UL 268

STANDARD FOR SAFETY

Smoke Detectors for Fire Alarm Systems

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UL Standard for Safety for Smoke Detectors for Fire Alarm Systems, UL 268

Eighth Edition, Dated June 2, 2023

Summary of Topics

This revision of ANSI/UL 268 dated April 16, 2026 includes the following changes in requirements:

– Incorporation of UL 1395; 2.4.2, 60.2.1, 60.3.2, 60.4.1 – 60.4.3, 60.5 (title), 60.5.1 – 60.5.3, and 61.1 – 61.3.

– Fire Test Distance Correction; 44.6.2.2, 44.6.2.6, and 48.1.1.

– Stability Test Clarification; 39.5

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated February 6, 2026.

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The most recent designation of ANSI/UL 268 as an American National Standard (ANSI) occurred on April 16, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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Preface

This is the joint ULSE and ULC Standard for Smoke Detectors for Fire Alam Systems. It is the fifth edition of CAN/ULC 529 and the eighth edition of ANSI/UL 268.

This Joint Standard was prepared by ULSE Inc. (ULSE), ULC Standards, and the NEMA Technical Harmonization Committee on Smoke Alarms and Smoke Detectors. The standard was formally approved by the ULSE Technical Committee on Smoke Detectors and Alarms; and the ULC Technical Committee on Fire Alarm and Life Safety Equipment and Systems.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

Annexes A, B, C,and F are identified as Normative and forms a mandatory part of this Standard.

Annexes D, E, and G are identified as Informative and are for informational purposes only.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of Harmonization

This Standard is published as an identical standard between ULSE and ULC Standards.

An identical standard is a standard that is the same in technical content except for conflicts in Codes and Governmental Regulations. Presentation shall be word for word except for editorial changes.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard shall be based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision shall be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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INTRODUCTION

1 Scope

1.1 This Standard sets forth requirements for smoke detectors and accessories, including mechanical guards to be employed in ordinary indoor locations in accordance with the following:

a) In Canada only:

1) Standard for the Installation of Fire Alarm Systems, ULC 524;

2) National Building Code of Canada; and

3) National Fire Code of Canada.

b) In the United States only:

1) National Fire Alarm and Signaling Code, NFPA 72.

1.2 A smoke detector (e.g. ionization-type, photoelectric-type, smoke detector with supplementary heat detection type, combination smoke type, multi-criteria type) as covered by this Standard consists of an assembly of electrical components arranged to detect one or more products of combustion. At a minimum the detector shall contain a smoke (particulate) sensor. The products of combustion may consist of visible as well as invisible smoke particles, gases, heat, radiant energy, and water vapor. The detector includes provision for the connection to a source of power, signaling, and optional remote control circuits. Additional functionality, such as a heat detector, heat sensor, or audible signaling appliance/device, is permitted to be incorporated as part of the smoke detector assembly.

1.3 This standard covers the following types of detectors:

a) Detectors intended for open area protection and for connection to a compatible power supply or control unit for operation as part of a fire alarm system;

b) Detectors intended solely for control of releasing devices such as electromagnetic door holders, fire dampers or smoke dampers;

c) Detectors intended for both applications described in (a) and (b) above; and

d) In Canada, duct detectors.

1.4 Products incorporating other functions in addition to those described in this standard, shall comply with:

a) In Canada only:

1) Control units that are covered by the Standard for Control Units for Fire Alarm Systems, ULC 527;

2) Self-contained single and multiple station smoke detectors that are covered by the Standard for Smoke Alarms, ULC 531;

3) A heat detector incorporated as a part of a smoke detector assembly, and covered by the Standard for Heat Actuated Fire Detectors for Fire Alarm Systems, ULC 530 and/or when part of a multi-criteria smoke detector;

4) Fire tests for smoke detectors integral with combination door closers and holders that are covered by the Door Closers and Holders, ULC/ORD-C228;

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5) Detectors for monitoring the smoke density within flues or stacks; and

6) A residential CO alarming device incorporated as a part of a smoke detector assembly, and covered by the CSA 6.19, Standards for Residential CO Alarming Devices, except when part of a multi-criteria smoke detector.

b) In the United States only:

1) Control units to which the detectors are intended to be connected that are covered by the Standard for Control Units for Fire-Protective Signaling Systems, UL 864;

2) Self-contained single and multiple station smoke detectors, not intended for connection to a system control unit, that are covered by the Standard for Single and Multiple Station Smoke Alarms, UL 217;

3) A heat detector incorporated as a part of a smoke detector assembly, and covered by the Standard for Heat Detectors for Fire Protective Signaling Systems, UL 521, except for the requirements of the Fire Test (Heat Detector) and/or when part of a multi-criteria smoke detector;

4) A gas and vapor detector or sensor incorporated as a part of a smoke detector assembly, and covered by the Standard for Gas and Vapor Detectors and Sensors, UL 2075, except when part of a multi-criteria smoke detector;

5) Fire tests for smoke detectors integral with combination door closers and holders that are covered by the Standard for Door Closers-Holders, With or Without Integral Smoke Detectors, UL 228;

6) Commercial-residential detectors not intended for connection to a system control unit that are covered by the Standard for Smoke Detector Monitors and Accessories for Individual Living Units of Multifamily Residences and Hotel/Motel Rooms, UL 1730; and

7) Detectors for monitoring the smoke density within flues or stacks.

1.5 These requirements also cover all remote accessories that are intended to be connected to a smoke detector.

2 General

2.1 Assembly

2.1.1 A detector shall be so constructed that it will be reliable and sufficiently durable for its intended installation and use.

2.1.2 A component of a detector shall comply with the requirements for that component, except that such requirements may be modified for the particular application.

2.2 Components

2.2.1 Except as indicated in 2.2.2, a component of a product covered by this standard shall comply with the requirements for that component. See Annex D for a list of standards covering components generally used in the products covered by this standard.

2.2.2 A component is not required to comply with a specific requirement that:

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