

Wireless Accelerometer Model 7034



Accelerometer Specifications:

- Piezoelectric Sensor
- Selectable $\pm 50G$ or $\pm 5G$ full scale range
- 0.35 Hz to 10,000 Hz Response
- Standard Temperature: $-5^{\circ}F$ to $+125^{\circ}F$
- High Temperature: $+32^{\circ}F$ to $+160^{\circ}F$
- Height = 2.63" x 1.56 Diameter

DSP Specifications:

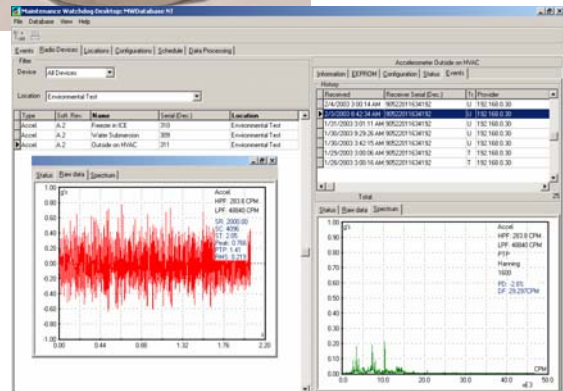
- 125Hz to 40kHz Sampling Rate
- Able to store 65,000 samples
- Programmable Data Form
 - Time Waveform
 - FFT (With Watchdog™ Desktop)
 - Historical Trends

Wireless Specifications:

- Automatically Configurable Wireless Node
- Operates in the License Free 902-928 MHz ISM Band
- Encrypted Secure Transmissions

General Specifications:

- Nominal Battery Life of 2+ Years
- IP65, NEMA 4 Package
- Housings of 303 Stainless
- Meets FDA Reg CFR-21-178.3570
- Integral 1/4-28 Mounting Thread



Description

The 7034 accelerometer is a wireless method of transmitting CBM vibration data in industrial environments. The unit contains a precision piezoelectric sensor, temperature sensor, digital signal processor, data memory, wireless transceiver, internal battery, and an internal antenna. Powered with an internal Lithium battery, the solid-state *Accelerometer* collects and transmits vibration data securely via a wireless link. The data collection parameters are configured from a networked Windows PC. Data in Gs, ips, or mils can be in the form of time trace or FFT and thousands of units may share the same radio network. All units communicate with Model 7031 Network Access Points (NAP), which bridges the wireless network to Ethernet network. Software control from a networked PC allows operators to configure thousands of 7034 wireless sensors and monitor vibration data.

Applications

- Condition Based Maintenance • Vibration Monitoring • Vibration Analysis • Machine Diagnostics •

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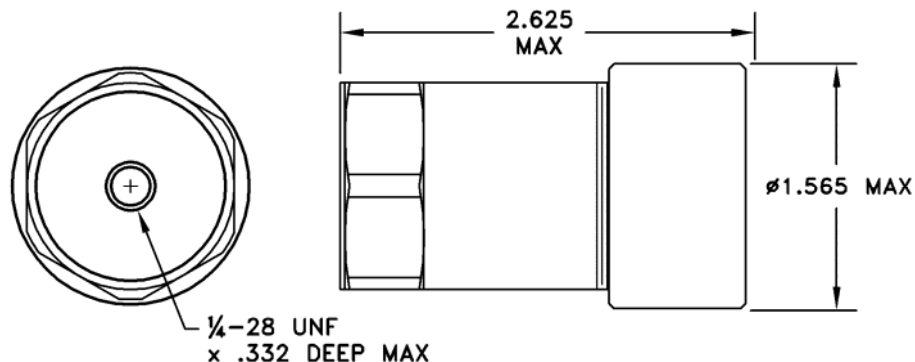
2001 Fulling Mill Road, Middletown, PA 17057
 Tel: +1 717-939-2300, Fax: +1 717-939-7170
 Web: <http://www.techkor.com>, eMail: wirelesskit@techkor.com

Performance: T_C=25° C unless otherwise specified.

Parameter	Min.	Typ	Max	Units
Number of Axes		1		Z
Maximum Range (User Selectable)	5		50	g
Calibration Accuracy (Stored in on board EEPROM)	-5		+5	%
Acceleration Sensitivity		0.003		g
Velocity Sensitivity @ 10 Hz		0.0125		in/s
Displacement Sensitivity @ 10 Hz		0.0005		in
Frequency Response (+/-3 dB)	0.45		10,000	Hz
Frequency Response (+/- 5%)	3		1,000	Hz
Resonance Frequency	25,000			Hz
Q	30	35	40	dB
A/D Resolution over Selected Range (User Selectable)	10	16	16	Bits
Sampling Rate	125		40,000	Hz
Storage Size	20		65,000	Samples
FFT Lines of Resolution	200		12,800	lines
Period (Time Between Measurement Records)	60		2,592,000	Seconds
Max Mechanical Shock			500	g
Sensitivity Temperature Shift		0.18		%FSO/°C
Non-Linearity (0 to + 90% of Full Scale)		0.1		% of span
Damping Ratio of Accelerometer Element	0.4	0.7	0.9	NA
Weight Including Lithium Battery		2.80		oz
Transceiver Operational Frequency		914.50		MHz
Radiated Power (ERP)			0	dBm
Receiver Sensitivity		-100		dBm
Range		250		feet
Battery Capacity (Lithium Thionyl Chloride)		1000		mAH
Sensor Battery Life (one 800-line FFT per hour)	1.5	2.0		years
Operating Temperature, Standard temperature version	-20 (-5)		+50 (125)	°C (F)
Operating Temperature, High temperature version	0 (32)		+70 (160)	°C (F)
Storage Temperature (all versions)	-40 (40)		+85 (185)	°C (F)
Tightening Torque	22	24	26	in-lbs

7034000-1, Standard Temperature version, 303 stainless steel base, polycarbonate lid
Standard Temperature Battery P/N **20317**

7034000-1, High Temperature version, 303 stainless steel base, polycarbonate lid
High Temperature Battery P/N **20318**



Rev A.2 Specifications are subject to change without notice.