# CAL FIRE - OFFICE OF THE STATE FIRE MARSHAL
# Code Interpretation 26-08

Issued: November 5, 2026

## Installing Heat Detectors in Lieu of Smoke Detectors

### OVERVIEW

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| **Edition:** | 2025 Title 24 California Building Standards (January 1, 2026 Errata) |
| **Code:** | Part 2, California Building Code (CBC) and Part 9, California Fire Code (CFC) |
| **Section(s):** | CBC Section 907.4.3 and CFC Section 907.4.3 |
| **Requested By:** | Sagiv Weiss-Ishai, Senior Fire Protection Engineer, San Francisco Fire Department, Bureau of Fire Prevention |
| **Date Received:** | July 23, 2026 |

### QUESTION #1

Is a heat detector permitted to replace a required smoke detector under CFC Section 907.4.3?

### ANSWER #1

Yes. While smoke detectors should be used where they are required, CFC Section 907.4.3 permits the use of a heat detector in lieu of smoke detectors when ambient environmental conditions have been proven to be hostile and unsuitable for smoke detectors.

Heat detectors may be needed because installing a smoke detector outside of its listed ambient operating conditions voids its UL 268 listing and renders it non-compliant. The smoke detector manufacturer's published literature will identify the limitations on the use of smoke detectors, including environmental conditions such as humidity, temperature, and airflow.

However, Authorities Having Jurisdiction (AHJs) should exercise care before approving this substitution. For instance, when certain emergency control functions require actuation upon smoke detection, such as smoke doors, smoke dampers, air moving system shutdown, elevator recall, etc., a heat detector may delay activation and potentially conflict with the device's listed installation requirements. Especially for these emergency control functions, and for general area detection, the ambient environmental conditions should always be addressed to allow for the use of a smoke detector first and foremost. If this is not possible, it must be demonstrated and proven that ambient conditions truly cannot be avoided, mitigated, or improved upon, and that the environment exceeds a smoke detector's listed operating conditions.

To maintain smoke detection capability in harsh environments, a recommendation is to use multi-criteria UL 268 and UL 521 listed smoke detectors with supplementary heat detection that is listed as suitable for the specific environment.

**QUESTION #2**

Can a Listed combination Smoke/Heat detector be used as two separate devices for two separate functions?

**ANSWER #2**

Yes, subject to AHJ approval, and only if the device is OSFM listed for this application in accordance with both UL 268 and UL 521, has separate addressable contacts, and is specifically listed as capable of providing independent smoke and heat signal outputs.