CLEMCO®

TECHNICAL DATA SHEET

CMS-4 CARBON-MONOXIDE MONITOR-ALARM

DETECTS CO IN CONCENTRATIONS OF AT LEAST 10 PPM. ATTACHES INSIDE AN SAR.

IMPORTANT: *For safe, efficient blasting, read and follow the operations manual and seek training for everyone who will use this equipment.*

The CMS-4 attaches inside the helmets of supplied-air respirators, which enables blast operators to self-monitor their CO exposure. It triggers audible, visual, and vibratory alarms if CO is detected in concentrations of at least 10 ppm.

OVERVIEW

The CMS-4 Monitor-Alarm triggers audible, visual, and vibratory alarms after it detects carbon monoxide (CO) in concentrations of at least 10 parts per million (ppm) in the breathing-air supply of supplied-air respirators (SARs).

ADVANTAGES

- The unit is small, lightweight, and quickly attaches inside the blast helmet of an SAR. It requires no external connections or hoses, and is easily removed and reinstalled.
- Its placement enables operators to self-monitor their CO exposure. They do not need to rely on coworkers or remote alarms for CO exposure warnings.

FEATURES

- The unit has an easy-to-replace sensor with a two-year estimated service life.
- It uses a small, commonly available lithium battery with a service life of up to 3000-hours, and it is easy to replace.
- The unit has low-battery and sensor-fail alarms.
- It is microprocessor controlled with a liquid crystal display (LCD).
- It can be calibrated in minutes.

DESCRIPTION OF OPERATION

OSHA requires Grade D quality breathing air and NIOSH-approved Type CE continuous-flow SARs for abrasive blasting operators. OSHA regulations call for a maximum exposure limit to CO of 10 ppm. When the presence of CO is detected at this level, the CMS-4 emits an audible alarm, a visible flash, and the unit vibrates. When an alarm occurs, the user should remove the respirator as soon as it is safe to. For easier startup of the unit before the next work shift, remove the CMS-4 from the SAR at the end of the current shift. To prolong battery life, turn the unit OFF. Before beginning the next work shift, turn the unit ON, check that it's settings are correct, and reinstall it into the blast helmet.

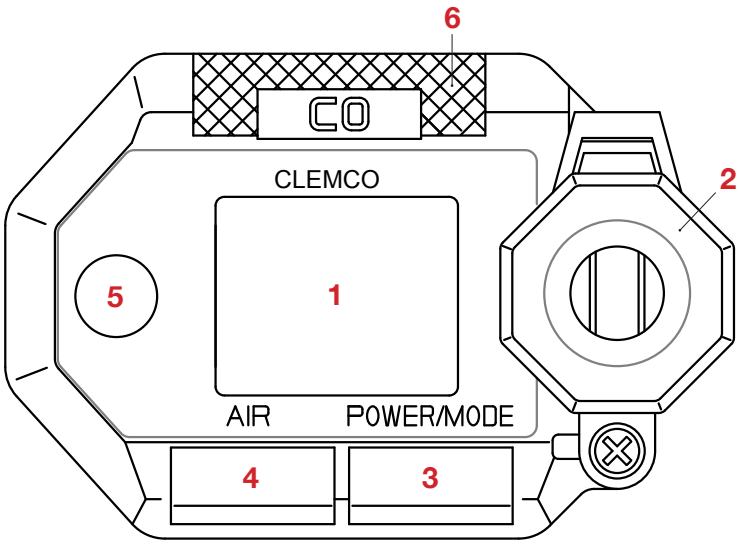
REQUIRMENTS FOR OPERATION

- Battery installed
- 25 ppm calibration gas, calibration cup, and connector
- Thorough familiarity with CMS-4 instructions

SPECIFICATIONS

- Unit alarm thresholds are preset at 10 ppm, but users can reset the thresholds to 5 ppm
- Sampling by diffusion

Stock No. 29766



- Operating temperature and humidity range:
  - Continuous environment: -4° to 122° F (-20° to 40° C); up to 90% relative humidity (noncondensing) factory set at 10 ppm.
  - Temporary environment (up to 15 minutes): -4° to 140° F (-20° to 40° C); up to 90% relative humidity (noncondensing) factory set at 10 ppm.
- Accuracy rating: ± 5% of reading or ± 5 ppm CO (whichever is greater)
- Powered by a 3-volt, coin-type, lithium battery (CR2450)
- Continuous operation: approximately one year of normal use (up to 3000 hours)
- Unit net weight: 1.6 ounces (0.1 lb)
- Dimensions: 2.5” W x 1.7” H x 0.9” D
- Unit calibrated with 25 ppm test gas. If fresh, ambient air cannot be assured, set the fresh-air baseline with optional impurity-free (0 ppm) test gas.
- Low-battery warning indicated by a flashing indicator
- Dead battery indicated by an audible alarm
- System failure warning given by an audible alarm
- Attachment to respirator: VELCRO®
- Warranty: One year material and workmanship

Diagram Key

1. LCD Window
2. Sensor Retainer
3. POWER/MODE Button
4. AIR Button
5. Audible Alarm Opening
6. LED Alarm-Lens