

## SMOKE ALARMS

### ONTARIO BUILDING CODE

#### 9.10.19.1. Required Smoke Alarms

(1) *Smoke alarms* conforming to CAN/ULC-S531, “Smoke Alarms”, shall be installed in each *dwelling unit* and in each sleeping room not within a *dwelling unit*.

(2) *Smoke alarms* required in sentence (1) shall have a signalling component conforming to the requirements in 18.5.3 of NFPA 72, “National Fire Alarm Signaling Code”.

#### 9.10.19.2. Sound Patterns of Smoke Alarm

- (1) The sound patterns of smoke alarm shall,
- (a) meet the temporal patterns of alarm signals, or
  - (b) be a combination of temporal pattern and voice relay.

#### 9.10.19.3. Location of Smoke Alarms

(1) Within *dwelling units*, sufficient *smoke alarms* shall be installed so that,

- (a) there is at least one *smoke alarm* installed on each *storey*, including *basements*, and
- (b) on any *storey* of a *dwelling unit* containing sleeping rooms, a *smoke alarm* is installed,
  - (i) in each sleeping room, and
  - (ii) in a location between the sleeping rooms and the remainder of the *storey*, and if the sleeping rooms are served by a hallway, the *smoke alarm* shall be located in the hallway.

(2) A *smoke alarm* required in sentence (1) shall be installed in conformance with CAN/ULC-S553, “Installation of Smoke Alarms”.

(3) A *smoke alarm* required in sentence (1) shall have a visual signalling component conforming to the requirements in 18.5.3 (Light, Color and Pulse Characteristics) of NFPA 72, “National Fire Alarm and Signalling Code”.

(4) The visual signalling component required in sentence (3) need not,

- (a) be integrated with the smoke alarm provided it is interconnected to it
- (b) be on battery backup, or
- (c) have synchronized flash rates, when installed in a dwelling unit

(5) The luminous intensity for visual signalling components required in sentence (3) that are installed in sleeping rooms shall be a minimum of 175 cd.

(6) *Smoke alarms* required in sentence (1) shall be installed on or near the ceiling.

#### 9.10.19.4. Power Supply

(1) Smoke alarm required in sentence 9.10.19.1 (1) shall,

- (a) be installed with permanent connections to an electrical circuit,
- (b) have no disconnect switch between the overcurrent device and the *smoke alarm*, and
- (c) in case the regular power supply to the *smoke alarm* is interrupted, be provided with a battery as an alternative power source that can continue to provide power to the *smoke alarm* for a period of not less than 7 days in the normal condition, followed by 4 min of alarm.

Note: A smoke alarm is not required on each level in a split-level dwelling unit as each level does not count as a separate storey.

#### 9.10.19.5. Interconnection of Smoke Alarms

(1) Where more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be wired so that the activation of one alarm will cause all alarms within the *dwelling unit* to sound.

#### 9.10.19.6. Silencing of Smoke Alarms

(1) Except as permitted in Sentence (2), a manually operated device shall be incorporated within the circuitry of a *smoke alarm* installed in a *dwelling unit* so that the signal emitted by the *smoke alarm* can be silenced for a period of not more than 10 min, after which the *smoke alarm* will reset and sound again if the level of smoke in the vicinity is sufficient to reactuate it.

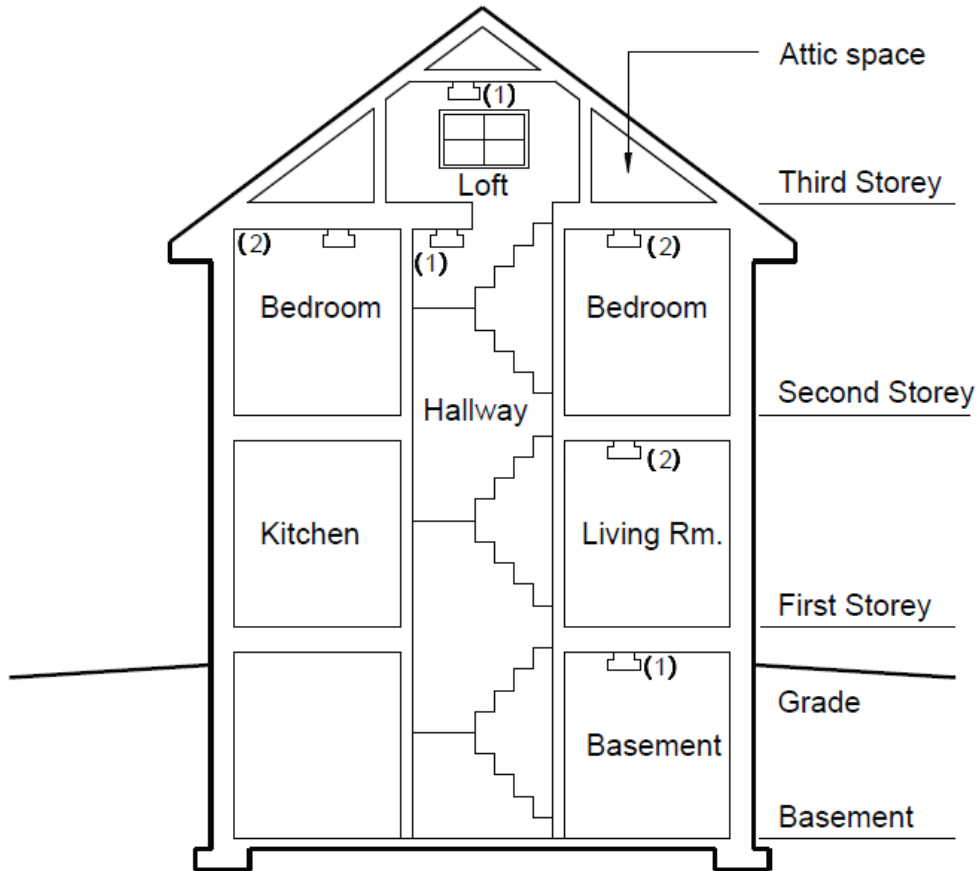
(2) *Suites of residential occupancy* equipped with *smoke detectors* installed to CAN/ULC-S524, “Installation of Fire Alarm Systems”, which are part of the fire alarm system in lieu of *smoke alarms* as permitted in Sentence 9.10.19.4.(3), need not incorporate the manually operated device required in Sentence (1).

### OBJECTIVE


To detect the presence of smoke and initiate an audible alarm and visual signal warning for occupants to take the appropriate action to secure their safety. Please refer to CAN/ULC-S553 standard and manufacture specifications for proper installation requirements.

# Builder Tip

## SMOKE ALARMS



### Legend

 Smoke alarm

- (1) One smoke alarm on each storey, including Basements and when sleeping rooms are served by a hallway, the smoke alarm shall be located in hallway.
- (2) Smoke alarm in each sleeping room.
- (3) Smoke alarms are not permitted to operate with wireless interconnect.

**Note:** Installed on or near the ceiling and Interconnected smoke alarms