BATTERY HANDLING SYSTEMS

Accessories
Safety Alarms & Response

Carbon Monoxide & Smoke Detector

The Carbon Monoxide & Smoke Detector (CO-S-D) combines two important safety devices in one unit. The CO-S-D features a voice warning system that announces the detected hazard to eliminate confusion. This battery-operated unit will continue monitoring even during a power outage, when many fire and carbon monoxide incidents may occur.

Features & Benefits

- When smoke or fire hazard is detected, red LED will flash and three long alarm beeps will sound followed by a verbal warning, “FIRE!” (pattern repeats until smoke is eliminated)
- When a Carbon Monoxide (CO) hazard is detected, four short alarm beeps will sound followed by a verbal warning, “WARNING! CARBON MONOXIDE!” (pattern repeats until the unit is reset or the CO is eliminated)
- Battery-powered to provide protection even during power outages
- Unit warns of low battery power by announcing “LOW BATTERY”, initiating an alarm chirp, and activating a flashing red LED
- Battery door will not close unless the batteries are properly installed
- Test/reset button tests alarm circuitry and triggers the voice announcement
- Nuisance alarms can be temporarily silenced

Product Specifications

	CO-S-D
Dimensions	5.6” x 1.8” (142 mm x 46 mm)
Power Source	2 AA Batteries
Smoke Sensor	Ionization
CO Sensor	Electrochemical
Audio Alarm	85 dB at 10’ (3.05 m)
Temperature Range	40˚F to 100˚F (4.4˚C to 37.8˚C)
Humidity Range	10% to 95% Relative Humidity, Non-condensing
Weight	13 oz (369 g)
Interconnects	No

Fire Extinguisher & Cabinet

The Fire Extinguisher & Cabinet (FE-20) includes a 20 lb (9 kg) capacity, Type ABC fire extinguisher and a front-loading cabinet. This multipurpose fire extinguisher is designed for use in combating nearly any fire risk from Class A (trash, wood, and paper), Class B (liquids and gases), and Class C (electrical fires). The cabinet is for indoor or outdoor use and protects the extinguisher from dirt, debris, water, and chemicals.

Features & Benefits

- 20 lb (9 kg) Type ABC fire extinguisher comes fully charged and tagged and is rechargeable
- Fire extinguisher range and discharge time: 15’ to 21’ (4.6 m to 6.4 m), 26 seconds
- Fire extinguisher approvals: UL Listed, Meets U.S.D.O.T. Requirements, USCG Approval
- High-density, injection-molded plastic cabinet: 28” H x 11” W x 9” D (711 mm x 279 mm x 229 mm)
- Grid-scored, UV-resistant break panel improves emergency access and does not require shattering glass
- Indoor/outdoor cabinet features natural ventilation, pitched drainage, and rounded corners
- Includes red hammer assembly, cylinder lock with key, and UV-resistant labels

Hydrogen Exhaust Fan Kit

The BHS Hydrogen Exhaust Fan Kit (HEF-KIT) monitors hydrogen gas levels, activating operating alarms and ventilation fans when necessary to exhaust gases. The HEF-KIT is intended for use in battery charging rooms and other areas where hydrogen gas may be present.

The HEF-KIT consists of a dual-relay Hydrogen Gas Detector (HGD-DR) and a Hydrogen Exhaust Fan (HEF-1). The Hydrogen Gas Detector monitors hydrogen gas and provides warning of increasing levels before they become dangerous.

Should the concentration of the hydrogen gas in the air surrounding the sensor reach 1% by volume, the yellow Warning LED will light and the 1% internal relay will close, activating the Hydrogen Exhaust Fan for forced ventilation. Should the concentration reach 2% by volume, the red Danger LED will flash, an 80 decibel alarm will sound, and the 2% internal relay will close. The relays will remain closed, LEDs lit, exhaust fan and alarm activated until the hydrogen concentration drops below the corresponding percentages.

Features & Benefits

- Continuous monitoring of hydrogen gas levels
- Reliable, highly sensitive, highly stable solid state sensor
- Forced ventilation
- Positive airflow shutoff
- Louvered dampers on exterior of fan prevent domestic air from escaping the room while fan is not in operation
- Remote firefighter's shutdown capability (recommended per NEC 501)
- Improve battery room air quality by exhausting gases produced during battery charge
- Reduce costs with controlled fan operation and prevent unnecessary escape of climate-controlled air
- A HEF-KIT aids in compliance with the following standards: NEC 480.9 Ventilation of Battery Rooms, NEC 501.125. (B), 501.105 (1-3), NFPA 2 Hydrogen Technology Code

Product Specifications

Hydrogen Exhaust Fan	
Dimensions	18" x 24" x 24" (457 mm x 610 mm x 610 mm)
Weight	Fan: 51 lb (24 kg), Rain shield and damper: 24 lb (11 kg)
Mounting	(4) 1 ½" (38 mm) Wings, Standard 24" (610 mm) Duct
Power Requirements	115 V ac, Grounded
Input	Positive shutoff control, Normally open dry contacts
Air Flow	(4) fans, each rated at 850 ft³/min, total 3,400 ft³/min N+1 (redundancy), (3) fans at 850 ft³/min, total 2,550 ft³/min for 2,550 ft³ (72 m³) area
Positive Shutoff	Dry contact activated, manually reset

Note: For HGD-DR specifications, refer to chart below.

Hydrogen Gas Detector

Hydrogen Gas Detectors (HGD) protect battery charging rooms and other locations where motive and stationary batteries are present by continuously monitoring hydrogen gas levels. The HGD is equipped with LED lights and an 80 dB alarm. AC- or DC-Powered models are available with single or dual relay.

Product Specifications

	Relay	Relay Rating	Power Requirements	Dimensions	Mounting	Operating Temperature
HGD-1	Single, Dry Contact Relay	10 A	85 V ac to 265 V ac 50/60 Hz	2 ½" x 4 ¾" x 7" (63.5 mm x 120.7 mm x 178 mm)	(4) 3/16" (4.8 mm) screws	14°F to 104°F (-10°C to 40°C)
HGD-1-DC			17 V dc to 60 V dc			
HGD-DR	Dual, Dry Contact Relay		85 V ac to 265 V ac 50/60 Hz			
HGD-DR-DC			17 V dc to 60 V dc			

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