

STANDARD INFORMATION

Standard: UL 217 / ULC 531

Standard ID:

Smoke Alarms [UL 217:2024 Ed.10+R:14Jan2026]

Standard for Smoke Alarms [CAN/ULC 531:2024 Ed.5+R:14Jan2026]

Previous Standard ID:

Smoke Alarms [UL 217:2024 Ed.10]

Standard for Smoke Alarms [CAN/ULC 531:2024 Ed.5]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **January 14, 2029**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes: Specific details of new/revised requirements are found in table below.

- Commercial Vehicle Cabin Inclusion
- Smoke Alarm Shipment

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
	Info	PERFORMANCE
37	Info	General
37.8	Info	Test conditions
		The smoke alarm shall be installed in an environment so as to permit accurate monitoring of the conditions in (a) – (f). Unless otherwise specified, the following conditions shall be established and maintained throughout the test:
37.8.1		a) Ambient temperature at 23 ± 3 °C (73.4 ± 5 °F) or a higher temperature if specified by the manufacturer; b) Relative humidity at 50 ± 20 %; c) Oxygen concentration at 20.9 ± 1 %; d) Barometric pressure of 760 ± 30 mm of mercury (101 ± 4 kPa); and e) Supply voltage, if applicable, adjusted to 100 % of rated input voltage; and <u>f) Applicable to multi-criteria smoke alarms that incorporate gas sensors - air movement in the test chamber shall be within 16.0 ± 7 fpm (0.08 m/s).</u>
		<i>New clause added;</i>
38.8.2		The multi-criteria smoke alarms that incorporate gas sensors shall be installed in a chamber, constructed so as to permit accurate monitoring and control of chamber air temperature and humidity and oxygen and manufacturer's specified gas concentration(s).
41	Info	Electrical Supervision Test
41.5	Info	Battery powered (primary or secondary) smoke alarms
		<i>New clause added;</i>
41.5.6		In the US only – Primary power for smoke alarms intended for use in commercial vehicle cabins shall be provided with a permanently sealed, non-replaceable battery installed within the smoke alarm, and not from an external AC or DC power source.
48	Info	Stability Tests – Multi-Criteria Smoke Alarms Incorporating Gas Sensor(s)
		<i>New clause added;</i>
48.4		All gas sensors shall be subject to the tests specified in One Year (minimum) Sensor Stability Test for Gas Sensors specified in UL 2075.



CLAUSE	VERDICT	COMMENT
74	Info	Abnormal Operation Test
74.1		A smoke alarm shall operate continuously under abnormal (fault) conditions without resulting in a risk of fire or <u>electric shock</u> .
		<i>New section added;</i>
		Impact Test (Commercial and Recreational Vehicles Only)
83A		A smoke alarm intended for use in commercial vehicle cabins or recreational vehicle shall be subjected to the requirements outlined in 83A.2 – 83A.4. See standard for details.
85	Info	Field Service Tests (If recommended by the manufacturer)
85.1	Info	Go/no-go field test
		<i>New section added;</i>
		Smoke entry and functional test as integral self-test – with or without aerosol stimuli (for the smoke sensor)
85.1.3		The following requirements apply to smoke alarms that employ an integral smoke entry and functional field test feature. The manufacturer shall: See standard for details.
88	Info	Smoke Alarms for Use in Recreational Vehicles (RV), Commercial Vehicles, and Boats
88.1	Info	General
		<i>New clause added;</i>
88.1.4		Batteries shall be tested in accordance with all applicable battery tests outlined within this Standard and the battery operating range specified in 88.1.3 using the methods specified in Battery Tests, 85.3.
88.2	Info	Marking
88.2.1		In addition to the applicable requirements in MARKING, Section 98, General, a single criteria or multi-criteria smoke alarm for use in a recreational vehicle, <u>commercial vehicle cabin</u> , or /boat shall be permanently and legibly marked with the following information. The markings shall be in contrasting color, finish or equivalent, in letters at least 1.2 mm (3/64 inch) high. Items (f) and (g) shall be readily visible after installation: a) Manufacturer's or private labeler's name or identifying symbol; b) Model, type, or catalog designation; c) as specified in 98.1(b); d) Electrical rating in volts and amperes;



CLAUSE	VERDICT	COMMENT
		<p>e) Reference to owner's manual;</p> <p>f) The type of product, such as "RV Smoke Alarm" or "RV Multi-criteria Smoke Alarm", "<u>Commercial Vehicle Smoke Alarm</u>", "Marine Smoke Alarm or "Marine Multi-criteria Smoke Alarm" or "RV/Marine Smoke Alarm" or equivalent. It is not prohibited that this marking be incorporated in (g);</p> <p>g) Identification of switches and light indicators;</p> <p>h) "Watertight" if the alarm complies with the requirements for watertightness in 88.5; and</p> <p>i) "For enclosed spaces only," or the equivalent if not marked in accordance with (h); and.</p> <p><u>j) The markings specified in (a) – (i) shall be applied in accordance with 88.2.1 and 88.2.2. 98.3 is not applicable for the marking requirements specified in 88.2.1.</u></p>
		<i>New clause added;</i>
88.2.2		<p>For Commercial Vehicle alarms, items (b) and (c) of 88.2.1 shall be readily visible on the front of the enclosure cover of the smoke alarm after installation.</p> <p>Exception: In lieu of the markings specified above, a set of pullout instructions that are accessible after installation may be permanently attached to the enclosure.</p>
97	Info	Smoke Alarm Shipment
97.1		<p>The battery intended to be employed with the alarm shall be shipped from the factory with the alarm in the same package. <u>Audible signals shall be disabled to prevent the smoke alarm evacuation signal or trouble signals during shipping. Battery capacity used during shipping shall be estimated and included in the required battery life calculations. To prevent unnecessary drain during shipment and storage, the battery shall not be connected in the alarm. One or both polarities of the battery shall be physically disconnected from the circuitry of the smoke alarm such that no battery capacity is used to provide standby, sleep, or other power to the alarm.</u></p>
	Info	MARKING
98	Info	General
		<i>New clause added;</i>
98.7		<p>All markings shall be permanent. See Marking Permanence, Section 98A.</p>
		<i>New section added;</i>
		Marking Permanence
98A		<p>Markings affixed to a smoke alarm shall be sufficiently durable as to resist the deleterious effects of handling, cleaning agents, and the like, expected in the intended use.</p> <p>See standard for details.</p>



CLAUSE	VERDICT	COMMENT
	Info	INSTRUCTIONS
100	Info	General
		<i>New clause added;</i>
100.6		Detailed information shall be provided regarding the Smoke Entry and Functional Test means as defined in 85.1 and 85.1.3. Typical information that shall be provided (when applicable) includes: a) Brief description of operation of the Smoke Entry and Functional Test means; b) Instructions on how to operate Smoke Entry and Functional Test and what test results can be expected and where they can be evaluated; and c) Explanation how the traditional “canned smoke” methods are used in conjunction with this test.