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PSI, F.Y.I.

Engineering... Training... and YOU

ELEVATOR FUNCTIONS

Elevator Code Requirements (ASME A17)

ASME A17.1-2004 is the elevator code specific to new elevator installations in the state of Florida.

- 2.27.3: Identifies this code to apply to any new elevator installations which penetrate a floor.
- 2.27.3.2-3: Identifies the initiating devices required to initiate the recall functions.
    - Detector in Lobby
    - Detector in Machine Room:
    - Detector in Elevator Shaft (only if sprinkled).
- 27.3.2.5: Recall level is determined by first activated fire alarm device in that group.
- 27.3.2.6: Fire hat signal is required to flash upon activation of detector in associated

machine room or elevator shaft.

- 2.8.2.3.2: If sprinklers are installed in the machine room or elevator shaft, then a shunt trip relay is required.

ASME A17.3-1996 is the elevator code specific to existing elevators in the state of Florida.

- 3.11.3: This code applies to any existing elevator having a travel distance of 25' or more above/ below

NFPA 72 Regarding Elevator Recall and Elevator Shutdown

NFPA72 6.15.3 discusses the means of installation for the equipment required by the Elevator Code (ASME A17.1).

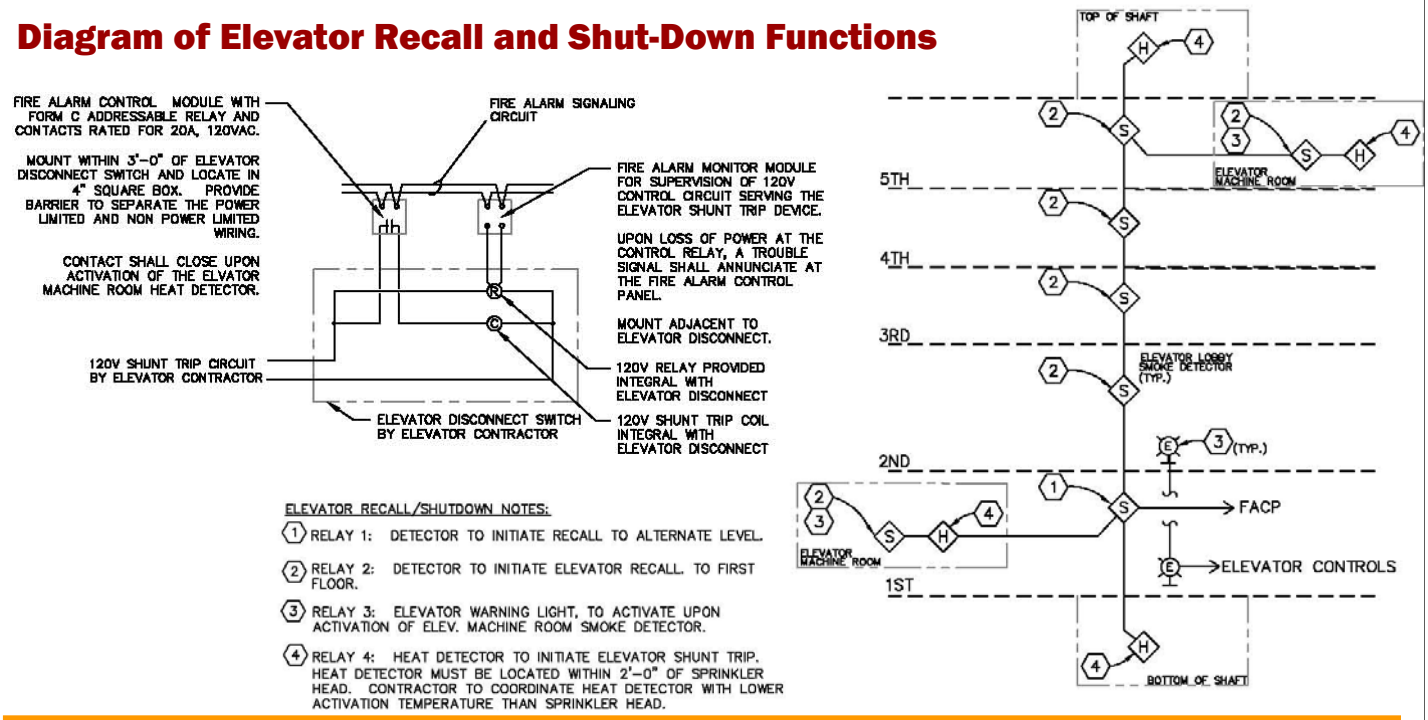
- 6.15.3.2: Detectors required by Elevator Code must be tied to the building FACP.
- 6.15.3.2: If no base building FACP, then a dedicated "Elevator Recall FACP" is acceptable.
- 6.15.3.3: Only those detectors required by the Elevator Code (elevator lobby, elevator shaft, elevator machine room) are allowed to initiate elevator recall functions.
- 6.15.3.7: Other types of detection are allowed if the environment is not suitable for smoke detection.
- 6.15.3.5: Smoke detector installed in the lobby must be located within 21' of the centerline of each associated elevator door.
- 6.15.4.2: If heat detection is provided to initiate elevator shut-down (machine room or elevator shaft), the detector must be located within 2' of sprinkler head.
- 6.15.3.6: Smoke detector MUST NOT be installed in elevator shafts UNLESS used to initiate smoke relief equipment.
- 6.15.3.9: Elevator machine room and elevator shaft detectors may be programmed as supervisory.
- 6.15.4.5: Control circuits for elevator shunt trip must be monitored for the presence of operating voltage.

Headlines:

Upcoming Events!

- PSI Suppression, Part I, Orlando, 18 Aug. 2011
- PSI Suppression, Part II, Orlando, 19 Aug. 2011
- PSI Suppression, Part I, S. Florida, 29 Sept. 2011
- PSI Suppression, Part II, S. Florida, 30 Sept. 2011
- Electrical Standards, Orlando, 2 Sept., 2011

Diagram of Elevator Recall and Shut-Down Functions



Summary of Elevator Functions

PROGRAMMING

Machine Room on 1st Floor

RELAY 2: Smoke detector to Recall to alternate level

RELAY 3: Elevator Hat light to flash.

RELAY 4: Heat detector to shunt power to elevator equipment.

Machine Room on other than 1st Floor

RELAY 1: Smoke detector to Recall to first floor

RELAY 3: Elevator Hat light to flash.

RELAY 4: Heat detector to shunt power to elevator equipment.

Elevator Lobby on 1st Floor

RELAY 2: Detector to Recall to alternate level

Elevator Lobby on other than 1st Floor

RELAY 1: Detector to Recall to first floor

Elevator Shaft

RELAY 4: Heat detector to shunt power to elevator equipment.

Today's References:

- **NFPA 72, 2002ed. 5.15**
- **ASME A17.1**
- **ASME A17.3**

Protective Systems, Inc. places a high value on individual education. We are dedicated to providing ongoing training for our managers, designers, and technicians who are expected to maintain a minimum NICET II certification is fire alarm and/or fire special hazards.

As codes, applications and enforcements are continually changing, Protective Systems, Inc. feels it is important to highlight specific topics to provide clarification and encourage discussion.

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