



# **Carbon Monoxide Detectors**

## Product Description

Carbon monoxide (CO) is produced wherever fossil fuel combustion occurs, including the operation of gasoline engines and heating and cooking appliances. It is invisible, odorless, tasteless, and deadly. Faulty venting or even a wind shift can create a dangerous situation, particularly in confined areas like boat cabins and sleeping guarters.

Carbon monoxide enters the bloodstream through the lungs, blocking the oxygen your body needs. Prolonged exposure to low concentrations or short exposure to high concentrations can be fatal. Typical symptoms of CO exposure can be mistaken for the flu, seasickness, or intoxication, making accurate on board CO detection a necessity.



# CO <mark>Sen</mark>tinel: CMD-4M-RLY

Model CMD-4M-RLY is a state-of-the-art carbon monoxide detector that utilises a relay circuit allowing for the optional automatic shutdown of the generator upon detection of dangerous CO levels. In addition, the relay allows for connecting

up to six (6) units in series for multiple location warning; when one unit alarms, all interconnected units will alarm for increased safety. The 12 VDC operation with a low current draw of only 46 mA allows for direct battery connection without discharge. The advanced self-cleaning sensor is not affected by common cleaning solvents and helps eliminate false alarms due to contamination. It utilises Time Weighted Average technology for determining dangerous CO levels. When 10% COHb is reached, the 85 dB alarm will sound to alert inhabitants. UL 2034 Marine Listed. 89mm length x 57mm width x 34mm depth.



# CO Sentinel: CMD-4M

The CMD-4M is a 12 VDC detector that is ideal when automatic generator shutdown and multiple location warning features are not desired. Extremely low current draw of only 16 mA during normal operation. The advanced self-cleaning sensor is not affected by common cleaning solvents and helps eliminate false alarms due to contamination. It utilizes Time Weighted Average technology for determining dangerous CO levels. When 10% COHb is reached, the 85 dB alarm will sound to alert inhabitants. UL 2034 Marine Listed. 89mm length x 57mm width x 34mm depth.

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## SS-770 Smoke & Fire Alarm

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**The SS-770 is a 9V (battery included) general purpose smoke** and fire alarm for use on boats and RVs. Using the principle of ionization, it will detect fast-flaming fires which consume combustible materials rapidly. Recommended installation is one unit in each sleeping accommodation, salon, galley, engine/ generator room, and electrical control room for adequate protection.

Meets the requirement of NFPA 302 stating that "all vessels 8 meters or more in length with accommodation spaces intended for sleeping shall be equipped with a single station smoke alarm that is listed to UL217 for recreational vehicles..." and complies with U.S. Coast Guard Section 28.325(b) and Section 181.450 inclusive.

Model Number: SS-770 Voltage: 9V Dimensions: 108mm Diameter, 32mm H Alarm dB: 85 dB Warranty: 1-Year Limited Warranty

Listing: UL 217 for RVs

### Exposure Level & Symptoms:

200 PPM: Slight headache within 2 to 3 hrs.

400 PPM: Frontal headache within 1-2 hrs.

800 PPM: Dizziness, nausea and convulsions within 45 min. Insensible within 2 hrs.

1600 PPM: Headache, dizziness, nausea within 20 min. Death within 30 min. 3200 PPM: Headache. dizziness and nausea in 5-10 min. Death within 30 min. 6400 PPM: Headache and dizziness in 1-2 min.

12800 PPM: Death in less than 3 min.

### Protect What's Important:

Installing and maintaining marine-grade CO detectors inside your boat can help protect you and your crew by helping to minimise the exposure to dangerous levels of carbon monoxide gas. Using the principle of "Time Weighted Averaging," Fireboy-Xintex CO detectors monitor CO concentration, temperature, and time to calculate levels of Carboxyhemoglobin (COHb). COHb is the degree to which the oxygen carrying capacity of the blood is impeded by the union of carbon monoxide to the hemoglobin and is expressed as a percentage. In layman's terms, our bodies prefer absorbing CO to oxygen and COHb is the ratio of absorbed carbon monoxide to oxygen in the bloodstream. Fireboy-Xintex CO detectors calculate this COHb as a function of time and determine the appropriate alarm time.

#### Recommended Carbon Monoxide Detector Installation:

ARINA LISTED A carbon monoxide detector should be installed in each accommodation space. Small craft with an open design may require only one detector for adequate protection. If two or more sleeping areas or spaces are partitioned, then one detector should be installed in each of the spaces.

Ideally, installation of the detector should be at eye level for easy monitoring and service. However, Fireboy-Xintex CO detectors are approved for wall or ceiling mounting. The detector should not be mounted within one foot of corners or other "dead

air" spaces and should not be located within five feet of any cooking appliance.

## Carbon Monoxide Can Accumulate

in Many Ways:

- Inadequately ventilated enclosures
- Blocked exhaust outlets
- Another vessel's exhaust
- The "station wagon effect" or back drafting
- At idle or slow speeds

Accommodation spaces indicated are galley, aft cabin, and v-berth.