

Autopark Guide for SCM Series CO Detector

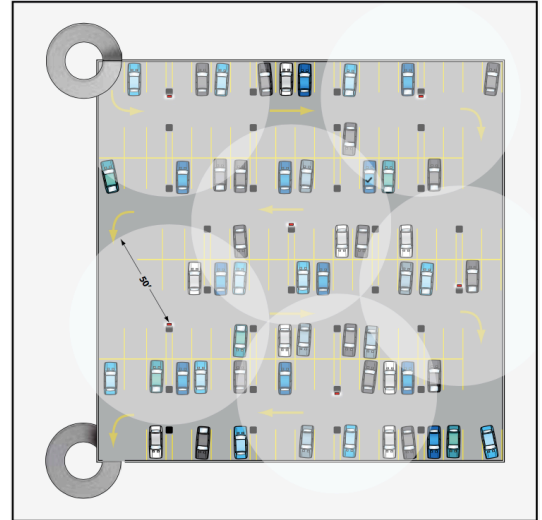
version 2

Quantity of sensors and location plan

1. The radius of coverage is maximum 15.2 m (50 feet) per carbon monoxide detector or maximum 725 sq.m (7,850 sq.ft).
2. Ideal area is 400 sq.m.
3. Use open interior support columns as much as possible to maximize the radius of coverage not walls.
4. Each level of the parking structure must be totally covered without overlapping the coverage of the sensors.

Height of sensors

1. The relative density of carbon monoxide compared to air of carbon monoxide is 0.957 (AIR =1).
2. The carbon monoxide will disperse evenly in the air.
3. The carbon monoxide detectors must be located to 1.5 meter (5 feet) above the floor.



Alarm Levels and National Standards for CO Exposure Levels

CO Level	Standard and Regulation	Alarm level
200 ppm	<i>NIOSH – National Institute for Occupational Safety and Health</i> Short term exposure limit 15-minute maximum exposure level	Good for high level alarm setpoint. Maximum concentration allowable high alarm.
50 ppm	<i>OSHA – Occupational Safety and Health Administration</i> The maximum allowable concentration for a worker's continuous exposure in any eight hour period.	Acceptable low level alarm setpoint. Maximum concentration for low alarm.
50 ppm	<i>UMC - Uniform Mechanical Code</i> Recommends to activate the mechanical ventilation when CO is monitored in a park- ing structure	Acceptable low level alarm setpoint. Maximum concentration for low alarm.
35 ppm	<i>EPA – Environmental Protection Agency</i> Recommends 35 ppm or lower as an ambient air quality goal averaged over one hour	Acceptable for low level alarm setpoint.
35 ppm	<i>NIOSH – National Institute for Occupational Safety and Health</i> PEL-TWA: 35 ppm is the maximum allowable concentration for a worker to be exposed to in any eight hour period.	Acceptable for low level alarm setpoint.
25 ppm	<i>ACGIH – American Conference of Governmental Industrial Hygienists</i> TLV-TWA: 25 ppm is the maximum allowable concentration for a worker's continuous exposure in any eight hour period.	Ideal low level alarm setpoint. Minimum concentration for low alarm.
25 ppm	<i>IMC – International Mechanical Code</i> Recommend to actuate the mechanical ventilation when CO is monitored in a parking structure	Ideal low level alarm setpoint. Minimum concentration for low alarm.
9 ppm	<i>EPA – Environmental Protection Agency</i> Recommends 9 ppm or lower as an ambient air quality goal averaged over eight hours.	Too low to be a valuable alarm setpoint. Normally used as being the maximum allowable concentration for office spaces.