

Issue Date: May 23, 2024

Pneumercator Company, Inc.

**TMS 4000 and TMS 4000M Series with  
ES825-100(F), 100XF, 100CF Non-Discriminating Liquid Sensor, ES825-200(F), 200XF  
Discriminating Liquid Sensor**

**INTERSTITIAL DETECTOR (LIQUID-PHASE)**

**Detector:**

Output type: qualitative  
Sampling frequency: continuous  
Operating principle: optical sensor, electrical conductivity

**Test Results:**

**\*California requires annual certification of all leak detection equipment. The certification of discriminating sensors should include functional testing of both water and product detection capabilities.**

**Model ES825-200(F): This sensor can only respond to liquid directly in contact with the detection element, and is unable to detect a product release floating on an existing pool of water whose height exceeds the level of the detection element.**

<b>ES825-100(F), 100XF, 100CF Non-Discriminating Liquid Sensor</b>	<u>unleaded gasoline</u>	<u>diesel</u>	<u>water</u>
Detection time (min)	<1	<1	<1
Fall time (min)	<1	<1	<1
Lower detection limit (in)	0.344	0.363	0.319
<b>ES825-200(F), 200XF Discriminating Liquid Sensor</b>			
Detection time (min)	<1	<1	<1
Fall time (min)	<1	<1	<1
Lower detection limit (in)	0.324	0.363	0.294

**Specificity Results:**

**California Code of Regulations require a written statement of compatibility for systems containing products other than petroleum-based fuels (biodiesel blends greater than 20%, ethanol blends greater than 10%, solvents, etc.).**

**Manufacturer's Specifications:**

All the sensors are designed to connect to a controller system that indicates the status of the sensor. Manufacturer indicates that discriminating sensors ES 825-200F and 200XF incorporate an optical liquid sensor and a conductivity sensor. These sensors discriminate between product and water by determining if the optical sensor, which responds to any liquid, or the conductivity sensor, which responds only to water, causes an alarm.

**Comments:**

"F", "XF", and "CF" are variations of the same sensor distinguished by the material they are made of, such as PVC and Teflon.

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