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Interactive Course

Tutorial

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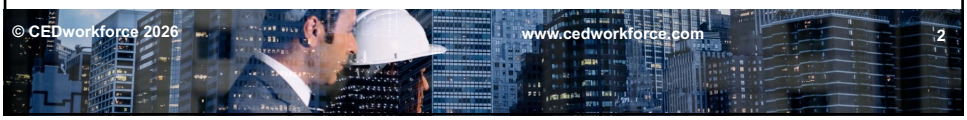

False Alarm Prevention
FL02-02I
2 Hour

False Alarm Prevention

Course No: FL02-02I - Course Credit: 2 Hour

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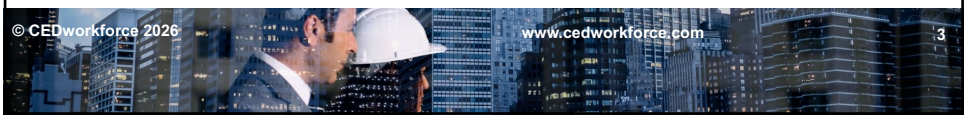


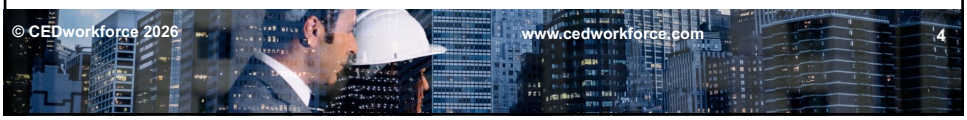
OVERVIEW

PART I: False Alarm Prevention Basics and Fundamentals

- Part I introduces false alarm prevention, including definitions, classifications, and types of unwanted alarms in fire and security systems, as well as their applications in residential, commercial, and industrial settings.

Part II - The 2025 Florida Statutes – Chapter 489 Part II Electrical and Alarm System Contracting and Chapter 633 Fire Prevention and Control

- Part II introduces the regulatory framework governing alarm system work in Florida.



False Alarm Prevention
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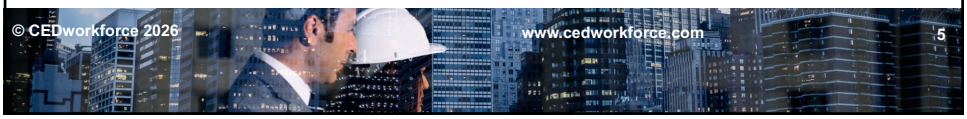
OVERVIEW

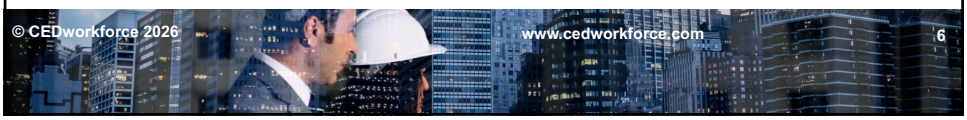
Part III - NFPA 72: National Fire Alarm and Signaling Code

- Part III explores the industry standards outlined in NFPA 72 National Fire Alarm and Signaling Code, with particular emphasis on requirements related to false alarm prevention, nuisance alarm reduction, system performance, inspection, testing, and maintenance.



LEARNING OBJECTIVES

1. To define false alarm prevention, including key terminology, classifications, types of false alarms in fire and security systems, and common causes of false alarms in fire and security systems.
2. To distinguish between different types of false alarms, including false fire and false burglar alarms.
3. To understand the applications of alarm systems and how design, environment, and user interaction influence false alarm occurrences.
4. To learn best practices for proper system design, installation, and configuration to support false alarm prevention.
5. To recognize the importance of inspection, testing, and maintenance in reducing false alarms and improving system reliability.



False Alarm Prevention
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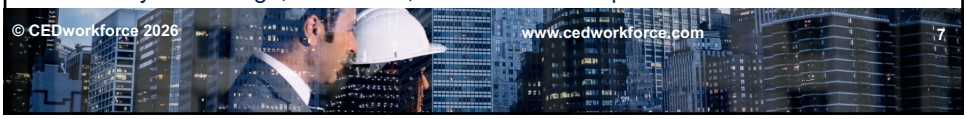
LEARNING OBJECTIVES

6. To apply effective troubleshooting techniques to identify and resolve the causes of unwanted alarms.
7. To become familiar with state rules and guidelines aimed at preventing unnecessary police and fire dispatches.
8. To understand licensure requirements, scope of practice, and legal responsibilities under Chapter 489 Part II Electrical and Alarm System Contracting as they apply to alarm system contractors.
9. To understand the regulatory framework of Chapter 633 Fire Prevention and Control as it relates to fire alarm systems and false alarm prevention.
10. To become familiar with the requirements of NFPA 72 National Fire Alarm and Signaling Code concerning false alarm prevention, including system design, installation, and maintenance practices.



PART I:

FALSE ALARM PREVENTION BASICS AND FUNDAMENTALS

INTRODUCTION TO FALSE ALARMS: DEFINITIONS AND KEY CONCEPTS

What is a False Alarm?

- A false alarm is when a system detects a problem or event that is not actually happening.
  In simple words: “The system thinks something is wrong—but it isn’t.”

- Examples: fire alarms, medical tests, spam filters, cyber alerts
  - A fire alarm rings – but there is no fire
  - A security system activates – but no intruder is present

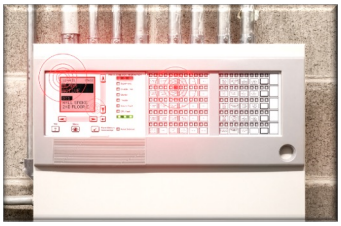
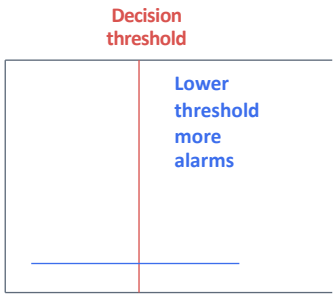


Figure 1: Fire alarm system with active alert and peeping

Why do false alarms happen?

1. Noise or interference in data
2. Threshold set too low or sensitivity too high
3. Imperfect models, sensors, or rules
4. Ambiguous patterns that resemble real events



False alarm vs. missed detection

- There are four possible outcomes in detection systems
  - **True positive:** correctly detects a real event
  - **False alarm (false positive):** detects an event that is not real
  - **Missed detection (false negative):** fails to detect a real event
  - **True negative:** correctly identifies no event
- False alarms and missed detections are the two main types of errors. There is a trade-off between them.
- Reducing false alarms can increase missed detections, and vice versa.
- The goal is to balance both to improve system performance.

Why false alarms matter

- **Alarm fatigue:** People start ignoring frequent warnings
- **Wasted resources:** Time, labor, and money are spent checking harmless alerts
- **Loss of trust:** Users doubt the system and delay responses
- **Poor decisions:** Leaders may act on misleading information

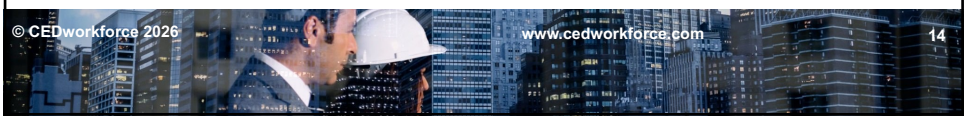
Key message: false alarms are not harmless. Too many of them can make a safety system less safe.

- False alarms are a normal part of detecting risk under uncertainty.
  - ➢ Systems try to separate real signal from random noise
  - ➢ Higher sensitivity catches more real events but raises false alarms
  - ➢ Good design balances detection with trust and usability
- A false alarm is an alert without a real event, and managing them is essential for reliable decision-making.

APPLICATIONS AND OPERATIONS OF ALARM SYSTEMS

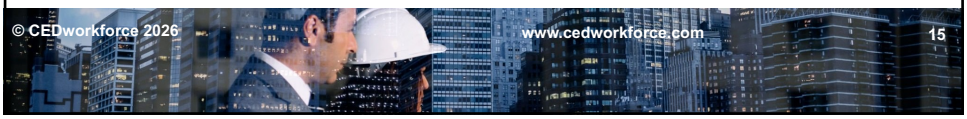
Alarm systems are used in many areas, depending on the type of risk being managed:

- **Residential use:** Home alarm systems protect against burglary, fire, and gas leaks. They help homeowners feel safe and can alert authorities in emergencies.
- **Commercial and industrial settings:** Businesses use alarm systems to prevent theft, unauthorized access, and workplace hazards. Factories may also use them to detect equipment malfunctions.
- **Public institutions:** Schools, hospitals, banks, and airports rely on alarm systems for crowd safety, emergency evacuation, and security monitoring.



Alarm systems are used in many areas, depending on the type of risk being managed *(Cont'd)*:

- **Vehicle protection:** Car alarm systems deter theft by sounding alerts when unauthorized entry is detected.
- **Environmental and hazard detection:** Some systems monitor smoke, heat, flooding, or carbon monoxide, helping prevent disasters before they escalate.



Alarm systems follow a structured process to detect and respond to threats:

- **Sensing (Detection):** Devices such as motion sensors, door/window contacts, and smoke detectors continuously monitor the environment for unusual activity.

Figure 2: Smoke Detectors

- **Signal Transmission:** When a sensor is triggered, it sends a signal to a central control panel.
- **Processing (Control Panel):** The control unit analyzes the signal to determine whether it represents a real threat.

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INTRODUCTION TO FALSE ALARMS: DEFINITIONS AND KEY CONCEPTS (CONT'D)

False Alarm Prevention
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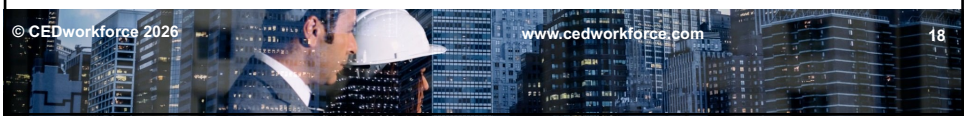
Alarm systems follow a structured process to detect and respond to threats *(Cont'd)*:

- **Activation:** If a threat is confirmed, the system activates alarms such as sirens, flashing lights, or warnings.
- **Notification:** Modern systems can send alerts to smartphones or monitoring centers for quick action.
- **Response:** The user, security personnel, or emergency services respond to the situation.

False alarms in home security systems can happen for several common reasons:

- **Malfunctioning equipment:** Even high-quality systems can sometimes have defective parts, which may cause alarms to go off unexpectedly.
- **User mistakes:** Although most systems are simple to use, people may trigger alarms accidentally if they haven't fully learned how to operate them—especially right after installation.
- **Low batteries or unstable power:** Wireless systems rely on batteries that need regular replacement. If batteries run low or the power supply is inconsistent, the system might send a false alert.



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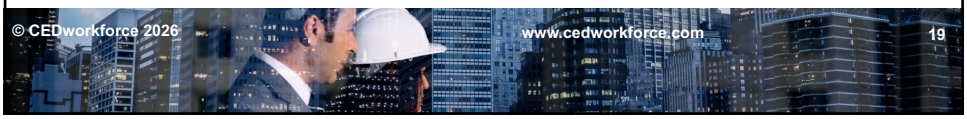
INTRODUCTION TO FALSE ALARMS: DEFINITIONS AND KEY CONCEPTS (CONT'D)

False Alarm Prevention
FL02-02I
2 Hour

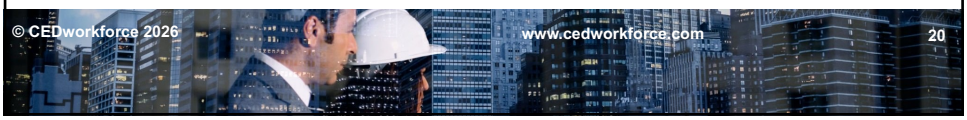
False alarms in home security systems can happen for several common reasons *(Cont'd)*:

- **Loose or unsecured doors and windows:** Sensors detect movement or separation. If a door or window isn't firmly closed, wind or slight movement can activate the alarm.
- **Improper setup:** If sensors and devices are not installed correctly or aligned properly, they may not function as intended, leading to unnecessary alarms—this is more common with DIY installations.
- **Animals or insects:** Motion detectors can be triggered by pets, as well as small animals like rodents or even insects. Using pet-friendly sensors can help reduce this issue.



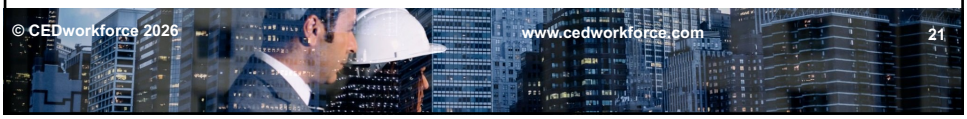
FALSE BURGLAR ALARMS: CHARACTERISTICS AND PREVENTION METHODS

- A false burglar alarm is an alarm signal that indicates a break-in or intrusion when no actual crime is taking place. In simple terms, the system reacts as if there is a burglary, but the alert is triggered by something harmless or accidental.
- Alarm associations suggest that false burglar alarms are not evenly distributed: some alarm systems experience no false alarms, and others, many. In some jurisdictions, the pattern of false alarms is much more widely distributed.
- Whether concentrated across locations or not, the aggregate number of false alarm calls among all alarmed premises places a high demand on limited police resources.



Causes of False Burglar Alarms

- **User errors:** Incorrect codes, leaving doors/windows open, improper use, pets or objects triggering sensors
- **Faulty equipment:** Defective or unsuitable alarm devices
- **Poor installation:** Incorrect placement or setup of sensors and system components
- **Weather conditions:** Wind, storms, or extreme temperatures affecting sensors
- **Monitoring errors:** Mistakes by alarm monitoring centers
- **Signal/line issues:** Communication or network problems causing false alerts



Effectiveness of Burglar Alarms

- Designed to **prevent burglary** and **assist police in catching offenders**
- Proven to be **effective deterrents** (U.S. & U.K. studies)
- Burglars often avoid alarmed properties due to **easier targets available**
- **Alarm signs/stickers alone** can discourage intruders
- Other effective deterrents:
  - Signs of occupancy
  - CCTV cameras
  - Motion-activated lights
  - Dogs, neighbors, window bars

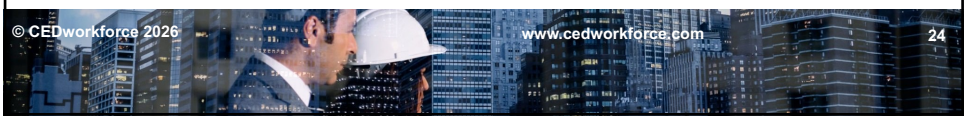
Figure 4: House Burglar Alarm System

Effectiveness of Burglar Alarms *(Cont'd)*

- **Limitations:**
  - High false alarm rates reduce efficiency
  - Can place a **burden on police resources**
- **Crime trends:**
  - Burglary rates declined over time
  - **No clear evidence** alarms alone caused the decline

Costs of False Burglar Alarms

- Each false alarm uses about **20 minutes of police time** (often 2 officers)
- Leads to **hundreds of millions of dollars** in public costs
- Costs are **rarely recovered through fines**
- **Direct costs include:**
  - Police call-takers and dispatchers
  - Officers' time, equipment, and backup support
  - Analysis and handling of false alarm cases
  - Alarm management systems (software, hardware, office space)



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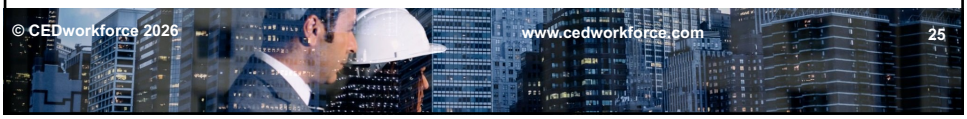
FALSE BURGLAR ALARMS: CHARACTERISTICS AND PREVENTION METHODS (CONT'D)

False Alarm Prevention
FL02-02I
2 Hour

Costs of False Burglar Alarms *(Cont'd)*

- **Administrative costs:**
  - Permits, billing, and notifications
  - Public education programs and materials
- **Hidden costs:**
  - **Lost opportunities** (police unavailable for real emergencies)
  - **Delayed response** to other 911 calls
- **Additional risks:**
  - Officer injuries
  - Vehicle damage during emergency responses



Hidden Impact of False Burglar Alarms

- **Distorts police distribution:**
  - More alarms in **wealthier areas** → more false alarm calls
  - Higher burglary rates in **urban & low-income areas**
- **Mismatch in risk vs. response:**
  - Households earning **below $25,000** face higher burglary risk
  - Those below **$7,500 income** have **2× higher risk** than households earning **$75,000+**
- **Skewed police allocation:**
  - Police deployment based on call data may send **more officers to high-alarm (not high-crime) areas**
- **Reduced police availability:**
  - Time spent on false alarms = **less time for real crime response**

Specific Responses to Reduce False Burglar Alarms

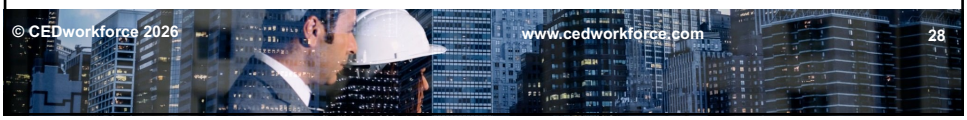
Most Effective Strategies

- **Verified response (before calling police):**
  - Alarm companies **confirm break-in (video/on-site)** before contacting police
  - Reduces alarm calls by **~90%**
  - Improves police response times
  - Example: Salt Lake City gained **~5 full-time officers' capacity**
- **Fees for false panic/duress alarms:**
  - Charges applied to reduce misuse
  - Encourages responsible activation
- **Limit response to building-based alarms:**
  - Avoids increase from **mobile/personal alarms**
  - Controls future growth of false calls

Specific Responses to Reduce False Burglar Alarms *(Cont'd)*

Moderately Effective Strategies

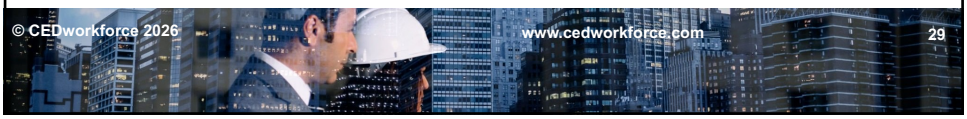
- **Enhanced call verification (2 calls):**
  - Contact owner via multiple numbers before police dispatch
  - Reduces false alarms by **~25–40%**
- **Temporary suspension of police response:**
  - After repeated false alarms
  - Encourages compliance and responsibility
- **User education programs:**
  - Training reduces repeat false alarms
  - Success varies by location



Specific Responses to Reduce False Burglar Alarms *(Cont'd)*

Administrative / Support Measures

- **Alarm permits & fines:**
  - Track users and penalize repeat false alarms
  - Limited long-term effectiveness
- **Charge fees to alarm companies:**
  - Reduces administrative burden on police
- **Outsource administration:**
  - Improves efficiency but **does not solve the problem**
- **Publish alarm company performance:**
  - Encourages better industry standards



Specific Responses to Reduce False Burglar Alarms *(Cont'd)*

Less Effective / Limited Impact

- **Cost-recovery fees only:**
  - Recover money but don't significantly reduce alarms
- **Dispatch cancellations:**
  - May reduce responses but increase dispatcher workload
- **Notifying alarm companies of abusers:**
  - Depends on company cooperation

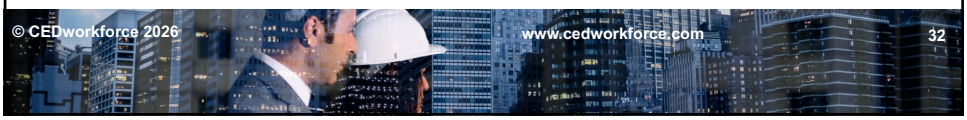
UNDERSTANDING AND REDUCING FLORIDA FALSE ALARMS SYSTEMS

Understanding Alarm Systems in Florida

- Alarm systems are designed to detect threats and reduce crime
- Homes with alarms are up to 6 times less likely to be burglarized
- Alarm systems provide early warning and quick response capability
- Widely used in residential, commercial, and public settings

The Problem of False Alarms

- False alarms occur when no real emergency exists
- They lead to unnecessary police dispatches and wasted resources
- High false alarm rates reduce system credibility and trust
- Can cause delays in responding to real emergencies



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UNDERSTANDING AND REDUCING FLORIDA FALSE ALARMS SYSTEMS (CONT'D)

False Alarm Prevention
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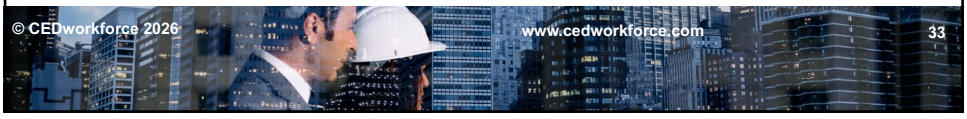
Key Causes of False Alarms

- **User errors:** Incorrect operation, poor training
- **Equipment issues:** Faulty or outdated systems
- **Poor installation:** Incorrect placement or setup
- **Lack of maintenance:** Sensors not properly serviced
- **Environmental factors:** Weather, pets, or insects triggering sensors



Impact on Police and Community

- Increases workload for police and dispatchers
- Delays response to real emergencies
- Creates significant public costs
- Reduces overall police efficiency and availability

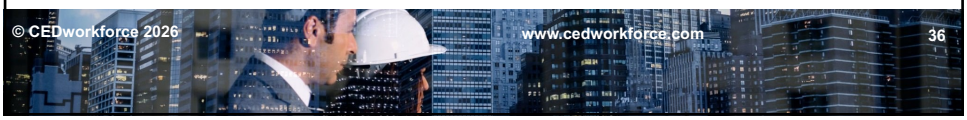
Strategies to Reduce False Alarms

- **Proper user training:** Train all users at installation
- **Regular system maintenance:** Fix faults and update systems
- **Use modern technology:** More accurate and reliable systems
- Follow industry standards and best practices
- Use verification methods before dispatching police

Figure 5: Alarm System Maintenance

Role of Alarm Companies and Users

- **Alarm companies:** Proper installation, support, and guidance
- **Users:** Correct operation and regular system checks
- Companies should provide ongoing training and maintenance services
- Users should avoid misuse and report system issues quickly



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UNDERSTANDING AND REDUCING FLORIDA FALSE ALARMS SYSTEMS (CONT'D)

False Alarm Prevention
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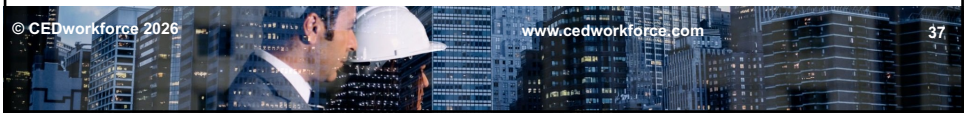
Key Takeaway

- Alarm systems are effective in crime prevention
- Reducing false alarms requires training + maintenance + proper use
- Collaboration between users, companies, and police is essential
- Goal: increase reliability while reducing unnecessary police calls



PREVENTING FALSE DISPATCHES: BEST PRACTICES FOR ALARM SYSTEM PROFESSIONALS

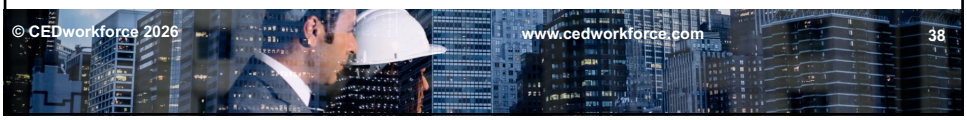
Reducing the Frequency of False Alarms

1. Choose the Right System

- Select a system based on home needs (pets, elderly, layout)
- Use licensed professionals or suitable DIY systems

2. Use a Familiarization Period

- Practice using the system without police dispatch risk
- Identify and fix issues early with company support



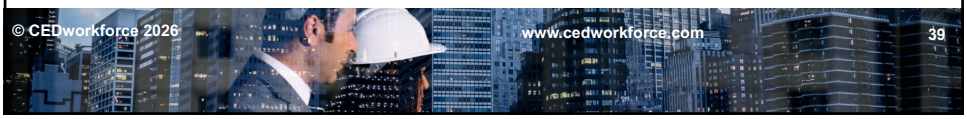
Reducing the Frequency of False Alarms *(Cont'd)*

3. Train All Users

- Ensure all users know how to arm/disarm and cancel alarms
- Share codes, passwords, and proper procedures

4. Use Advanced Technology

- Install systems with two-way communication
- Enables real-time verification with monitoring center



Reducing the Frequency of False Alarms *(Cont'd)*

5. Require Verification Before Dispatch

- Use audio/video confirmation before calling police
- Helps reduce unnecessary dispatches

6. Review After False Alarms

- Identify the cause of each false alarm
- Take steps to prevent recurrence

7. Perform Regular Maintenance

- Keep sensors clean, secure, and functional
- Check for dust, loose devices, or damage

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PREVENTING FALSE DISPATCHES:
BEST PRACTICES FOR ALARM
SYSTEM PROFESSIONALS (CONT'D)

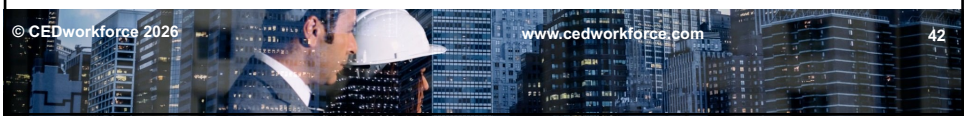
False Alarm Prevention
FL02-02I
2 Hour

8. Optimize System Settings

- Adjust entry and exit delays to allow users enough time to arm/disarm without triggering alarms
- Configure sensor sensitivity levels based on environment (pets, airflow, lighting conditions)
- Customize system settings to match daily routines and occupancy patterns
- Regularly review and update settings as household or building conditions change

9. Improve Sensor Placement & Zoning

- Divide the property into zones to pinpoint the exact source of alarm activation
- Install sensors in low-interference areas away from vents, windows, and moving objects
- Ensure proper height, angle, and alignment of motion detectors
- Use appropriate sensor types for each area (e.g., pet-immune, glass-break, door/window contacts)



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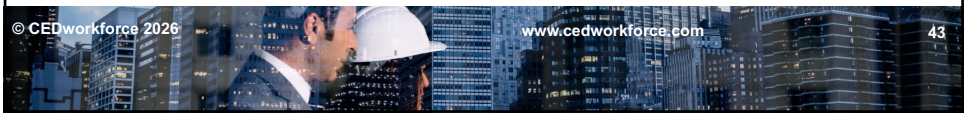
PREVENTING FALSE DISPATCHES:
BEST PRACTICES FOR ALARM
SYSTEM PROFESSIONALS (CONT'D)

False Alarm Prevention
FL02-02I
2 Hour

10. Use Data & Alarm History

- Maintain and review alarm event logs to track all activations
- Identify repeat false alarm locations or users
- Analyze patterns to determine common causes (time, activity, environment)
- Use data insights to adjust system settings and improve performance



11. Strengthen Communication & Backup Systems

- Use cellular and/or internet backup systems to ensure signal reliability
- Prevent false alarms caused by communication failures or signal interruptions
- Keep emergency contact lists updated for faster verification
- Ensure monitoring center can quickly reach responsible parties before dispatch

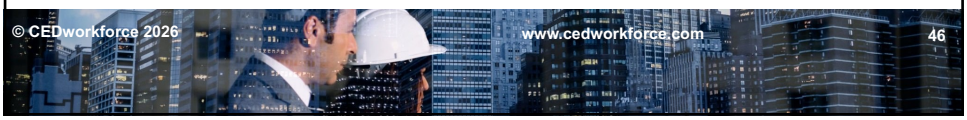
Additional Prevention Tips

- Secure all doors and windows before arming
- Ensure alarm company is licensed and reputable
- Test system regularly
- Keep batteries and backup power working
- Keep contact information updated
- Place panic buttons out of children's reach
- Be aware of environmental changes (pets, décor, HVAC)
- Use deadbolt locks for stability
- Control insects and pests near sensors
- Inform monitoring center when away for long periods

PART II: THE 2025 FLORIDA STATUTES

Chapter 489 Contracting – Part II Electrical and Alarm System Contracting

Chapter 633 Fire Prevention and Control

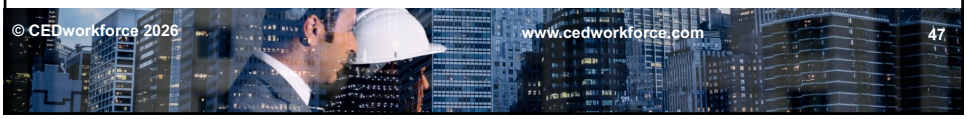


CHAPTER 489 CONTRACTING – PART II ELECTRICAL AND ALARM SYSTEM CONTRACTING

489.505 Definitions

- **"Alarm system"** means any electrical device, signaling device, or combination of electrical devices used to signal or detect a burglary, fire, robbery, or medical emergency.

- **"Alarm system contractor"** means a person whose business includes the execution of contracts requiring the ability, experience, science, knowledge, and skill to lay out, fabricate, install, maintain, alter, repair, monitor, inspect, replace, or service alarm systems for compensation, including, but not limited to, all types of alarm systems for all purposes.



- **"Alarm system contractor"** ***(Cont'd)***.
  - This term also means any person, firm, or corporation that engages in the business of alarm contracting under an expressed or implied contract; that undertakes, offers to undertake, purports to have the capacity to undertake, or submits a bid to engage in the business of alarm contracting; or that by itself or by or through others engages in the business of alarm contracting.
    a) **"Alarm system contractor I"** means an alarm system contractor whose business includes all types of alarm systems for all purposes.

    b) **"Alarm system contractor II"** means an alarm system contractor whose business includes all types of alarm systems other than fire, for all purposes, except as herein provided.

- **"Registered alarm system contractor I"** means an alarm system contractor whose business includes all types of alarm systems for all purposes and who is registered with the department pursuant to s. 489.513. A registered alarm system contractor I may contract only in the jurisdictions for which his or her registration is issued.

- **"Registered alarm system contractor II"** means an alarm system contractor whose business includes all types of alarm systems, other than fire, for all purposes and who is registered with the department pursuant to s. 489.513. A registered alarm system contractor II may contract only in the jurisdiction for which his or her registration is issued.

- **"Registered residential alarm system contractor"** means an alarm system contractor whose business is limited to burglar alarm systems in single-family residential, quadruplex housing, and mobile homes of a residential occupancy class and who is registered with the department pursuant to s. 489.513. The board shall define "residential occupancy class" by rule. A registered residential alarm system contractor may contract only in the jurisdiction for which his or her registration is issued.
- **"Burglar alarm system agent"** means a person:
  a) Who is employed by a licensed alarm system contractor or licensed electrical contractor.
  b) Who is performing duties which are an element of an activity which constitutes alarm system contracting requiring licensure under this part.
  c) Whose specific duties include any of the following: altering, installing, maintaining, moving, repairing, replacing, servicing, selling, or monitoring an intrusion or burglar alarm system for compensation.

"Fire alarm system agent" means a person:

a) Who is employed by a licensed fire alarm contractor or certified unlimited electrical contractor.
b) Who is performing duties which are an element of an activity that constitutes fire alarm system contracting requiring certification under this part.
c) Whose specific duties include any of the following: altering, installing, maintaining, moving, repairing, replacing, servicing, selling, or monitoring a fire alarm system for compensation.

489.518 Alarm System Agents

1) A licensed electrical or alarm system contractor may not employ a person to perform the duties of a burglar alarm system agent unless the person:
   a) Is at least 18 years of age or has evidence of a court-approved declaration of emancipation.

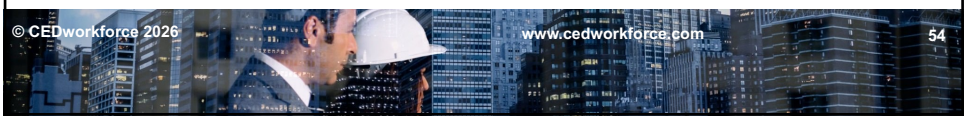
489.518 Alarm System Agents *(Cont'd)*

1) (Cont'd):
   b) Has successfully completed a minimum of 14 hours of training within 90 days after employment, to include basic alarm system electronics in addition to related training including CCTV and access control training, with at least 2 hours of training in the prevention of false alarms. Such training shall be from a board-approved provider, and the employee or applicant for employment shall provide proof of successful completion to the licensed employer. The board shall by rule establish criteria for the approval of training courses and providers and may by rule establish criteria for accepting alternative nonclassroom education on an hour-for-hour basis. The board shall approve providers that conduct training in other than the English language. The board shall establish a fee for the approval of training providers or courses, not to exceed $60. Qualified employers may conduct training classes for their employees, with board approval.

489.518 Alarm System Agents *(Cont'd)*

1) (Cont'd):

c) Has not been convicted within the last 3 years of a crime that directly relates to the business for which employment is being sought. Although the employee is barred from operating as an alarm system agent for 3 years subsequent to his or her conviction, the employer shall be supplied the information regarding any convictions occurring prior to that time, and the employer may at his or her discretion consider an earlier conviction to be a bar to employment as an alarm system agent. To ensure that this requirement has been met, a licensed electrical or alarm contractor must obtain from the Florida Department of Law Enforcement a completed fingerprint and criminal background check for each applicant for employment as a burglar alarm system agent or for each individual currently employed on the effective date of this act as a burglar alarm system agent.



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489.505 DEFINITIONS
(CONT'D)

False Alarm Prevention
FL02-02I
2 Hour

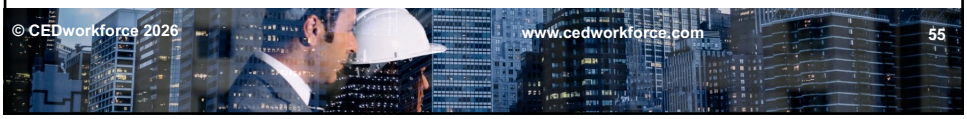
489.518 Alarm System Agents *(Cont'd)*

1) (Cont'd):

d) Has not been committed for controlled substance abuse or been found guilty of a crime under chapter 893 or a similar law relating to controlled substances in any other state within the 3-year period immediately preceding the date of application for employment, or the effective date of this act for an individual employed as a burglar alarm system agent on that date, unless he or she establishes that he or she is not currently abusing any controlled substance and has successfully completed a rehabilitation course.

(2)(a) Persons who perform only monitoring are not required to complete the training required for burglar alarm system agents.

- (b) Persons who perform only monitoring at an out-of-state location are not required to comply with background check requirements.



489.518 Alarm System Agents *(Cont'd)*

(2) (c) Persons who perform proprietary burglar alarm system agent duties for only a single employer, and who do not offer alarm system contracting services to the public, are not required to comply with background check requirements.

- (d) A state-certified electrical contractor, a state-certified alarm system contractor, a state-registered alarm system contractor, a journeyman electrician licensed by any local jurisdiction, or an alarm technician licensed by a local jurisdiction that requires an examination and experience or training as licensure qualifications, is not required to complete the training required for burglar alarm system agents. A state-registered electrical contractor is not required to complete the training required for burglar alarm system agents, so long as he or she is only doing electrical work up to the alarm panel.

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489.505 DEFINITIONS
(CONT'D)

False Alarm Prevention
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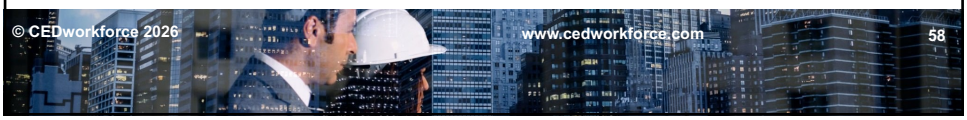
2 Hour

489.518 Alarm System Agents *(Cont'd)*

(2) (e) A nonsupervising employee working as a helper or apprentice under the direct, onsite, continuous supervision of a state-certified electrical contractor, a state-registered electrical contractor, a state-certified alarm system contractor, a state-registered alarm system contractor, a journeyman electrician licensed by any local jurisdiction, an alarm technician licensed by a local jurisdiction that requires an examination and experience or training as licensure qualifications, or a qualified alarm system agent is not required to complete the training otherwise required and is not required to be 18 years of age or older.

489.518 Alarm System Agents *(Cont'd)*

3) An applicant for employment as an alarm system agent, or an individual employed as a burglar alarm system agent on the effective date of this act, may commence or continue employment pending the completion of the required training and the results of the background check required by this section for a period not to exceed 90 days after the date of application for employment, or 90 days after the effective date of this act for individuals currently employed as burglar alarm system agents. However, the person must work under the direction and control of a sponsoring licensed electrical or burglar alarm system contractor pending the completion of the training and the criminal background check. If an applicant or an individual employed on the effective date of this act does not complete the training or receive a satisfactory criminal background check within the 90-day period, the employment must be terminated immediately.



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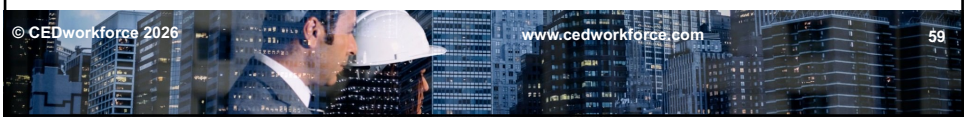
489.505 DEFINITIONS
(CONT'D)

False Alarm Prevention
FL02-02I
2 Hour

489.518 Alarm System Agents *(Cont'd)*

(4)(a) A licensed electrical or alarm system contractor shall furnish each of its burglar alarm system agents with an identification card.

- (b) The identification card shall be designed in a board-approved format. The card must include a picture of the agent, must specify at least the name of the holder of the card and the name and license number of the contractor, and must be signed by the contractor and by the holder of the card. Each identification card is valid for a period of 2 years after the date of issuance. The identification card must be in the possession of each burglar alarm system agent while engaged in burglar alarm system agent duties.
- (c) Each person to whom an identification card has been issued shall be responsible for the safekeeping thereof and shall not loan, or allow any other person to use or display, the identification card.



489.518 Alarm System Agents *(Cont'd)*

4) (d) Each identification card must be renewed every 2 years and in a board-approved format to show compliance with the 6 hours of continuing education necessary to maintain certification as a burglar alarm system agent.

   (e) Each licensed electrical or alarm system contractor must obtain an updated criminal background check from the Department of Law Enforcement for each burglar alarm system agent who renews certification.

5) Each burglar alarm system agent must receive 6 hours of continuing education on burglar alarm system installation and repair and false alarm prevention every 2 years from a board-approved sponsor of training and through a board-approved training course.

6) Failure to comply with any of the provisions of this section shall be a disciplinable offense against the contractor pursuant to s. 489.533.

489.5185 Fire alarm system agents

1) A certified unlimited electrical contractor or licensed fire alarm contractor may not employ a person to perform the duties of a fire alarm system agent unless the person:

   a) Is at least 18 years of age or has evidence of a court-approved declaration of emancipation.

489.5185 Fire alarm system agents *(Cont'd)*

1) (Cont'd):

b) Has successfully completed a minimum of 14 hours of initial training, to include basic fire alarm system technology in addition to related training in National Fire Protection Association (NFPA) codes and standards and access control training, with at least 2 hours of training in the prevention of false alarms. Such training must be from a board-approved provider, and the employee or applicant for employment must provide proof of successful completion to the licensed employer. The board, by rule, shall establish criteria for the approval of training courses and providers. The board shall approve qualified providers that conduct training in other than the English language. The board shall establish a fee for the approval of training providers, not to exceed $200, and a fee for the approval of courses at $25 per credit hour, not to exceed $100 per course.

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489.505 DEFINITIONS
(CONT'D)

False Alarm Prevention
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489.5185 Fire alarm system agents *(Cont'd)*

1) (Cont'd):

c) Has not been convicted within the last 3 years of a crime that directly relates to the business for which employment is being sought. Although the employee is barred from operating as a fire alarm system agent for 3 years subsequent to his or her conviction, the employer shall be supplied the information regarding any convictions occurring prior to that time, and the employer may at his or her discretion consider an earlier conviction to be a bar to employment as a fire alarm system agent. To ensure that this requirement has been met, a certified unlimited electrical contractor or licensed fire alarm contractor must obtain from the Department of Law Enforcement a completed fingerprint and criminal background check for each applicant for employment as a fire alarm system agent or for each individual currently employed on the effective date of this act as a fire alarm system agent.

489.5185 Fire alarm system agents *(Cont'd)*

1) (Cont'd):

d) Has not been committed for controlled substance abuse or been found guilty of a crime under chapter 893 or any similar law relating to controlled substances in any other state within the 3-year period immediately preceding the date of application for employment, or immediately preceding the effective date of this act for an individual employed as a fire alarm system agent on that date, unless the person establishes that he or she is not currently abusing any controlled substance and has successfully completed a rehabilitation course.

489.529 Alarm confirmation required

- All residential or commercial intrusion/burglary alarms that have central monitoring are required to have the alarm monitoring company attempt to confirm the alarm signal by call, text message, or other electronic means made to the owner, occupant, or an authorized designee associated with the premises generating the alarm signal before alarm monitor personnel contact a law enforcement agency for alarm dispatch.
- The alarm monitoring company must attempt to confirm the alarm signal a second time via communication with the owner, occupant, or an authorized designee associated with the premises if the first attempt to confirm is unsuccessful.

489.529 Alarm confirmation required *(Cont'd)*

- However, alarm signal confirmation is not required if:
  1) The intrusion/burglary alarm has a properly operating visual or auditory sensor that enables the alarm monitoring personnel to verify the alarm signal; or
  2) The intrusion/burglary alarm is installed on a premises that is used for the storage of firearms or ammunition by a person who holds a valid federal firearms license as a manufacturer, importer, or dealer of firearms or ammunition, provided the customer notifies the alarm monitoring company that he or she holds such license and would like to bypass the two-attempt confirmation protocol. Upon initiation of a new alarm monitoring service contract, the alarm monitoring company shall make reasonable efforts to inform a customer who holds a valid federal firearms license as a manufacturer, importer, or dealer of firearms or ammunition of his or her right to opt out of the two-attempt confirmation protocol.

489.530 Audible alarms

- Every audible alarm system installed by a licensed contractor shall have a device to automatically terminate the audible signal within 15 minutes of activation.
- A fire alarm system, whether installed voluntarily or as a requirement of an adopted code, which employs an audible fire signal is exempt as required by such code.

Figure 6: Audible Alarm

CHAPTER 633 FIRE PREVENTION AND CONTROL

633.104 State Fire Marshal; authority; duties; rules

1) The Chief Financial Officer is designated as "State Fire Marshal." The State Fire Marshal has authority to adopt rules pursuant to ss. 120.536(1) and 120.54 to implement this chapter. Rules must be in substantial conformity with generally accepted standards of firesafety; must take into consideration the direct supervision of children in nonresidential child care facilities; and must balance and temper the need of the State Fire Marshal to protect all Floridians from fire hazards with the social and economic inconveniences that may be caused or created by the rules. The department shall adopt the Florida Fire Prevention Code.

633.104 State Fire Marshal; authority; duties; rules *(Cont'd)*

2) Subject to the limitations of subsection (1), it is the intent of the Legislature that the State Fire Marshal shall have the responsibility to minimize the loss of life and property in this state due to fire. The State Fire Marshal shall enforce all laws and provisions of this chapter, and any rules adopted pursuant thereto, relating to:
   a) The prevention of fire and explosion through the regulation of conditions which could cause fire or explosion, the spread of fire, and panic resulting therefrom;
   b) Installation and maintenance of fire alarm systems and fire protection systems, including fire suppression systems, fire-extinguishing equipment, and fire sprinkler systems;

633.202 Florida Fire Prevention Code

1) The State Fire Marshal shall adopt, by rule pursuant to ss. 120.536(1) and 120.54, the Florida Fire Prevention Code which shall contain or incorporate by reference all firesafety laws and rules that pertain to and govern the design, construction, erection, alteration, modification, repair, and demolition of public and private buildings, structures, and facilities and the enforcement of such firesafety laws and rules.
2) The State Fire Marshal shall adopt the current edition of the National Fire Protection Association's Standard 1, Fire Prevention Code but may not adopt a building, mechanical, accessibility, or plumbing code. The State Fire Marshal shall adopt the current edition of the Life Safety Code, NFPA 101, current editions, by reference. The State Fire Marshal may modify the selected codes and standards as needed to accommodate the specific needs of the state. Standards or criteria in the selected codes shall be similarly incorporated by reference.

633.202 Florida Fire Prevention Code *(Cont'd)*

3) No later than 180 days before the triennial adoption of the Florida Fire Prevention Code, the State Fire Marshal shall notify each municipal, county, and special district fire department of the triennial code adoption and steps necessary for local amendments to be included within the code. No later than 120 days before the triennial adoption of the Florida Fire Prevention Code, each local jurisdiction shall provide the State Fire Marshal with copies of its local fire code amendments. The State Fire Marshal has the option to process local fire code amendments that are received less than 120 days before the adoption date of the Florida Fire Prevention Code.

633.346 Jurisdiction of State Fire Marshal over alarm system contractors and certified unlimited electrical contractors

1) If the State Fire Marshal, in the course of its activities pursuant to s. 633.104(2), determines that an alarm system contractor or a certified unlimited electrical contractor working with an alarm system has violated any provision of this chapter or the rules of the State Fire Marshal, the State Fire Marshal shall have jurisdiction, notwithstanding any other provision of this chapter, to order corrective action by the alarm system contractor or the certified unlimited electrical contractor to bring the alarm system into compliance with applicable standards set forth in this chapter and the rules of the State Fire Marshal.

633.346 Jurisdiction of State Fire Marshal over alarm system contractors and certified unlimited electrical contractors *(Cont'd)*

2) Any order issued by the State Fire Marshal shall comply with the provisions of chapter 120 and allow a reasonable time for corrective action to be completed.

3) The Department of Business and Professional Regulation and the Electrical Contractors' Licensing Board may participate, at their discretion, but not as a party, in any proceedings relating to corrective action.

4) The State Fire Marshal shall adopt standards, by rule, for the installation, maintenance, alteration, repair, monitoring, inspection, replacement, or servicing of fire alarms and fire alarm systems.

633.348 Requirements for fire alarm system equipment

- The requirements for fire alarm system equipment are:

1) Equipment supplied shall be approved by a nationally recognized testing laboratory, and installed in accordance with its procedures. Any testing laboratory wishing to be considered "nationally recognized" by the State Fire Marshal shall submit an application to the State Fire Marshal for certification in accordance with procedures established by the State Fire Marshal by rule.
2) Equipment shall be installed in accordance with the applicable standards of the National Fire Protection Association and procedures approved by said testing laboratory.
3) Each piece of equipment supplied shall be warranted for a period of 1 year against defects in material or operation.

633.348 Requirements for fire alarm system equipment

4) The fire alarm system contractor or the certified unlimited electrical contractor shall furnish the user with appropriate documentation as required by the National Fire Protection Association standards, operating instructions for all equipment installed, together with a diagram of the final installation, except where the ownership of the system remains with the contractor.
5) All fire alarm systems required by the State Fire Marshal's rules shall be installed, serviced, tested, repaired, inspected, and improved in compliance with the provisions of the applicable standards of the National Fire Protection Association as adopted by rule.
6) The State Fire Marshal shall promulgate specifications, by rule, regarding the information and data to be contained in the test certificate hereby required to be provided to the consumer when the fire alarm system is installed, serviced, tested, repaired, improved, or inspected.

633.3482 Prohibited acts regarding alarm system contractors or certified unlimited electrical contractors; penalties.

1) It shall be unlawful for any person, directly or through an agent, to sell, offer for sale, or give any make, type, or model of fire alarm system, either new or used, unless such make, type, or model has been tested and is currently approved or listed by a nationally recognized testing laboratory.

2) A person who violates this section commits a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

633.3482 Prohibited acts regarding alarm system contractors or certified unlimited electrical contractors; penalties *(Cont'd)*

3) It is a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083, for any fire alarm system contractor or certified unlimited electrical contractor to intentionally or willfully:
   a) Render inoperative any fire alarm system which is required by the State Fire Marshal's rules, except when the system is being serviced, tested, repaired, inspected, or improved.
   b) Improperly install, service, test, repair, improve, or inspect a fire alarm system.
   c) Knowingly combine or conspire with a person by allowing one's certificate to be used by an uncertified person with intent to evade this act. When a licensee allows his or her license to be used by one or more companies without having any active participation in the operation or management of the companies, such act constitutes prima facie evidence of any intent to evade this chapter.

633.3482 Prohibited acts regarding alarm system contractors or certified unlimited electrical contractors; penalties *(Cont'd)*

4) It is a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083, for any person to intentionally or willfully install, service, test, repair, improve, or inspect a fire alarm system unless:
   a) The person is the holder of a valid and current active license as a certified unlimited electrical contractor, as defined in part II of chapter 489;
   b) The person is the holder of a valid and current active license as a licensed fire alarm contractor, as defined in part II of chapter 489;
   c) The person is authorized to act as a fire alarm system agent pursuant to s. 489.5185; or
   d) The person is exempt pursuant to s. 489.503.

PART III:

NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE

CHAPTER 14: INSPECTION, TESTING, AND MAINTENANCE

- Chapter 14 addresses inspection, testing, and maintenance requirements for systems and the initiating devices and notification appliances connected to them.
- The installation of these systems is covered by the requirements in other chapters of the Code.
- Listed smoke detection devices not connected to a fire alarm system (often called stand-alone detectors) are sometimes in HVAC systems, door-releasing applications, and special hazard releasing devices.
- The requirements in Chapter 14, including sensitivity testing, apply to these types of detectors.

14.2.2 Performance.

14.2.2.1 Performance Verification.

- To ensure operational integrity, the system shall have an inspection, testing, and maintenance program.

14.2.2.1.1

- Inspection, testing, and maintenance programs shall satisfy the requirements of this Code and conform to the equipment manufacturer's published instructions.

14.2.2.3 Deficiencies.

14.2.2.3.1

- System deficiencies shall be corrected.

14.2.2.3.2

- If a deficiency is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner's designated representative shall be informed of the deficiency in writing within 24 hours.

Figure 7: System deficiencies

14.2.2.3.3

- In the event that any equipment is observed to be part of a recall program, the system owner or the system owner's designated representative shall be notified in writing.

14.4.4.3*

- In other than one- and two-family dwellings, sensitivity of smoke detectors shall be tested in accordance with 14.4.4.3.1 through 14.4.4.3.6.

14.4.4.3.1

- Sensitivity shall be checked within 1 year after installation.

14.4.4.3.3

- After the second required calibration test, if sensitivity tests indicate that the device has remained within its listed and marked sensitivity range, the length of time between calibration tests shall be permitted to be extended to a maximum of 5 years.

Figure 8: Sensitivity Tests

CHAPTER 17: INITIATING DEVICES

17.7.1.7

- The selection and placement of smoke detectors shall take into account both the performance characteristics of the detector and the areas into which the detectors are to be installed to prevent nuisance and unintentional alarms or improper operation after installation.
- The process of detector selection and how the design addresses the criteria outlined in A.17.7.1.8 and A.17.7.1.10 should be documented as part of the project file. See 17.7.1.1.

17.7.1.1*

- The smoke detection design documentation shall state the required performance objective of the system.

17.7.1.8*

- Unless specifically designed and listed for the expected conditions, smoke detectors shall not be installed if any of the following ambient conditions exist:
  1) Temperature below 32°F (0°C)
  2) Temperature above 100°F (38°C)
  3) Relative humidity above 93 percent
  4) Air velocity greater than 300 ft/min (1.5 m/sec)

17.7.4 Location and Spacing.

17.7.4.1* General.

17.7.4.1.1

- The location and spacing of smoke detectors shall be based upon the anticipated smoke flows due to the plume and ceiling jet produced by the anticipated fire, as well as any pre-existing ambient airflows that could exist in the protected compartment.
- NFPA Insights Collapse When determining the location and spacing of smoke detectors, the designer must consider how smoke is likely to flow. The likely flow of smoke depends on the ambient conditions as well as the fire.
- In some cases, the ambient airflow can be deduced by inspection. In other cases, the use of a velometer or an anemometer can be helpful in determining the direction and speed of ambient air currents that constitute the dominant ambient air movement in the compartment or space.

17.7.5 Heating, Ventilating, and Air-Conditioning (HVAC).

17.7.5.1*

- In spaces served by air-handling systems, detectors shall not be located where airflow prevents operation of the detectors.

17.7.5.3

- Detector spacings and locations shall be selected on the basis of anticipated airflow patterns and fire type.

17.7.5.4*

- Detectors placed in environmental air ducts or plenums shall not be used as a substitute for open area detectors.

17.7.5.5

- Detectors placed in environmental air ducts or plenums shall be permitted to be either supervisory or alarm initiating devices.

17.4.3

- Initiating devices shall be installed in a manner that provides accessibility for periodic inspection, testing, and maintenance.
- Installing initiating devices where they cannot be inspected, tested, and maintained during the life of the system is not permitted.
- The intent is not to discourage the use of portable ladders to access detection devices; the use of portable ladders would typically be needed to service detectors on ceilings of normal height and higher.
- Rather, the Code is concerned with extreme cases in which unusually tall extension ladders (e.g., those required in atriums) would be needed to service the devices.

17.9.3 Multi-Criteria Detectors.

17.9.3.1

- A multi-criteria detector shall be listed for the primary function of the device.

17.9.3.2

- Because of the device-specific, software-driven solution of multi-criteria detectors to reduce unwanted alarms and improve detector response to a nonspecific fire source, location and spacing criteria included with the detector installation instructions shall be followed.

CHAPTER 29: SINGLE & MULTIPLE-STATION ALARMS AND HOUSEHOLD SIGNALING SYSTEMS

29.3 Basic Requirements.

29.3.1*

- All devices, combinations of devices, and equipment to be installed in conformity with this chapter shall be approved, labeled, or listed for the purposes for which they are intended.

29.3.2

- Fire and carbon monoxidewarning equipment shall be installed in accordance with the listing and manufacturer's published instructions.

29.3.3*

- The installation of smoke, heat, fire, or carbon monoxide alarms or systems, or combinations of these, shall comply with the requirements of this chapter.

29.10.5 Operability.

- Single- and multiple-station alarms, including heat alarms, shall be provided with a convenient means for testing its operability by the occupant, system owner, or other responsible parties.

29.10.9.7*

- Alarm signals shall be permitted to be verified prior to reporting them to the fire service, provided that the verification process does not delay the reporting by more than 90 seconds.

29.11.1.4.1

- The supplier or installing contractor shall provide the system owner or other responsible parties with the following:
  1) An instruction booklet illustrating typical installation layouts
  2) Instruction charts describing the operation, method, and frequency of testing and maintenance of the warning equipment
  3) Printed information for establishing an emergency evacuation plan
  4) Printed information to inform system owners where they can obtain repair or replacement service, and where and how parts requiring regular replacement, such as batteries or bulbs, can be obtained within 2 weeks
  5) The instructions required in Section 29.14

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CHAPTER 29: SINGLE & MULTIPLE-STATION ALARMS AND HOUSEHOLD SIGNALING SYSTEMS (CONT'D)

False Alarm Prevention
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29.11.1.4.2

- The supplier or installing contractor shall provide the system owner or other responsible parties with information noting the following requirements:
  1) Replace smoke alarms and carbon monoxide alarms that fail to respond to tests.
  2) Replace smoke alarms and carbon monoxide alarms that have been in service longer than 10 years from the date of manufacture unless otherwise stated in the manufacturer's published instructions.

29.13 Inspection, Testing, and Maintenance.

29.13.1

- Fire and carbon monoxide alarm equipment shall be maintained and tested in accordance with the manufacturer's published instructions and per the requirements of 14.4.5, 14.4.6, and 14.4.8.

29.13.2

- All fire and carbon monoxide alarm equipment shall be restored to a normal condition after each alarm or test.

Figure 8: Fire and carbon monoxide alarm

29.14.1.1.1.2

- All alarms and detectors shall be plainly marked on the unit in accordance with the following:
  1) The sensitivity setting for an alarm having a fixed setting
  2) For an alarm that is intended to be adjusted in the field, the range of sensitivity
  3) The marked sensitivity indicated as a percent per foot obscuration level
  4) A nominal value plus tolerance marking

THANK YOU FOR LISTENING!

This concludes our presentation, and we hope that you enjoyed it.

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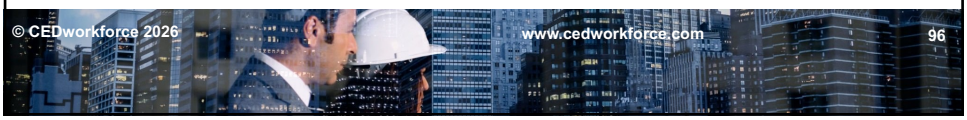
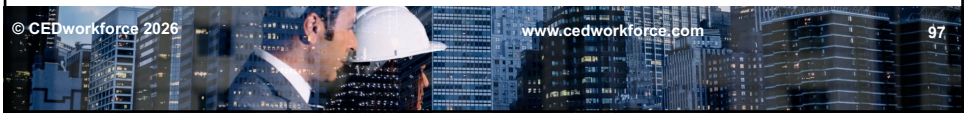


REFERENCES

This interactive presentation was adapted from:

- The 2025 Florida Statutes, Title XXXII Regulation of Professions and Occupations:
  - Chapter 489 Contracting – Part II Electrical and Alarm System Contracting
  - Chapter 633 Fire Prevention and Control
- NFPA 72: National Fire Alarm and Signaling Code



COURSE PROVIDER BIOGRAPHY

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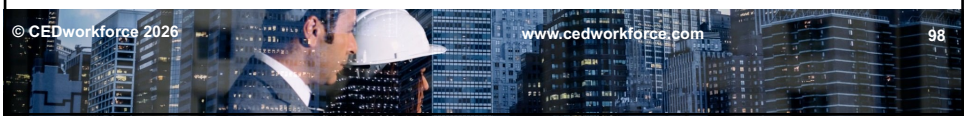

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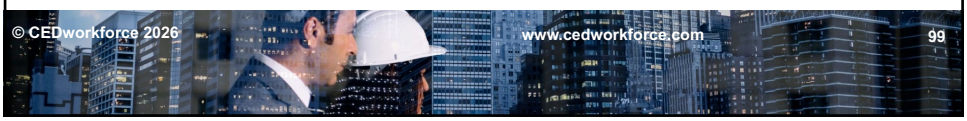
We look forward to seeing you again!



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