



JCI Digital's False Alarm Reduction Service

Discover the Analytical Power of Your Security System



THE NEW JOHNSON CONTROLS

Building Controls	Security & Fire Technology
HVAC Solutions & Services	Retail & Loss Prevention
Digital Solutions	Integrated Solutions & Services

Johnson Controls is uniquely positioned to be a world leader in building and energy storage solutions and technologies. Our industry leading brands, innovative technologies, global footprint and operating system allow for significant scale and compelling value creation.

YOU MAY KNOW US AS



Critical Data



98% of security alarms are false alarms creating a \$3.2 billion industry problem

Market stakeholders are unable to distinguish between a true alarm and a false alarm, so they must **react to all alarms**

100% of the time alarms tell you something about your security wellness

We understand your security monitoring challenges
A trusted name in the security industry for over 100 years.

Key Contributors of False Alarms

People Changes

- Employee turnover
- Seasonality

Corporate Policy

- Store risk rating changes
- SOP changes
- Security initiatives
- Delegation of authority

Environment

- Remodels/ Marketing
- Weather
- Cultural & talent influences

System Configuration

- Zone changes
- Adding/removing users
- PIC code changes
- Call tree changes
- PIR sensitivity changes
- Equipment interactions

Product Changes

- Field failures rates, changing tolerances
- Product obsolescence

Panel SW Programming

- Inaccurate product configurations
- Install configurations



Introducing... False Alarm Reduction Service

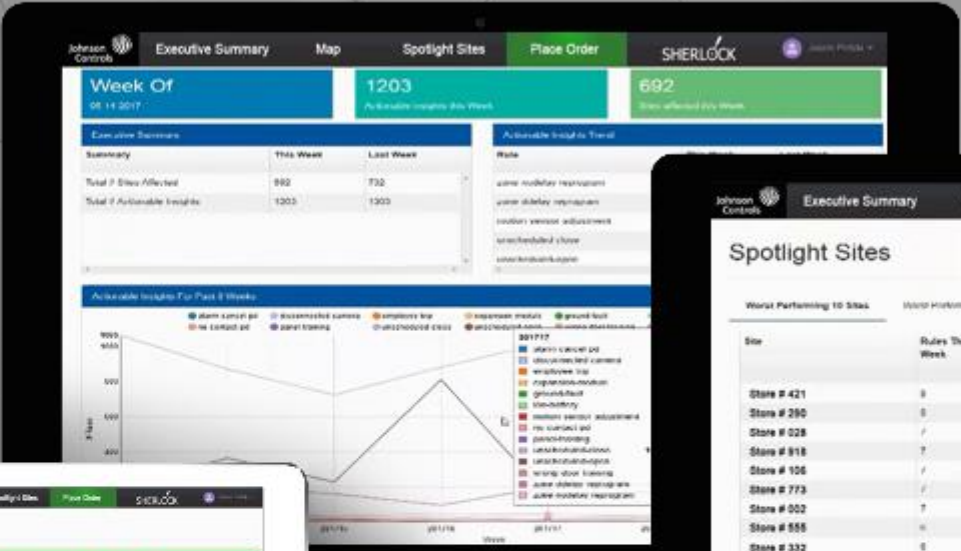
A **first of its kind** application service enabling you to monitor your sites' security wellness and take actions to eliminate preventable false alarms.

Actionable insights into false alarm activity by region and site put the power in back in your hands.



Data Driven Recommendations

Executive Weekly Summary

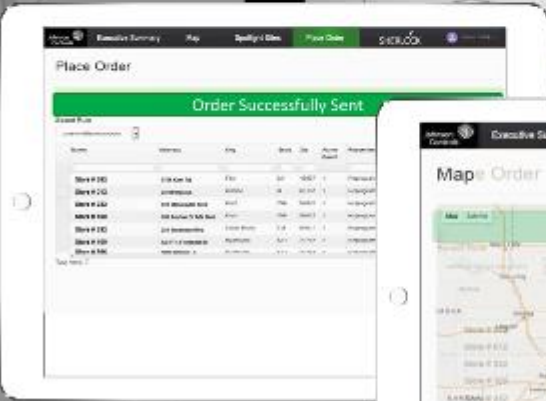


Spotlight Problem Sites

The screenshot shows the 'Spotlight Sites' dashboard with a table of 'Worst Performing 10 Sites'. The table lists site numbers and various incident counts across different categories.

Site	Rules This Week	Zone-Notelay-Program	Zone-Delay-Program	Wrong-Door-Training	Panel-Training	Ground-Fault	Motion-Sensor-Adjustment	Unscheduled-Climate	
Store # 421	8	0	0	0	0	0	0	7	0
Store # 290	5	0	0	0	0	0	0	0	0
Store # 028	7	0	1	0	0	0	0	0	0
Store # 916	7	0	0	0	0	0	0	7	0
Store # 106	7	0	0	0	0	0	0	0	7
Store # 773	7	0	4	0	0	0	0	0	0
Store # 002	7	0	6	0	0	0	0	1	0
Store # 555	6	0	0	0	0	0	0	0	0
Store # 332	5	0	0	0	0	0	0	0	0
Store # 511	5	0	0	0	0	0	0	0	1

Take Action with Easy Order Button



Local/Regional Site Geo-mapping



Data Driven Methodology



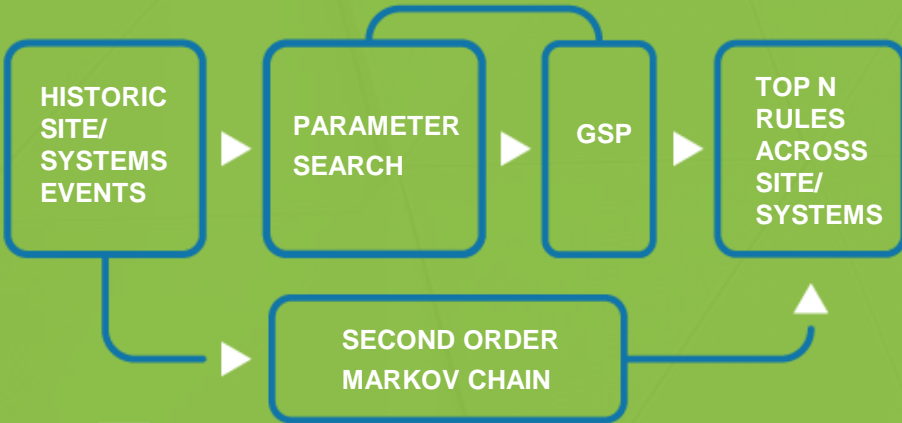
Event

Alarm panels send individual events



Signals

Dispersed Signals
(i.e. Door Open vs Door Closed)



Signatures

Signatures are correlated signals based on ML rules.



Patterns

Signatures with time series events applied develop repeatable false alarm patterns

Door Delay



Employee Error



Expansion Model



Ground Fault



Low Battery



Recommendations



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0010001101010111
1101100111011101
001000110010001110
1101100111011001
1101100111011101
001000110010001110
1101100111011001
001000110010001110
1101100111011101
1101100111011001
  
```



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001000110
111011001
001000110
111011001
111011001
  
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Bayesian Inference, Probabilistic Programming

Programming includes exponential, uniform, negative binomial. Historical door delay, prediction from posterior door distribution.

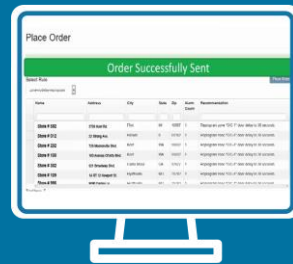
How It Works....



Application with data to indicate action needed



User clicks approve to generate an action



Monitoring Center takes action (e.g. roll a truck, change system configuration, change perform remote resolution)



Customer sees ROI results when implementing training, employee trip, schedule violations and more.



Root cause issue resolved



Customer sees progress and tracks resolution of false alarms

Your Engagement Benefits



No additional
site equipment
to install



Security panel
manufacture
agnostic



No additional
manpower
*(Optimize your team's
efficiency)*




Continuous risk
monitoring



Site agnostic
*(Works at single site or
thousands of sites across
any vertical)*

Success in Action.. Large Communications Retailer

- ✓ Customer expected to save \$160,000 in the first year.
- ✓ 30% yoy. reduction in signal volume
- ✓ 23% decrease in false police dispatch rate in 12 months
- ✓ Continued savings from reduced business interruptions
- ✓ Improved customer experience



Large Communications Retailer - Case Study

False Alarm Reduction Service

Reduce Monthly Savings

Partnering a retail customer with an alert system to mitigate problem false alarm events, for the purpose of saving on their monthly expense of personnel costs and false alarm dispatches.

While they have more than 1,000 stores, and you know the reason the False Alarm Reduction Service was selected was to reduce the volume of false alarm events, the fact that they chose this service was not only a sign of their commitment to the world's largest communications retailer, but also a sign of their commitment to the world's largest communications retailer. The False Alarm Reduction Service was selected for its ability to reduce the volume of false alarm events, for the purpose of saving on their monthly expense of personnel costs and false alarm dispatches.

Intelligent Algorithms Take a Reasonable Approach

The False Alarm Reduction Service from Johnson Controls is designed to minimize the number of false alarm events, thereby reducing the volume of false alarm events, for the purpose of saving on their monthly expense of personnel costs and false alarm dispatches.

Recommendations and Benefits:

REDUCED SIGNAL COSTS The volume of false alarm events is reduced, resulting in lower monthly signal costs.	REDUCED PERSONNEL COSTS The volume of false alarm events is reduced, resulting in lower monthly personnel costs.	REduced DISPATCH COSTS The volume of false alarm events is reduced, resulting in lower monthly dispatch costs.
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Johnson Controls

Cost Reduction is Substantial

Johnson Controls has found a way to reduce a significant portion of a client's false alarm events. The False Alarm Reduction Service from Johnson Controls is designed to minimize the number of false alarm events, for the purpose of saving on their monthly expense of personnel costs and false alarm dispatches. The False Alarm Reduction Service was selected for its ability to reduce the volume of false alarm events, for the purpose of saving on their monthly expense of personnel costs and false alarm dispatches.



Savings Expected

This large communications retailer is expected to save \$160,000 in the next year. Using the False Alarm Reduction Service from Johnson Controls, the retailer is expected to reduce customer interruptions and false alarm events, resulting in a significant cost reduction.

The following is a sample of the implementation flow using the False Alarm Reduction Service:

1. INITIAL CONSULTATION
2. SITE VISIT
3. SYSTEM ANALYSIS
4. IMPLEMENTATION
5. MONITORING AND MAINTENANCE

What services are included in the False Alarm Reduction Service?

"We started with an inventory problem and leveraged our domain expertise in the security world, coupled with our strength in data science and analytics to develop a solution that addresses the problem for this large retailer. Our technology provides actionable insights that allow the customer to see and manage what was once an out-of-control problem - their customers."

Learn more about False Alarm Reduction Service at
www.johnsoncontrols.com/digital

Johnson Controls

Learn more about this case study at
<https://www.johnsoncontrols.com/digital>