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Conspec Controls, Inc.
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Attn: Bob Vigdor

RESEARCH REPORT NO.: 501135

Approval Date: November 14, 2024
Expires: November 14, 2025

GENERAL APPROVAL – OPTIO-V Nitrogen Dioxide, Carbon Monoxide Detection System and Primus V controller - Manufactured by Conspec Controls, Inc. - 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 and Nitrogen Dioxide Sensor shall be plainly and permanently marked on a contrasting background where readily visible with the following:
 - A. Manufacturer's name, *(Conspec Controls, Inc.)*
 - B. Model designation, *(OPTIOV) and Primus V*
 - C. Electrical rating, *(24-120VAC, 50/60HZ)*
 - D. Manufactured date,
 - E. "Carbon Monoxide Sensor"
 - F. "This CO Sensor must be replaced within 7 years of the manufactured date."
 - G. "This NO2 Sensor must be replaced within 2 years of the manufactured date."
 - H. "NOT SUITABLE FOR HAZARDOUS LOCATIONS",
 - I. *"The installation of this CO and NO2 detection system shall be based on the conditions of approval listed in Research Report number 501135. Not valid if RR is not current. For a copy of the RR visit www.LADBS.org or call 323-482-6721."*

2. The carbon monoxide and Nitrogen Dioxide 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).
3. Plans for the installation of the carbon monoxide detection and Nitrogen Dioxide system shall be submitted to and approved by the Mechanical Plan Check and the Electrical Plan Check prior to each installation.
4. The performance and sensitivity of the carbon monoxide and Nitrogen Dioxide detection system must be evaluated, tested and listed by an approved recognized testing agency.
7. The Carbon Monoxide and Nitrogen Dioxide 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 and Nitrogen Dioxide sensor shall be replaced by qualified personnel within 7 years for Carbon Monoxide and 2 years for Nitrogen Dioxide of the manufactured date, in accordance with the manufacturer's instructions.
9. The installation and performance of this Carbon Monoxide and Nitrogen Dioxide 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.

DISCUSSION

The product covered in this Research Report is a *Carbon Monoxide (CO) and Nitrogen Dioxide NO2 Detection System* for use in non- hazardous locations such as commercial buildings. A UL listed Class 2, step down, 120VAC:24VAC 24VDC transformer, installed in accordance with the National Electric Code, shall be the only device used to energize this (CO/ NO2) Detection System. This equipment monitors the concentration level of (CO/ NO2) in the surrounding air. This (CO/NO2) detection system is suitable for installation in Indoor and/Dry locations only. The OPTIOV uses an electrochemical fuel cell as the (CO/ NO2) detection element. A normal characteristic of the sensor type is a gradual decrease in output response over time. Periodic calibration of the OPTIOV sensors is necessary to restore accuracy. Under normal conditions of use, the detection element will need to be replaced after seven (7) years and 2 years for NO2 from date of manufacture.

When the (CO/NO2) 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. Technical Modification was submitted for system firmware upgrade to OPTIO V.

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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