

# Dixon Can Help You Comply With NFPA 407



## Debunking the Confusion and Frustration Around Proposed NFPA 407 Changes

The facts are, that if affirmed, as of **June 2, 2021** you will need an additional automatic shutdown system for aviation fuel loading. NFPA is changing to be in line with API RP1004 which defines a standardized method for loading cargo tanks. API RP1004 was first issued by the API (American Petroleum Institute) almost 40 years ago to establish a standard interface between the tank truck and loading terminal. The standard was also established to improve the environmental and safety of the loading process. Today some 50,000 petroleum cargo tanks and 2,000 refined fuel terminals follow the API RP1004 standard across the U.S. The API standard has become an international standard now followed in Europe, Middle East, North and South America, Africa and Asia (some regions have issued their own standards, but all follow the API RP1004 standard).

The newly revised NFPA standard requires a primary and secondary means of shut off along with the liquid flow control. The secondary means of flow control must be a failsafe shutoff type system. The primary means is typically a flow meter. The secondary system is an API RP1004 compatible failsafe liquid level sensor mounted in the top of each tank compartment, wired to an API RP1004 compatible socket. This is the most basic system. With this system the refueling vehicle could be loaded at any petroleum terminal in the U.S.

There are two configurations of sockets one defined as “OPTIC” and color-coded blue, and a “THERMISTOR” color-coded green. The truck owner would install an OPTIC or THERMISTOR system on their truck refueler to match the overfill control monitor at the terminal. The terminal would have a matching “Overfill Control Monitor” with an API RP1004 compatible plug and cord set. This system provides the secondary shut off signal to the pump / valve control.

# How does it all work?

The terminal has a primary control of the loading process through a meter. Product is metered into the refueling truck. A terminal "Rack Overfill Monitor" would monitor the sensor mounted in the refueler truck, through an API compatible plug and socket connection, and verify the secondary sensors are functional and DRY. Normally a trailer is loaded by the meter. When the correct amount is loaded in the truck via the meter and the loading is stopped. Only if the trailer becomes "overfilled" does the sensor in the truck compartment signal the rack control monitor to initiate an emergency shut down of the loading process.

Dixon offers standard truck overfill system with all the components needed to become compliant with the new NFPA 407 requirements and be compatible with any API compatible equipment already in use.



The Right Connection®

**So, what are the options for my fuel trucks to comply?**

## Option 1: Straight 5-Wire Probe to Optic Socket

(FT101-12 Sensor with Housing, FT300SS Optic Socket, FT400-50 Cable, 10139 Cable Glands)



### **Option 2: Straight 2-Wire Probe to Thermistor Socket**

(FT151-12 Sensor with Housing, FT301SS Thermistor Socket, FT155 Thermistor Dummy, FT400-50 Cable, 10139 Cable Glands)



### Option 3: 2-Wire Probe to On-Board Monitor with Integral Dual Thermistor/Optic Sockets

**(FT208-390P, FT20801TWS, FT151P-12) BEST SOLUTION**





The Right Connection®

**So, what are the options for my fuel farm to comply?**

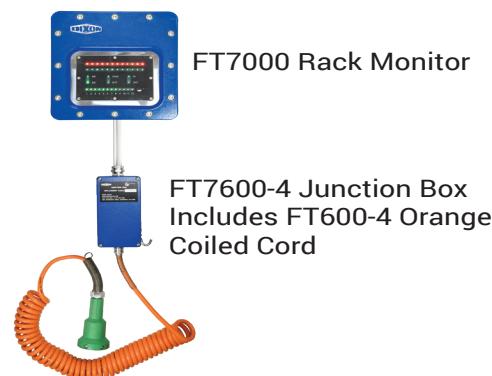
## **Option 1: Overfill Monitor with Optic Cord**

(FT7000 Rack Monitor, FT7620 Junction Box Includes Blue Optic Coiled Cord)



#### **Option 2: Overfill Monitor with Thermistor Cord**

(FT7000 Rack Monitor, FT7600-4 Junction Box Includes Orange Coiled Cord and 4-J Thermistor Plug)



## **Option 3: Overfill Monitor With Dual Optic/Termistor Cords**

(FT7000, FT7501 Dual Junction Box, FT7620 Blue Optic Coiled Cord, FT600-4 Orange Coiled Cord and  
4-J Thermistor Plug) **BEST SOLUTION**



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Dixon offers a team of sales professionals throughout North America and around the world, backed by 24x7 technical help and stocking locations near all major markets. We are here to help, simply pick up the phone and call or email us and let us know how we can help!

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