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Critical Environment  
Tech, Inc. 145-7391  
Vantage Way Delta,  
British Columbia V4G  
1M3 Attn: Alex van  
Ballegoie

RESEARCH REPORT NO.: 501140

Approval Date: December 27, 2024

Expires: December 30, 2025

**GENERAL APPROVAL** – Carbon Monoxide Detection System - Manufactured by Critical Environment Technologies, Inc. – Single and Multi-Station – FCS-M and FCS-B Controllers Rated 90-240 VAC, 50/60HZ, 75 WATT - Carbon Dioxide Detectors CGAS-A-CO and CGAS-D-CO Rated 16-30 VDC, 3W / 12-27 VAC, 3VA, installed in accordance with the National Electric Code and is suitable for installation in Indoor and/or Dry Locations only.

## **DETAILS**

This approval is for fire, shock, and electrical hazards only and does not address those aspects of detection of gases the device is designed or calibrated to detect.

## **CONDITIONS OF APPROVAL**

The installation and use of the carbon monoxide detection system is approved when the following provisions are met:

1. The Carbon Monoxide Sensor Models shall be plainly and permanently marked on a contrasting background where readily visible with the following:
  - A. Manufacturer's name, *(Critical Environment Technologies, Inc.)*
  - B. Model designation, *(CGAS-A-CO) (CGAS-D-CO)*
  - C. Electrical rating, *(16-30 VDC, 3W 60HZ (12-27 VAC, 3VA 60HZ)*
  - D. Manufactured date,
  - E. "Carbon Monoxide Sensor"
  - F. "For use with Critical Environment Technologies, Inc. FCS Controller ONLY."
  - G. "This CO Sensor must be replaced within 3 years of the manufactured date."
  - I. "The installation of this CO detection system shall be based on the conditions of approval listed in Research Report number 501140. Not valid if RR is not current. For a copy of the RR visit [www.LADBS.org](http://www.LADBS.org) or call 323-482-6721."

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2. The FCS Controller shall be plainly and permanently marked in letter heights not smaller than 1/8 inch on a contrasting background where readily visible with the following:
    - A. Manufacturer's name,
    - B. Model designation,
    - C. Serial Number,
    - D. Electrical rating, in Volts, Amperes and Frequency,
    - E. "NOT SUITABLE FOR HAZARDOUS LOCATIONS",
    - F. "For Carbon Monoxide Detection Only.",
    - G. "For use with Critical Environment Technologies CGAS Carbon Monoxide Sensor ONLY",
    - H. "For Indoor / Dry Installations ONLY.",
    - I. *"The installation of this CO detection system shall be based on the conditions of approval listed in Research Report number 501140. Not valid if RR is not current. For a copy of the RR visit [www.LADBS.org](http://www.LADBS.org) or call 323-482-6721."*
  3. The carbon monoxide detection system shall be installed, calibrated, and maintained by qualified personnel in accordance with the manufacturer's instructions. The installation of the detection system shall comply with the applicable provisions of the Los Angeles City Codes (Building, Electrical, Mechanical and Fire).
  4. Plans for the installation of the carbon monoxide detection system shall be submitted to and approved by the Mechanical Plan Check and the Electrical Plan Check prior to each installation.
  5. The performance and sensitivity of the carbon monoxide detection system must be evaluated, tested and listed by an approved recognized testing agency.
  7. The Carbon Monoxide detection system shall be serviced by qualified personnel at least once a year and it shall always be in optimum operating condition. The building owner shall maintain all service records and make them available to the Department of Building and Safety for inspection when requested.
  8. This Carbon Monoxide sensor shall be replaced by qualified personnel within 3 years of the manufactured date, in accordance with the manufacturer's instructions.
  9. The installation and performance of this Carbon Monoxide detection system shall comply with the applicable provisions of the Los Angeles City Codes (Building, Electrical, Mechanical & Fire) and California Title-24 Part 6.
  10. The audible device shall have a different tone from life safety devices.
  11. A part, when replaced, shall be of the identical original approved manufactured part and rating, unless otherwise approved by the Los Angeles City Electrical Testing Laboratory.
  12. This approval shall be void if the product is modified without prior authorization from the Los Angeles City Electrical Testing Laboratory.
  13. A copy of this conditional approval letter shall be made available at each installation site.

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**DISCUSSION**

The product covered in this Research Report is a *Carbon Monoxide (CO) Detection System* for use in non-hazardous locations such as commercial buildings. This equipment monitors the concentration level of (CO) in the surrounding air. This (CO) detection system is suitable for installation in Indoor and/Dry locations only. The CGAS sensor models use an electrochemical fuel cell as the (CO) detection element. A normal characteristic of the sensor type is a gradual decrease in output response over time. Periodic calibration of the CGAS sensor is necessary to restore accuracy. Under normal conditions of use, the detection element will need to be replaced after five (5) years from date of manufacture.

When the (CO) level exceeds allowable values, set by California Title-24 Part 6 and OSHA, the (CO) detection system, activates the building’s ventilation system. If the concentration of (CO) rises above the recommended upper limits set by California Title-24 Part 6 and OSHA, an audible and visual alarm will be activated.

When this system is installed in accordance with the provisions of this General Approval, it should meet the minimum safety standards of the Los Angeles City Electrical Code.

For this General Approval to be valid on any installation in the City of Los Angeles, an engineer or inspector of the Department of Building and Safety may make a determination that all conditions of the General Approval required to provide equivalency have been met.

This General Approval is in accordance with Section 93.0303 of the Los Angeles Electrical Code pertaining to “New Materials and Methods of Construction” and does not waive the requirements of any other City of Los Angeles Codes.

This General Approval is neither a product endorsement nor a certification of function or accuracy of the approved items.

**PICTURES:**



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