	1/4-28	1.0 µg	5	205	
High frequency a	cceleromete	rs									
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	
728A/728T	500	5%	1.0 - 10K	24	side/top, R1	120	10-32	0.3 μg	15	45	
732A/732T	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	
Triaxial accelero	meters										
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	Υ

^{*} 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	Haz area option
		÷	Hz	kHz		° C		/√Hz	g peak	grams	ομειστι
Piezovelocity transducers											
793V	100 mV/in/sec	10%	2.5 - 7k	15	top, R6	120	1/4-28	1.0 µin/sec	50 in/sec	145	Υ
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	Υ
High temperature accelerometers											
376/CC701	100 mV/g	10%	1.0 - 12k	30	top R1/ inline, R6F	260	1/4-28	5 μg	80	90	Υ
793-6	100 mV/g	10%	1.0 - 12k	20	top, R6	150	M8	5 μg	80	90	
797-6	100 mV/g	10%	1.0 - 11k	20	side, R6	150	1/4-28	5 μg	80	90	Υ
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	
4-20 mA vibration out	put sensors										
PC420 series acceleration, velocity RMS and peak	4-20 mA	5%	1.0 - 2k	N/A	top, R6	105	M8	N/A	5, 10, 20 g	162	Υ
PC420D displacement, peak to peak	4-20 mA	5%	10 - 1k	N/A	top, R6	85	1/4-28	N/A	40 mils	162	
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	Υ
PCC423 series acceleration, velocity RMS and peak	4-20 mA	5%	4.0 - 2k	N/A	side, integral cable	105	1/4-28	N/A	5, 10, 20 g	135 excl. cable	Υ
Dual output vibration	(4-20 mA) an	d temperatur	e sensors								
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	
Dual output vibration	and tempera	ture sensors									
786T	100 mV/g	5%	0.5 -12k	30	top, R6G	120	1/4-28	5 μg	60	90	Υ
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	
Seismic sensors	40.14	4004	0.05 500	0.55	. 5/		0/0.4/	0.004	0.05	450	
731A	10 V/g	10%	0.05 - 500	0.75	top, R6	65	3/8-16	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	
731-207R radiation resistant	10 V/g	10%	0.2 - 1.3k	2.4	top, R1	80	10-32	0.03 µg	0.05	77	
Underwater acceleror	neters and hy	ydrophones									
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	
757 biaxial	100 mV/g	10%	2.0 - 2k at 10%	30	side, integral cable	80	10-32	1.0 µg	50	110	

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