

SMARTLink Ultrasonic - How it works

Ultrasonic tank monitors are devices used to measure the level of liquid in a tank using ultrasonic technology. Here's how they typically work:

- 1. Transducer:** The ultrasonic tank monitor consists of a transducer, which is a device that emits ultrasonic waves. This transducer is usually mounted at the top of the tank.
- 2. Ultrasonic Waves:** The transducer emits ultrasonic waves that travel down towards the liquid surface in the tank.
- 3. Reflection:** When the ultrasonic waves hit the surface of the liquid, they are partially reflected back towards the transducer.
- 4. Time of Flight Measurement:** The monitor measures the time it takes for the ultrasonic waves to travel from the transducer to the liquid surface and back. Since the speed of sound is known, the monitor can calculate the distance to the liquid surface based on the time it took for the waves to return.
- 5. Calculation of Liquid Level:** Using the distance to the liquid surface, the monitor can calculate the level of liquid in the tank. This information is often displayed on a digital screen or transmitted to a remote monitoring system.
- 6. Continuous Monitoring:** Some ultrasonic tank monitors provide continuous monitoring, constantly measuring the level of liquid in the tank and updating the readings in real-time.
- 7. Additional Features:** Depending on the model, ultrasonic tank monitors may offer additional features such as temperature compensation, tank shape calibration, and alerts for low or high levels of liquid.

Overall, ultrasonic tank monitors provide a reliable and non-contact method for measuring liquid levels in tanks, making them suitable for various industrial, commercial, and residential applications.

