



Cost vs. performance: TrueAlert ES is the best of both worlds.

An independent study finds TrueAlert ES outperforms non-addressable fire notification appliances at a lower overall cost.

Building owners, facility managers, contractors, architects and engineers are always looking for ways to improve the operation & safety of their buildings while lowering costs. Only TrueAlert ES gives you the advanced performance and safety of addressable appliances with an overall cost that is lower than non-addressable appliances.

This white paper will introduce findings from an independent study conducted by Worcester Polytechnic Institute researching the increased functionality and cost-effectiveness of smart building technologies incorporating addressable fire alarm notification. This study effectively shows why the addressable fire notification appliances, traditionally thought of as the more expensive units, could save on installation costs as well as ongoing savings associated with maintenance and annual testing.

A recent WPI study using a 12-story hotel layout compared addressable and non-addressable notification for the system. Each design used optimal wiring layout based on notification type.

Non-addressable notification must be installed in a series fashion and doesn't allow "spur" or "T-Tapped" arrangements in the wiring design. Additionally, all notification appliances on an individual circuit(s) operate as an entire group within a building and cannot be changed without re-wiring of the circuit(s).

Addressable notification can be installed in a variety of configurations, potentially optimizing (minimizing) wiring design. These appliances can be programmed to operate individually or as a "virtual" group as needed by the building irrespective of how the appliances are physically wired. Some future changes can be made with programming modifications without the cost and complexity of altering the wiring configurations.

The final drawings of the fire alarm system layout for the 12-story hotel show the proposed routing, with tags to identify the specific wires within each pathway. From these drawings, a third-party electrical contractor estimated the cost for both fire alarm systems. The cost estimate included everything that would be expected in a new fire alarm installation - wire, conduit, labor, and the system equipment. The total cost to install a fire alarm system using TrueAlert ES addressable notification was estimated to be at least 10% less than a traditional non-addressable notification system. The larger the project size and the higher the local cost of labor, the more TrueAlert ES can potentially save. In some projects, it can be as high as 12%. Decreased wire lengths in the addressable system offset the higher price of the technologically advanced appliances themselves. In addition, long-term maintenance for the addressable system is simplified through less control equipment maintenance, easier and more convenient testing of notification appliances and the ability to pinpoint circuitry problems with addressable points in the system.

KEY FINDINGS FROM THE STUDY

- A fire alarm system utilizing addressable notification appliances would be less expensive than a system with non-addressable notification appliances for the same building.
- The cost of equipment and wiring for the addressable appliances is lower in this example.
- Major cost savings are a result of the significantly reduced number of labor hours required to install the system with addressable notification appliances.

Based on these findings, fire alarm systems utilizing addressable notification appliances can provide significant cost savings for system installation and long-term maintenance of the system. Find out more about TrueAlert notification appliances.

[Read the full report.](#)

ADDRESSABLE AND EASILY ATTAINABLE

TrueAlert ES is a family of intelligent, addressable notification appliances that deliver:

- Individual appliance identification and addressability
- Unparalleled system design and installation flexibility
- Lower costs through more efficient use of wire and power
- Revolutionary appliance testing capabilities

WHY TRUEALERT ES WORKS

Easier, lower cost installation

- In an addressable fire alarm circuit, it isn't necessary to provide a continuous path between the panel and an end of line resistor because the panel is supervising each appliance. With this flexibility, many designers and installers choose to take advantage of a practice known as T-Tapping. This method of wiring helps reduce costs because it uses less wire and can be more convenient for contractors who are installing.

Fewer disruptions using self-test

- With UL Verified self-testing capabilities, TrueAlert ES appliance notification can be tested during "off peak" hours, minimizing disruption for occupants. Testing can be performed as often as desired and assists customers in complying with testing requirements and improving maintenance.

Accurate troubleshooting

- Each addressable notification appliance has a unique address and a location description label (e.g., Second Floor Electrical Closet) associated with it. This advanced identification enables more efficient and effective troubleshooting for specific appliances that need it.

Groundbreaking flexibility

- When laying out a system with addressable appliances, circuits can be designed to go further with less wire, creating a system that is highly scalable and primed for any expansion. Appliances can also be controlled individually or programmed into groups to send messages to selected areas of the building without any respect for physical circuit routing.

Transformative efficiency

- With a lower power consumption and smaller gauge, TrueAlert ES can support up to 30% more appliances than non-addressable circuits and save on energy costs. In an addressable fire alarm circuit, each piece of equipment on the circuit is equipped with the ability to routinely send and receive data to and from the fire alarm control panel, enhancing the effectiveness of your system.

LEARN MORE

With easier installation, better reporting, fewer disruptions, more flexibility, more efficiency and lower-cost maintenance, the TrueAlert ES fire alarm system is the optimal solution to assist you with your safety needs. TrueAlert ES products are available through a global network of authorized distributors.