

What is FM Global 7745 Standard for Leak Detection?

FM Global stands apart among commercial insurers because it focuses on preventing losses rather than simply paying claims. Through its testing and certification arm, FM Approvals, it defines performance standards for the FM7745 approval, that ensure leaks are detected in under 30 seconds or less.

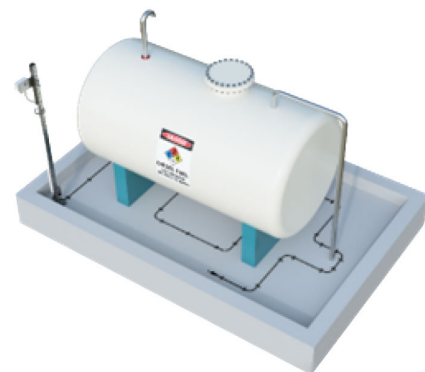
At the heart of the Naftosense system is a rope-style sensing element that behaves very differently from point sensors or float-based probes. Instead of waiting for liquid to pool at a single location, the rope sensor monitors extended linear paths where leaks are most likely to occur. When refined fuel contacts the sensing element, the system registers the change almost immediately. In controlled testing and real installations, it can detect extremely small volumes of refined hydrocarbons in under 30 seconds. That response time matters, because even modest diesel or fuel oil leaks can spread invisibly along floors, containment berms, or pipe racks before anyone notices an odor or visible sheen.

The Naftosense FM7745 Solution

Naftosense re-designed our standard oil and gas products into a new system built specifically for rapid detection of hydrocarbons in under 30 seconds. The technology ignores the presence of water and zeros in on refined fuels and other hydrocarbon based liquids. The sensing element reacts only to the chemical signature of refined fuels rather than general conductivity or moisture, which allows facilities to run the system continuously without constant recalibration or false positive alarms.

Naftosense's FM7745 leak detection system consists of up to 3 sensors of any type or length. The rope style sensors (FLD-HSC) installed around storage tanks, gen sets, containment areas and plumbing. Sensor probes (FLD-02W) can be used in combination with sensor ropes for sumps, low points, and elevator pits. The (FLD-SMC) master controller has a convenient LCD display with many alarm annunciation options to integrate. Alarm outputs include Modbus TCP, RTU and dry contact outputs to integrate into BMS / PLC.

Leak sensor probes can be cleaned using our proprietary cleaning and testing spray (FLD-TCP-II). This is helpful for installation/qualification and cleaning sensors after a leak has occurred. System comes with a 10-year factory warranty on sensor and controls.



Industrial Hydrocarbon Leak Detection Solutions

The FLD-HSC is a fully encapsulated high-performance sensing rope designed for detecting leaks of Hydrocarbon based fluids. Standard length of sensor rope are 10', 25' & 50'. With factory installed waterproof connectors you can quickly install in series of up to three sensors of any length. With our UV rated outer braid these sensors can be installed indoors, outdoors, and are rated for underground installation.

For smaller single sensor systems the FLD-HSC sensor is offered with a factory installed leader cable and end seal for easy deployment.

The FLD-O2W-SP is a leak detection probe designed for vertical installations to detect a thin film of hydrocarbons floating on water. With factory installed connector it is easy to integrate as a single sensor or the last sensor in the string in a low point or sump area.



FLD-HSC



FLD-O2W-SP

Typical detection times for BOTH models of hydrocarbon sensors:

Unleaded Gasoline:< 30 seconds*
 Diesel/Jet Fuel:< 30 seconds*
 Light Crude Oils:4-5 minutes
 Heavy Crude Oils:8-10 minutes
 Motor/Bunker Oils:10-13 minutes

*These performance metrics are validated by FM Approvals

FLD-SMC is designed to be connected three sensors of any length or style. Powered by 120VAC or 12-24 VDC it can be mounted anywhere indoors.

High-level interfacing to BMS/DCS is implemented through dry contact output or Modbus RTU/TCP. FLD-SMC also has an adjustable leak alarm threshold for existing contaminated sites so baseline hydrocarbon presence can be ignored.

