



Retail Fuel Dispenser Security White Paper


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Executive Summary

The need to protect the access panels of a retail fuel dispenser has become mandatory for many gas station operators. Thieves will open the fuel dispenser, disable the fuel counter, and pump for free. As operators secure dispensers thieves move to another gas station.

Loxahatchee Electronics has addressed this need by creating an electronic alarm retrofit kit to monitor the access panels of a fuel dispenser. If an intrusion is detected the dispenser will be shut off and/or a signal can be sent to a central monitoring station.

Fuel dispenser tampering is becoming increasingly common and there are approximately 900,000 pumps in service. Many of these sites have security for the building, very few have security for the fuel dispensers.

Our system is specifically designed for retail fuel dispensers. The components are designed for this unique environment and safeguards are in place for the hazardous conditions,  listed.

In this paper we will describe the opportunity and challenges to provide a solution.

Introduction

Its no surprise that when gas went over the \$3 a gallon price that fuel theft steadily increased. The push from petroleum equipment buyers for lower costs from equipment manufactures, has made the equipment vulnerable to fuel theft. The manufactures have recognized this problem by now offering security options on new retail fuel dispensers. New fuel dispensers IS NOT an option for most fuel station operators.

A quote from the Association for Convenience and Fuel Retailing (NACS) :
”Gas theft still plagues retailers but sophisticated new methods of stealing fuel bring additional threats.”

Oil companies are trying hardware solutions, this does increase costly equipment repairs and may not stop the theft. Heavy bars and locks make the customers feel uncomfortable.

Station owners realize that they can not rely on the cashiers to confront a fuel thief. Sometimes employees are involved, sometimes they are intimidated.

Bulky chains and steel bars is not the image oil companies are trying to convey. They spend a fortune promoting their image, a clean safe environment is most appealing


Loxahatchee Electronics has developed a robust solution to electronically monitor the access panels of a fuel pump. The completed solution is called the Defender_1.

The Defender_1 can be connected to an alarm company’s wireless transmitter. This connection gives the Defender_1 the ability to connect to most monitored alarm systems, without the need for additional wiring to the fuel pump.

Concerns in a Retail Fuel Environment:

- Credit Card Skimming
This is a major concern particularly for a multi-station operator. Their reputation is at stake. A breach may make it onto the local news.
- Costly Pump Repairs
Usually a thief will physically break into a pump using force, breaking expensive doors and causing \$1000 in damage plus the stolen fuel. Using steel bars and large locks only forces the thief to use larger and more destructive tools to gain access into the pump. Force is not the only way, the keys to open the panels of the pump are readily available.
- Lost Fuel
There have been organized thefts, losing thousands of gallons of fuel in a single incident.
- Corporate Image
Electronic protection is invisible to the consumer while protecting the fuel and the image of the oil company.
- State Mandated Fuel Tank Reconciliation
State laws mandate that fueling stations account for the fuel that is delivered to their stations. Accountably is important to protect the environment when dealing with hazardous materials. The problem with fuel theft is that often it is very difficult to determine the loss. The thieves have bypassed or broken the metering device.
- Consumer Safety
It is simply not safe to use a fuel dispenser that has been tampered with. An unsuspecting consumer could be the next one to use that pump. Smarter thieves try to cover up what they have done. A violated pump needs to be inspected by a professional before it is used by a consumer. Our system disables the pump.

DEFENDER_ONE

- 1 unit will protect both sides of the fuel dispenser
- Arms itself automatically
- When an intrusion is detected alarm will sound and the fuel pump will be deactivated. Until an inspection and re-activation of the fuel dispenser
- May be modified to work with all models of fuel pumps. Works with all terminals, fuel controllers and cash registers
- No additional station wiring
- Layers of protection are available
- Central alarm monitoring connections
- Custom solutions
-  Approved

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