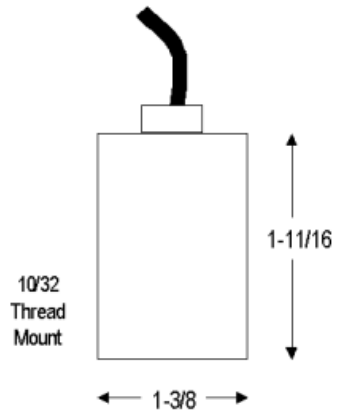
Ultrasonic Sensor UM100

Ultrasonics sense high frequency emissions produced by operating equipment. A baseline threshold can be set within a wide dynamic range of 120 decibels. Once set the **UM100** then monitors changes of ultrasonic amplitude within a range of 40 decibels. This technology can detect amplitude rise caused by friction indicating surface damage to bearings, lubrication deficiencies, and seal wear. These problems are identified before the onset of changes in vibration. Amplitude fall-off can be used to signal dynamic process conditions such as line flow disruption, cavitation, and valve leakage. The signals are passed through Interscada's spectral analysis tool to identify problem areas, and the overall frequency can be trended. By preceding vibration, Ultrasonics is a powerful tool in moving towards a more proactive asset management and preventative maintenance program.

Indicates:

Rubbing, friction due to improper lube, trends lube breakdown, geartooth wear, static charge build in lubricants, cavitation, flow & no flow, mechanical seal lubrication problems, valve leakage.



Technical Specifications

	Loop Powered	Current Output
Power Supply:	18-30 V (30 mA max)	18-30 V
Current Draw:	4-20 mA (25 mA max) proportional to ultrasound signal detected	30 mA max
Output:	Demodulated/heterodyned*	Demodulated/heterodyned* 4-20 mA proportional to ultrasound signal detected
*optional:		
Ambient Temperature Range:	32°-122°F (0°-50°C)	
Detection Frequency:	40 kHz (± 2 kHz)	
Non-Volatile Sensitivity Adjustment:	Pushbutton contact closure or TTL control signal	
Cable:	RF Shielded 10' (3m)	
Transducer:	piezoelectric	
Method of Attachment:	10/32 thread mounting hold	
Housing:	Stainless steel: water resistant & dust proof, meets NEMA 4X requirements. Exceeds IP 54 ratings	

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