Tech Bulletin Number: V04660

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Products: DX Air Handling Equipment

Controls: Limited AAON Factory Controls

A2L Mitigation

DX Air Handling Equipment with limited 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 limited 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 known to be a Make Up Air unit, the outside air damper will be forced to open.
    - Return air units potentially utilized in a MUA arrangement will not be recognized as a known MUA and will not have circuitry to force the outside air damper to open.
- The main supply fan will be forced to operate and will ramp to its maximum configured speed at a ramp rate designed to allow time for other components such as VAV boxes to open as required.
    - 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.

- If the unit has a return fan, the return fan will be forced to run at its max configured speed.
- If the unit has an exhaust fan, no override action will be taken for this fan.
    - The building engineer will need to take steps to assure any outside air provided by the supply fan being forced to run at max speed is properly ventilated from the building.

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.
    - Gas heat operation is disabled.
    - The mitigation board will provide a relay that can be field wired in series with the appropriate relay from the air stream sensing mitigation board to force the condensing unit to stop all compressors.
    - **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.
    - Both mitigation boards will provide relays that can be field wired in series to the condensing unit to force stopping of all compressors.
    - Gas heat operation is disabled.
    - The mitigation board will provide a relay that can be field wired in series with the appropriate relay from the air stream sensing mitigation board to force the condensing unit to stop all compressors.
    - **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.