

Tank Leak Detector

Applications:

- Tank Leak Detector
- Tank Leak Monitor
- Interstitial Tank Leak Detector
- Hydrocarbon Storage Tank Leak Detector
- Underground Storage Tank Leak Detector

Application Background:

Most underground storage tanks installed today are of double wall construction or surrounded by a separate vault or cavity for leak containment. Monitoring and detecting when a leak has occurred is a mandated regulatory requirement in some cases and is just good stewardship in protecting the environment and safe water supply.

Application Solution:

There are many liquid leak monitoring and detection technologies including: manual observation, floats, conductivity probes, etc. All have proven to work with varying degrees of success. Some rely on operator's time and attention, while some have mechanical parts and are prone to wear, hang-up, and failure.

A better solution for liquid leak detection is the Thermal Differential Switch. The TD switch has two thermal sensing devices (RTD's) encased in stainless steel tips. One sensor detects the temperature of the liquid while the second has a very small current applied to create a thermal differential above the liquid temperature. The differential temperature between air and liquid is different. Therefore detection of an uncovered sensor probe and a probe covered by the liquid is a simple, reliable technique for a point leak monitor and detector

With a single process connection into the interstitial cavity of a double wall tank or between a single wall tank and its vault a TD probe can be strategically located to monitor and detect any leak from the primary tank. The sensing probes can be fitted with flexible hosing to allow insertion in the interstitial space cavity of a double wall tank or between the single wall tank and its vault to a strategic location to detect a leakage. When the probe detects the liquid, the TD switch activates a relay output to alarm that a leak has occurred.

Any of the Delta M Corporation microtuf® and Versa-Switch® liquid level product models can provide the solution in this application. The dual channel Versa-Switch® has the added feature of a second relay contact for detection of a second liquid. For instance if ground water were to leak into the outer tank or vault wall the second channel of the Versa-Switch® the second relay would alarm for that condition. The first channel alarm would be devoted to the primary tank leak detection of its contents be it oil, gasoline, other hydrocarbon products, or chemical.