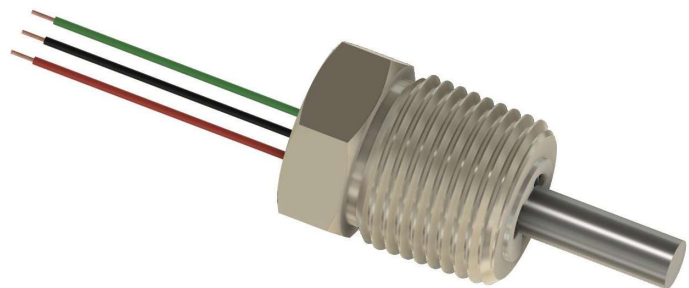
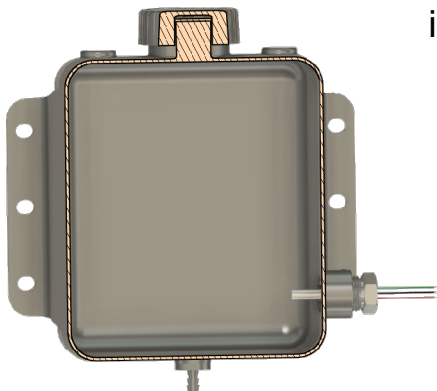
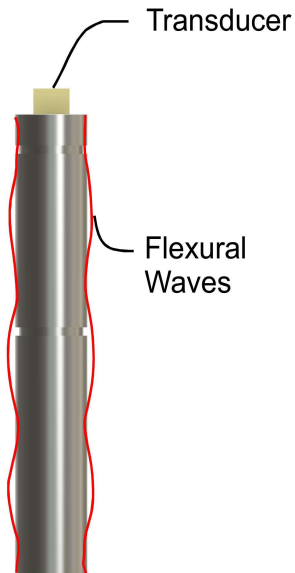


Discrete Flexural Liquid Level Sensor



The Discrete Flexural Liquid Level Sensor senses a specific liquid level. The Sensor utilizes a flexural mode ultrasonic wave which is propagated into a rod by an ultrasonic transducer. The flexural wave is easily absorbed by any liquid even highly aerated liquids. The sensor design is a simple rod with an ultrasonic transducer attached. The rod is mounted into a housing either by welding or retaining rings with an o-ring seal. When operating out of liquid the flexural wave travels up and down the sensor rod hundreds of times after being excited by the transducer. When the sensor rod is submerged in a liquid the flexural waves traveling up and down the sensor rod are dampened so they only travel up and down the rod a few times. By detecting the length of time the flexural wave travel up and down the rod out of liquid, then comparing that to the reduction in time the flexural waves travel up and down the rod in liquid determines that the sensor rod is submerged. A low cost micro controller circuit is all that is necessary to detect this reduction in time the flexural waves travel when submerged in a liquid and provide an output for the user.



- > Can be all metal construction, stainless steel, aluminum or titanium for harsh liquid processing
- > Housing can be any material suitable for the application
- > Measurement unaffected by changes in temperature, density or viscosity.
- > Operating temperature range -40°C to 85°C
- > Detects highly aerated fluids

- > Sensor has self diagnostic capabilities
- > Sensor is self calibrating
- > Shock and vibration resistant
- > Tolerant of liquid agitation or sloshing
- > Liquid temperature measurement
- > Low cost micro controller control circuit
- > Sensor mount opening can be less than 5/8"
- > Simple 3 wire interface or other interfaces available



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