

H2 Hydrogen Gas Ventilation System



Compliance

Properly installed, the system is compliant with The National Electric Code (NEC) Section 480.9 (A) for ventilation of battery rooms. This is also the specified requirement for solar or wind generated power Battery Rooms.

It is also compliant with The National Fire Protection Association, NFPA 2 Hydrogen Technology Code, which is more stringent.

The minimum system consists of an H2 Hydrogen Gas Detector, an H2 Battery Room Forced Ventilator with Positive Airflow Shut Off, a remote firefighter's shutdown capability, a backflow damper, and a 2% monitored alarm.

This unit complies with NEC 501.125. (B), 501.105 (1)-3 and is designed for use in Class 1 Div. 2 hydrogen containing classified areas.

Arrgh Manufacturing in Novato California produces an American-made hydrogen gas detector and forced ventilation fan system for use in battery charging rooms and other areas where hydrogen may be present. The system consists of two parts, hydrogen gas detector with relay contacts that mounts in the highest part of the room and a large vent fan enclosure mounted through the outside wall. The system is NFPA compliant. The system has four fans factory rated at 850 CFM each. This conforms to N+1 for 2550 CFM. The vent is equipped with a Positive Airflow Shut Off. These doors can be closed by an external electrical command. They will stop any airflow from passing through the fans.

The vents can be daisy chained, more than one vent can be controlled by one gas detector. More than one hydrogen gas detector can activate a vent. The unit usually is set up to exhaust air but can be turned around to source forced air into a room. The unit will work with the Arrgh Manufacturing Inc. H2 Hydrogen Gas Detector or the Arrgh Manufacturing Inc. HTS Hydrogen, Temperature and Smoke detector. These units are designed with flexibility in mind.

Arrgh Manufacturing

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Features of the H2 Hydrogen Gas Detector

Should the concentration of hydrogen gas in the air surrounding the sensor reach 1% by volume (10,000 ppm), the "1% Caution" yellow LED will light and the 1% internal relay will close. Should the hydrogen gas concentration reach 2% by volume (20,000 ppm), the "2% Warning" red LED will flash and an 80 db alarm will sound; the 1% relay will remain closed and, The 2% internal relay will close. Either relay can activate a remote exhaust fan and/or alarm.



Hydrogen gas H2 detector

Dimensions: Height 7 " (17.8 cm.)
 Width 4-3/4 " (12.0 cm.)
 Depth 2-1/2 " (5.5 cm.)
 Mounting: Four 3/16 " (4.5 mm.) screws
 Power Requirements: 24, 48 volts dc. or 115 VAC as ordered
 Relay(s): At 2% SPDT. At 1% SPDT

Features of the H2 Hydrogen Gas Vent



Positive Shut off Armed



Positive Shut Off Closed

Dimensions: Height 24 " (61 cm.)
 Width 24 " (61 cm.)
 Depth 18 " (45 cm.)
 Weight Fan 51 lb. Rain shield and damper 24lb.
 Mounting: Four 1.5 " Wings, Standard 24" Duct
 Power Requirements: 24, -48 volts dc. or 115 VAC as ordered, Ground Stud
 Input Positive shutoff control, N.O. Dry contacts
 Output 1% fan running, 2% Alarm, N.O. Dry Contacts
 Air flow 4 ea fans rated at 850 CFM Total 3,400 CFM
 N+1 3 Fans at 850 CFM Total 2,550 CFM for 2,550 Sqft Area
 Positive Shut Off Dry contact activated, Manually reset.
 Options Mounting wing placement, Room exhaust or source, Small or large rain shield, N.O. to N.C, Custom features on request