



# Ultrasonic Liquid Level Sensing Systems

Ultrasonic Sensors consists of two piezoelectric elements mounted in the housing of the sensor. These elements convert mechanical energy in the form of high frequency sound to electrical energy and vice versa. The elements are mounted across an air gap in the probe. A high frequency signal is sent by the electronics to the transmitting element vibrating the element at 1 to 4 MHz. Air nor gases will carry sound at this high frequency and will not travel across the sensor gap. When the air gap is filled with liquid, the sound will travel across the gap to vibrate the receiving element. The vibration generates an electrical signal that is amplified and read by the detector circuit in the electronics as a "wet" signal. The signal is converted to a relay output or a shift in current output.

[www.CABriggs.com](http://www.CABriggs.com)

Ultrasonic technology is not dependent on the dielectric constant, color, or viscosity of the liquid and there are no moving parts in the sensor. The reliability surpasses other methods and technologies and has been used for decades with a proven track record.

[www.CABriggs.com/Seneras-PDFs.html](http://www.CABriggs.com/Seneras-PDFs.html)

### Applications:

- High Level / Overflow Alarm
- Low Level / Pump protection
- Condensate pots
- Sump Water / Oil / Sludge Detection
- Lubricant circulation equipment
- Fill machine level control
- Pump leak detection
- Air-in-Line/ Air Bubble Detectors
- Multiple point Detection

### Markets and Industries:

- Upstream Oil & Gas/ Midstream Oil & Gas
- Military: Subsea – Surface
- Petrochemical / Chemical / Medical
- Water / Waste-water
- Maritime Shipping / Inland Barge: ERC- Cargo
- Pulp & Paper
- Food / Beverage
- Aerospace
- Semiconductor

### Interface Detection

## Made in the USA

### Low Cost



### Hi/Low Level Switches with Integral or Remote Electronic



### Solar Powered



### Sludge Blanket Detection



### Air-in-Line Detection



### Multiple Point Level



### Air Bubble Detection



### Waste Level



### Fuel level



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