

SMOKE & CARBON MONOXIDE ALARMS

9.10.18.6. Portions of Buildings Considered as Separate Buildings

1) Except as provided in Sentence (2), where a vertical *fire separation* having a *fire-resistance rating* of not less than 1 h separates a portion of a *building* from the remainder of the *building* and there are no openings through the *fire separation* other than those for piping, tubing, wiring and conduit, the requirements for fire alarm and detection systems may be applied to each portion so separated as if it were a separate *building*.

2) The permission in Sentence (1) to consider separated portions of a *building* as separate *buildings* does not apply to *service rooms* and storage rooms.

9.10.18.7. Central Vacuum Systems

1) Central vacuum cleaning systems <servicing more than one *suite* or *storey*> in *buildings* equipped with a fire alarm system shall be designed to shut down upon activation of the fire alarm system.

9.10.18.8. Open-Air Storage Garages

1) A fire alarm system is not required in a *storage garage* conforming to Article 3.2.2.88, provided there are no other *occupancies* in the *building*.

9.10.19. Smoke Alarms

9.10.19.1. Required Smoke Alarms

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

9.10.19.2. <Sound Patterns of Smoke Alarms

- 1) The sound patterns of *smoke alarms* shall
 - a) meet the temporal patterns of *alarm signals* (see A-3.2.4.19.(2) in Appendix A), 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.>

(See Appendix A.)

2) <A *smoke alarm* required by Sentence (1) shall be installed in conformance with CAN/ULC-S553, "Installation of Smoke-Alarms.">

- 3) *Smoke alarms* required in Article 9.10.19.1. and Sentence (1) shall be installed on or near the ceiling.

9.10.19.4. Power Supply

- 1) <Except as provided in Sentences (2) and (3),> *smoke alarms* <described in Sentence 9.10.19.1.(1)> shall
 - a) be installed with permanent connections to an electrical circuit <(see A-3.2.4.21.(6)(a) in Appendix A),>
 - 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 no less than 7 days in the normal condition, followed by 4 minutes of alarm.>
- 2) Where the *building* is not supplied with electrical power, *smoke alarms* are permitted to be battery-operated.
- 3) <*Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors*
 - a) are capable of independently sounding audible signals within the individual *suites*,
 - b) except as permitted in Sentence (4), are installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems," and
 - c) form part of the fire alarm system.

(See A-3.2.4.21.(7) in Appendix A.)

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- 2) Where additional make-up air is required for appliances described in Sentence (1), it shall be provided by
 - a) supply ducts sized in conformance with Table 9.32.3.8. for requirements of 60 l/s or less, or
 - b) a supply fan rated to deliver outdoor air at the rate of the installed exhaust appliance.
- 3) The supply fan as required in Clause (2)(b) shall be interconnected with the exhaust fan for which make-up air is required.
- 4) The outdoor air required by Sentence (3) shall be
 - a) tempered to at least 1°C before being introduced to a normally unoccupied area of the *dwelling unit*, or
 - b) tempered to at least 12°C before being introduced to occupied areas either by passive transfer grille or directly from outside.

9.32.4.2. Carbon Monoxide Alarms

(See Appendix A.)

- 1) This Article applies to every *building* that contains a *residential occupancy* and that also contains
 - a) a fuel-burning *appliance*, or
 - b) a *storage garage*.
- 2) Carbon monoxide (CO) alarms required by this Article shall
 - a) conform to CAN/CSA-6.19, "Residential Carbon Monoxide Alarming Devices,"
 - b) be equipped with an integral alarm that satisfies the audibility requirements of CAN/CSA-6.19, "Residential Carbon Monoxide Alarming Devices,"
 - c) have no disconnect switch between the overcurrent device and the CO alarm, where the CO alarm is powered by the *dwelling unit's* electrical system, and
 - d) be mechanically fixed at a height recommended by the <manufacturer's instructions>.
- 3) <Where a room contains a solid-fuel-burning *appliance*,> a CO alarm conforming to CAN/CSA-6.19, "Residential Carbon Monoxide Alarming Devices," shall be mechanically fixed
 - a) <at a height recommended by the manufacturer's instructions where those instructions specifically mention solid-fuel-burning *appliances*, or>
 - b) <in the absence of specific instructions related to solid-fuel-burning *appliances*, on or near the ceiling.>
- 4) Where a fuel-burning *appliance* is installed in a *suite of residential occupancy*, a CO alarm shall be installed
 - a) inside each bedroom, or
 - b) outside each bedroom, within 5 m of each bedroom door, measured following corridors and doorways.
- 5) Where a fuel-burning *appliance* is installed in a *service room* that is not in a *suite of residential occupancy*, a CO alarm shall be installed
 - a) in the *service room*, and
 - b) for every *suite of residential occupancy* that shares a wall or floor/ceiling assembly with that *service room*, either
 - i) inside each bedroom, or
 - ii) outside each bedroom, within 5 m of each bedroom door, measured following corridors and doorways.
- 6) For each *suite of residential occupancy* that shares a wall or floor/ceiling assembly with a *storage garage* or that is adjacent to an attic or crawl space to which the *storage garage* is also adjacent, a CO alarm shall be installed
 - a) inside each bedroom, or
 - b) outside each bedroom, within 5 m of each bedroom door, measured following corridors and doorways.
- 7) Where CO alarms are installed in a house with a *secondary suite* including their common spaces, the CO alarms shall be wired so that the activation of any one CO alarm causes all CO alarms within the house with a *secondary suite* including their common spaces to sound.