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Aerionics Inc.

3601 N. St. Paul Ave.
Sioux Falls, SD 57104
Attn: Jeffrey Christiansen

RESEARCH REPORT NO.: 930483

Approval Date: September 23, 2019
Approval Expires: August 9, 2020

GENERAL APPROVAL -Technical Modification - Carbon Monoxide (CO) Detection System -
Manufactured by Aerionics Inc. - Controller Model "DVP-120" and "DVP-120C" - Rated 120VAC, 60HZ,
1.0 Amp and (CO) Sensor Model "CM-6" - Rated 24VAC, 60HZ, 5VA, with an optional adapter connection,
MRS-485.

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 CO detection system is approved when the following provisions are met:

1. The Controller Models "DVP-120 / DVP-120C" 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, *(Aerionics Inc.)*
- b. Model designation, *("DVP-120 / DVP-120C")*
- c. Serial Number,
- d. Electrical rating, in Volts, Amperes and Frequency, *(120VAC, 1.0Amp, 60HZ)*
- e. "NOT SUITABLE FOR HAZARDOUS LOCATIONS",
- f. "For Carbon Monoxide Detection Only.",
- g. "For use with Aerionics, Inc., Macurco CM-6 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 930483. Not valid if RR is not current. For a copy of the
RR visit www.LADBS.org or call 213-482-6721."

2. The Carbon Monoxide Sensor Model CM-6 shall be plainly and permanently marked on a contrasting background where readily visible with the following:
 - a. Manufacturer's name, *(Aerionics Inc.)*
 - b. Model designation, *(CM-6)*
 - c. Electrical rating, *(24VAC, 60HZ, 5VA)*
 - d. Manufactured date,
 - e. "Carbon Monoxide Sensor"
 - f. "This CO Sensor must be replaced within 7 years of the manufactured date."
 - g. "For use with Aerionics, Inc. Macurco DVP-120 / DVP-120C Controller Panel ONLY."
3. The final installation of this Carbon Monoxide detection system, including secondary wiring from controller to sensors shall comply with requirements of "Class 1" wiring methods in approved raceways or conduits per National Electrical Code.
4. This CO detection system shall be installed, calibrated, and maintained by qualified personnel in accordance with the manufacturer's instructions and shall comply with the applicable provisions of the Los Angeles City Codes (Building, Electrical, Mechanical and Fire).
5. Plans for the installation of the CO detection system shall be submitted to and approved by the *Mechanical Plan Check* and the *Electrical Plan Check* prior to each installation.
6. The performance and sensitivity of the carbon monoxide detection system must be evaluated, tested by an approved recognized (NRTL) testing agency.
7. An electrical permit shall be obtained prior to installation or relocation of this equipment in the City of Los Angeles.
8. Primary and Secondary conductors shall be rated for the highest voltage present and conductors shall be approved and listed by a City of Los Angeles approved electrical testing laboratory.
9. The installation and performance of this CO 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 maximum allowable concentration level of the Carbon Monoxide shall be in compliance with the requirements of California Title-24 Part 6 and OSHA-recommended limits.
11. The audible device shall have a different tone from life safety devices.
12. This CO detection system shall be serviced by qualified personnel at least once a year and it shall always be in optimum operating condition. The owner shall maintain all service records and make them available to the Department of Building and Safety for inspection when requested.
13. 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.
14. This approval shall be void if the product is modified without prior authorization from the Los Angeles City Electrical Testing Laboratory.

15. A copy of this conditional approval letter and the electrical permit shall be made available at each installation site.
16. The final installation of this system shall comply with all local and national codes.

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 carbon monoxide in the surrounding air.

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.

An on-board microcomputer supervises and verifies the operation of the system and displays the status to the indicator lights. If a malfunction occurs, the ventilation system is activated and a fault warning signal is 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 Electrical Code pertaining to "New Materials and Methods of Construction", and does not waive the requirements of the City of Los Angeles Building Code.

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

Pictures:



CO Sensor, Model CM-6



Controller, Model DVP-120 / DVP-120C

Approved By:

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