

APPLICATION GUIDE

CAR PARK / GARAGE GAS DETECTION

Continuous monitoring of carbon monoxide and nitrogen dioxide in a mid-sized parking garage



Peace of mind. Guaranteed.

Parking garages vary in size, layout and the number of cars in operation. When planning installation and mounting locations for each cGas-SC, you must consider the air flow patterns. Entrances to the parking facility, elevators, exhaust fans, makeup air fans and any other sources of active air currents will affect the ability of the sensor to accurately read the gas levels. Sensors should be placed in dead air zones, where there is little or no air movement and areas of good air circulation but not in the path of rapidly moving air. For most commercial vehicle exhaust applications, each sensor monitors up to 5000 - 10,000 ft² (464 - 929 m²) or 40 - 56 ft (12 - 17 m) radius. Each cGas-SC should be mounted in the "breathing zone", 4 - 6 feet (1.2 - 1.8 m) from the floor, the height at which most humans breathe. The cGas-SC can be mounted on the back of a column or a wall, preferably in a less obvious spot to reduce the likelihood of tampering. A few typical configuration examples for a CGAS-SC-CO-NO2 detector with internal CO and NO₂ sensors would be as follows.

Configured with the low alarm to trigger the first relay to turn on the exhaust fans to bring the gas level down to an acceptable level and the high alarm to trigger the second relay to activate a remote strobe/horn.

Configured with the low alarm to trigger the first relay to turn on the exhaust fans and the makeup air fans to bring the gas level down to an acceptable level and the high alarm to trigger the second relay to activate a remote strobe/horn.

Configured with the low and high alarm to trigger the first and subsequent second relay that activates a two speed fan at low speed



GAS DETECTION SOLUTION

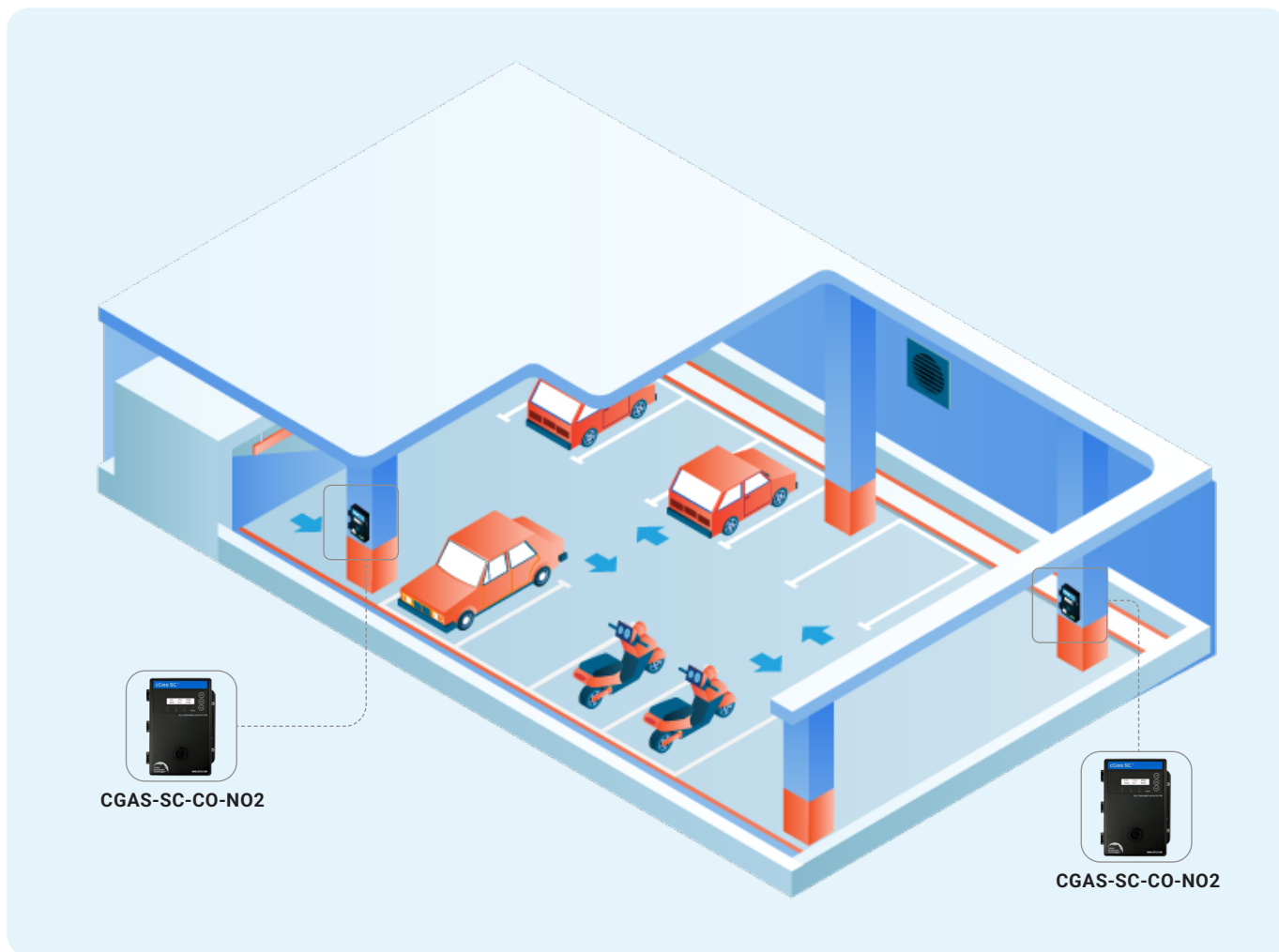
- cGas-SC Self Contained Controller
- RSH-24V-R Remote Strobe & Horn



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and high speed. (This requires a power connection for the fans themselves.)

The relays can be programmed to activate the equipment or to delay the activation of the equipment for a programmed length of time after the low alarm is activated (up to 20 minutes). This allows the fans to get up to speed and stay on before they get turned off if the alarm was activated by a nearby idling vehicle or a high number of cars entering/exiting all around the same time, as commuters start and end work. Using the relay on delay and off delay functionality for activating the ventilation system keeps the equipment running properly and reduces energy costs by not having the fan on constantly. The cGas-SC also features an optional on delay for the internal alarm (up to 20 minutes). The low voltage cGas-SC can be ordered with line voltage by

adding Option -DV.

The cGas-SC offers up to 3 channels and may be configured with an ESH-A remote combustible gas sensor if required. For example, if the parking facility is frequented by propane powered vehicles or is equipped with electric car charging stations that cause hydrogen buildup, or if the facility has been built on an old landfill site, methane off gas may be of concern.

Remote visual and audible alarm devices such as the Remote Strobe & Horn (RSH-24V-R) may be connected to Relay 2 and should be located in an area that will alert the appropriate parking lot personnel. The cGas-SC fixed system is fully set up, programmed, calibrated and tested prior to being shipped from the factory. It is ready to install upon arrival and operate following the warmup period.



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