

Reduce costs in meeting new elevator fire safety standards

Elevator Alternate Floor Recall

ASME A17.1, Safety Code for Elevators and Escalators and NFPA 72 now requires alternate floor elevator recall, which may require you to upgrade both your elevator and fire systems. Multiple circuits between the elevator controller and the fire system are required to achieve alternate recall:

- Initiating devices activate the first circuit on the designated level for egress.
- Other elevator lobby detectors activate the second circuit.
- Devices in the elevator machine room and hoistway activate the third circuit.

A fire alarm signal from a detector on any of these circuits must recall the elevator nonstop to the designated level unless the signal comes from that level. Should that occur, the car must return to the “alternate” level.

The Challenges

Previously, elevator recall was required only to the primary landing floor in the event that any elevator lobby smoke detector reported an alarm. Most fire and elevator control systems provide minimum compliance, and no simple upgrade to meet the new code is possible.

- Many elevator controllers are not equipped for alternate floor recall.
- Fire control panels may only provide smoke detection for a single zone with a single relay output to the elevator control panel for the entire vertical lobby smoke detector loop.
- Fire control panels may not support additional detector inputs and may now also be obsolete.

Previous options for satisfying code requirements for pre-1996 systems include:

1. Replacement of the elevator controller
2. Replacement of the majority of the fire system
 - a. Fire panel replaced with addressable type and compliant with current fire codes
 - b. All initiation devices replaced with addressable type to ensure system interoperation
 - c. Addition of more circuits and relays to the elevator control room to facilitate alternate recall



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These options result in invasive construction including new conduit, wire, termination boxes to support all new detectors, and upgraded ancillary equipment on the new panel or loop. Affected buildings often have hard ceilings and wall coverings that are difficult to match, so aesthetics may be compromised by the need for surface-mounted conduits.

The Practical Solution

Hochiki now offers a solution to compliance with the new codes. The FireNet Vapor® VPR-15 is a unique high-sensitivity air-sampling smoke detector (ASD) that is able to pinpoint the source of an incipient smoke incident to speed response, enhance investigation and minimize business disruption and downtime.



Why FireNet Vapor® VPR-15?

- Reduced cost
- Faster installation
- Improved aesthetics in elevator lobby
- Resistant to vandalism and tampering in open areas
- Avoids FACP upgrade or replacement
- Elevator recall independent of fire control panel operation and future panel upgrades
- Enhanced fire detection performance in critical areas

The Advantages of FireNet Vapor®

FireNet Vapor® air-sampling smoke detectors provide early and reliable fire detection in areas with:

- Aesthetic requirements and challenging smoke dilution (e.g., atria)
- A history of vandalism and tampering (e.g., unsecured public areas)
- Environmental issues such as low/high temperatures, dust and high background levels (e.g., car parks, elevator pits)
- Expensive maintenance (e.g., hoistways)
- Sprinklers prone to tampering, forcing elevator shut-down, building evacuations and lost revenues
- An opportunity for integration of indoor air quality and energy systems to obtain LEED or Energy Star compliance for the entire building



FireNet Vapor® VPR-15

Contact your local FireNet Vapor® distributor for more information about the FireNet Vapor® VPR-15

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