

## Hydrogen Gas Ventilation System Specifications

### 1. Summary

This document describes the specific requirements for a hydrogen gas ventilation system. Standard functions and features of the ventilation system should include:

- Unattended gas ventilation
- Communication with hydrogen gas detector
- Positive airflow safety shut-off
- Manual reset
- Dry contact inputs and outputs
- Louvered dampers
- NFPA and NEC Compliant
- High sensitivity and stability
- Optional: Mounting wing placement
- Optional: Room exhaust or source
- Optional: Large or small rain shield
- Optional: Normally open or normally closed contacts

### 2. Ventilation System Capabilities

- 2.1 The ventilation system works in tandem with hydrogen gas detectors. If a room has hydrogen gas buildup, the gas detector will turn on the ventilation system once the atmosphere reaches 1% hydrogen concentration. Once concentration drops back below 1%, the ventilation system will shut off automatically.
- 2.2 User specified AC and DC input power options. Available options are 110 VAC, 24 VDC, or 48 VDC.
- 2.3 May be daisy chained so that multiple vents are controlled by a single hydrogen gas detector, or so that multiple gas detectors can be set up to activate a single vent.
- 2.4 May be factory configured to force air into a room instead of exhausting air out.
- 2.5 Positive airflow shut-off feature used to prevent air passage through the fan, in the case of a thermal event which leads to a fire.
- 2.6 Louvered dampers prevent domestic air from escaping a room during non-operation.

### 3. Hardware Performance

3.1 The system utilizes four fans, factory-rated at 850 CFM each. This gives a total of 3400 CFM, and conforms to N+1 for 2550 CFM.

3.2 Manually activated reset in the case of a positive airflow shut-off event.

### 4. Technical Specifications

<b>Connections:</b>	Input: Positive shutoff control, N.O. Dry Contacts Output: 1% Fan Running, 2% Alarm, N.O. Dry Contacts
<b>Mounting:</b>	(4) 38 mm (1.5 in) Standard 607 mm (24 in)
<b>Positive Shut Off:</b>	Dry contact activated, manually reset
<b>Power Requirements:</b>	24 - 48 VDC or 110 VAC as ordered, ground stud
<b>Dimensions:</b>	H x W x D: 610 x 610 x 450 mm (24 x 24 x 18 in)
<b>Weight:</b>	Fan: 23 kg (51 lbs) Rain Shield & Damper: 10.9 kg (24 lbs)
<b>Safety Standard:</b>	(4) fans rated at 850 CFM Total 3400 CFM N+1 (3) Fans at 850 CFM Total 2550 CFM for 777 sq. m (2550 sq. ft)
<b>Options:</b>	Mounting wing placement, room exhaust source, small or large rain shield, N.O. to N.C., custom features on request

### 5. Warranty

12 Months.