

MEANS OF EGRESS

Common Myths and Mistaken Beliefs to Avoid

Appendix 2 : Design of Locking Devices with a Red Manual Fire Alarm Station

Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on doors located in *floor areas* laid out in accordance with Sentences 3.3.3.5.(2) to (14), in compliance with Sentence **3.4.6.16.(5)** provided:

Conditions	Comments to validate if this option is adequate for the project
a) the building is <ul style="list-style-type: none"> i) equipped with a fire alarm system, and ii) sprinklered, 	The 3/15 s locks required alarm system but waives the sprinkler protection of the building. This option is not possible if the CHSLD within a building or rooms B3 occupancy is unsprinklered. Please note that this option is only possible when the occupants are in compartments compliant to Sentences 3.3.3.5.(2) to (14), apply to compartments including sleeping rooms. This option is not possible for the means of egress in B3 occupancy. According to Article 3.2.4.3., the fire alarm system shall also be a 2-stage system.
b) the locking device releases:	There are 4 different ways to neutralize the devices.
<ul style="list-style-type: none"> i) upon actuation of the alarm signal transmitted by the building's fire alarm system; 	As the fire alarm system is a 2-stage system, the alert signal, when the activation of a manual fire alarm station required in Subclause (iv), will only unlock the adjacent door, as the fire alarm signal

Conditions	Comments to validate if this option is adequate for the project
	will unlock all the doors including this type of device.
ii) upon loss of power controlling the electromagnetic locking mechanism and its associated auxiliary controls;	Similar requirements than the 3/15 s locking device release [3.4.6.16.(4)(c)]
iii) upon actuation of a readily accessible manually operated switch in a location continually monitored, inside locked spaces; and	The sleeping rooms compartment shall have a security guard station so to permit the presence of continuous surveillance inside contained spaces. According to CAN/ULC-S524 requirements, the manual fire alarm station may be installed under a protector that can activate a local alarm or a security station. As well as the personnel in this station will be notified a few seconds before the activation of a manual station so to anticipate their intervention.
iv) upon activation of a manual station equipped with an auxiliary contact that directly unlocks the electromagnetic locking mechanism and is installed less than 0.5 m from each door equipped with such a mechanism;	The auxiliary contact is a switch that is usually closed and installed in series inside the circuit supplying the electromagnetic lock.
c) once released, the locking device is manually reset by the switch referred to in Subclause (b)(iii);	In this case, the reaction shall not be done remotely. It shall be done in the security guard station within the sleeping rooms compartment that include the manual switch.
d) the door has a permanent legible sign in letters at least 25 mm high with lines at least 5 mm wide on which the following notice is written: "In case of fire, this door may be opened by activating the manual station located (on the left or right depending on the location of the station);	The size of the letters of the sign is greater than for the 3/15 s locking devices, passing from 15 mm to 25 mm high and from 3 mm to 5 mm wide. Moreover, compared to the 3/15 s device, the text is standard and shall not be modified.

Conditions	Comments to validate if this option is adequate for the project
e) the operation of a bypass switch installed for the purpose of testing the fire alarm system releases an audible and visual signal on the annunciator of the fire alarm system and in the monitoring station mentioned in Sentence 3.2.4.8.(4); and	Similar requirements than the 3/15 s locking device [3.4.6.16.(4)(i)]
f) an emergency lighting system is installed on the doors.	Similar requirements than the 3/15 s locking device [3.4.6.16.(4)(j)]

Finally, do not forget the following two conditions:

- Locking devices permitted shall conform to the test requirements prescribed in CAN/ULC-S533, "Egress Door Securing and Releasing Devices. **[3.4.6.16.(8)]**
- Door hardware for the operation of the doors referred to in this Section shall be installed at a height not more than 1 200 mm above the finished floor. **[3.4.6.16.(9)]**

by Nicole Olivier, Architect