Tech Bulletin Number: V04560

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Products: DX Air Handling Equipment

Controls: AAON Provided Factory Controls

A2L Mitigation

DX Air Handling Equipment with AAON Factory Controls

Introduction

This technical bulletin outlines the mitigation actions for A2L gas detection in AAON systems for each of the possible detection methods. This bulletin applies to DX air handling equipment with AAON provided factory controls.

A2L Gas Sensed only by the Air Stream Sensors

- The mitigation board will provide a relay that can be field wired to the condensing unit to force stopping of all compressors.
- If the unit is a Make Up Air unit or otherwise designated to operate only with 100% outside air, the outside air damper will be opened.
- The main supply fan will be ramped at a predetermined rate to its maximum configured operating speed. This ramp is to allow time for other system functions such as dampers and VAV boxes to react to the A2L alarm condition.
    - This speed is regardless of other intended operating controls such as static pressure control. It is up to the building designer to ensure that all VAV boxes open to allow for this airflow.
    - This operation should not be blocked or interfered with as it is specifically a required operation for A2L mitigation.
    - **Note**: This operation may run the risk of introducing unconditioned air to an interior space. Appropriate mitigation measures should be taken by the building engineer to protect from these unintended consequences.
- Any return or exhaust fans will operate as would be normal for occupied operation.
- Non-DX heat and cooling are available and will be utilized as appropriate for space control conditions as may be currently needed.

A2L Gas Sensed only by the Cabinet or Gas Heat Sensors

- A DX air handler will only have a cabinet sensor if it has gas heat, and the sensor location will be in the gas heat cabinet.
- Normal unit operation as commanded (occupied or unoccupied) except:
    - Gas heat operation if present is disabled.
        - Other forms of heat can operate.
        - **Note**: This operation may run the risk of introducing unconditioned air to an interior space. Appropriate mitigation measures should be taken by the building engineer to protect from these unintended consequences.

A2L Gas Sensed by both the Air Stream Sensors and the Cabinet/Gas Heat Sensors

- All operations will be the same as the "A2L Gas Sensed only by the Air Stream Sensors" above, except:
    - A DX air handler will only have a cabinet sensor if it has gas heat, and the sensor location will be in the gas heat cabinet.
        - Gas heat operation if present is disabled.
        - Other forms of heat can operate.
        - **Note:** This operation may run the risk of introducing unconditioned air to an interior space. Appropriate mitigation measures should be taken by the building engineer to protect from these unintended consequences.

Ensure that all actions related to A2L gas detection and mitigation are carefully monitored and managed by the building engineer to maintain safety and operational efficiency.

Any applications changes or SPA's must assure that they do not alter the A2L operations from what is documented here without first being approved by engineering.

Technical Specifications

- Board part number: ASM07503
- Sensors Part Number: G137750
- Mitigation Board Plug: G145190

Note: Refer to appropriate IOM for additional information.