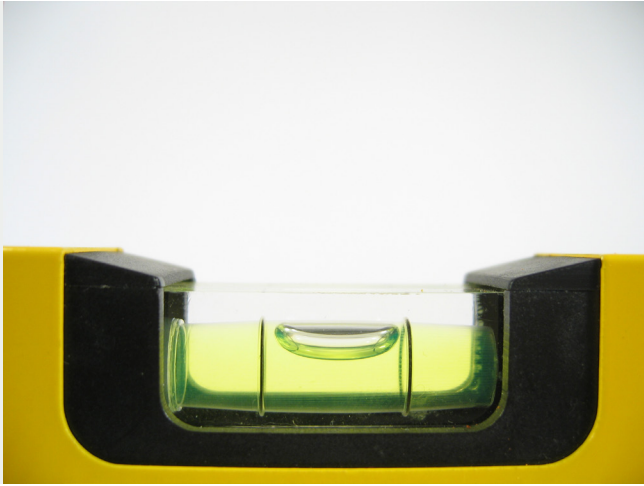


Capacitive verses Float sensors. Which one wins?



Float devices are a very popular technology for measuring the level of liquids. The simplest and most common example is the floating ball valve found in many domestic water systems, but electronic versions are also available for more sophisticated demands.

These can take two forms. A float on an arm, like the domestic version, operating a simple potentiometer to create an output, or a float -or a series of floats - sliding vertically on a rod, inside of which is a string of reed switches providing liquid level signal outputs.

With such a well understood and established technology, what advantages can a capacitive liquid level sensor offer?

Solid State Design. The capacitive sensor is a true solid state device with no moving parts. This provides unrivalled reliability as there are no floats or arms to either jam in place or wear out.

The electronics are situated outside of the liquid container. Unlike the float arm sensor, where the potentiometer element is inside the tank and vulnerable to corrosion or fluid contamination.

Continuous level measurement. A capacitive sensor does not have any mechanical 'steps' in its output providing an unsurpassed level of accuracy. The reed switch float sensor only detects a level change as the float activates individual switches, providing an inferior stepped level indication.

The capacitive sensor 'smooths' turbulent liquids, as the measurement of the liquid takes place inside the capacitive sensor probe whereas float sensors sit on top of this turbulence, providing a less stable output.

Low cost of ownership. Although an inductive sensor may have a higher initial purchase price, its inherent reliability and durability that provides it with an unlimited mechanical life, means that if a float sensor has to be replaced due to malfunction, the lifetime cost of ownership of the capacitive device is less than multiple replacements of lower purchase price devices.

Who wins? Float sensors have their place in simple applications and is both a popular and mature technology for unsophisticated measurement of liquid levels. However, by utilising the superior advantages of the state-of-the-art capacitive technology, liquid level measurement that is accurate, reliable, consistent, corrosion resistant and good value is available to all. Therefore the winner has to be Capacitive.