



HGD-3000 Hydrogen Gas / Smoke Detector with Intrusion Alarm



HGD-3000i

Hydrogen Gas Detection

The HGD-3000 Hydrogen Gas and Smoke Detector with optional Silent Intrusion Alarm is designed for unattended battery installations or remote shelters containing gassing lead acid batteries and charging systems. The HGD-3000 will turn on an exhaust fan when hydrogen gas levels reach 1% and will alarm at 2%. This alarm consists of a local 80db horn, a flashing red LED, and a dry contact switch closure for remote alarming.

Smoke Detection

The photoelectric smoke sensor detects minute combustion products from smoldering wire insulation, battery cases, and other material. When smoke is detected, a distinctive alarm is emitted from the 80db horn and a separate dry contact switch is activated. At this time, the exhaust fan is inhibited in order to deny the fire increased oxygen from outside air.

Temperature, Loss of Power, & Intrusion

During normal operation and in the absence of an alarm condition, an internal thermostat will turn on the exhaust fan at a preset temperature to reduce heat build-up in the room. Loss of power to the unit will also generate a dry contact alarm. Additionally, an optional infrared intrusion alarm will trigger a silent dry contact switch.

Features

- Automatic Operation and Continuous 24/7 Monitoring
- Highly sensitive and stable solid state hydrogen sensor
- Sensitive photoelectric smoke detector module
- Internal thermostat for automatic exhaust fan control at 40°C (104°F) with ±5° adjustable range
- Save insurance costs - reduce insurance premiums when placed in battery charging rooms

Applications

- Utilities and Power Plants
- UPS Power Systems
- Fuel Cell Test Stations
- Nuclear Waste Reforming
- Hydrogen Refueling Stations
- Fire Department
- Battery Suppliers
- Battery Charging Rooms
- Motive Power
- Golf Cart

Kit Includes

- HGD-3000
- User Manual
- **Optional:** Silent-Alarm Add-on
- **Optional:** Breakout box for easy-access control
- **Optional:** Junction Box
- Compliance Certificate available on request

Technical Specifications

Detection:	Hydrogen Gas, Smoke, Temperature, Intrusion
Alarms:	10A Relay for Exhaust Fan, 1A Relay for Loss of Power, 1A Relay for Smoke Alarm, 1A Relay for Intrusion, 1A Relay for 2% H ₂ Concentration
Relay Connections	RJ45, Punch-Down Block
Mounting:	(4) 4.5 mm (3/16 in) screws
Operating Environment:	Temperature: -10 – 40 °C (14 – 104 °F)
Power Requirements:	Standard: 85 – 265 VAC, 50/60 Hz Optional: 17 – 60 VDC
Compliance:	IEEE Standard 450; National Protection Agency (NFPA) Article 64; NFPA 2: Hydrogen Technologies Code; Uniform Building Code (UBC) Section 6400; National Electric Code (NEC) Section 480.9 (A); NEC 501.125 (B); NEC 501.105 (1)-3 - use in Class 1 Division 2 Group B. Meets UL Std. No. 61010-1 3rd Edition and CAN/CSA-C22.2 No. 61010-1-12(R2022) (DC model only)
Dimensions:	178 x 120 x 55 mm (7 x 4.75 x 2.5 in)

Ordering Information

Model No.	Description
HGD-3000	Hydrogen Gas / Smoke Detector
HGD-3000i	Hydrogen Gas / Smoke Detector with Infra-red Intrusion Alarm
Breakout Box	Breakout Box for the HGD-3000