

The background of the entire page is a photograph of an industrial facility, likely an ammonia plant, featuring large storage tanks, complex piping, and metal walkways. A semi-transparent yellow vertical band runs down the left side of the image, serving as a backdrop for the text. In the bottom left corner, there are decorative curved lines in blue, green, and yellow.

COOL AIR
INCORPORATED

PREVENT Exposures

With Our Full Line of
Ammonia Gas Detectors

763.205.0844 | coolairinc.com

Who We Are

Affordable, dependable, and virtually maintenance-free detectors manufactured by the leading supplier of quality industrial refrigeration ammonia gas monitoring equipment.

Summary

Cool Air Incorporated is a family owned and operated business that has been designing, manufacturing, and selling ammonia gas detection monitors, across the globe for over 35 years. Our equipment is purposefully built to be used in industrial refrigeration industries such as food processing plants, cold storage facilities, fish processors, power utilities and many more. Cool Air detectors are the most reliable, have the longest lasting sensor, and are the easiest to maintain of any detectors in the world today. In addition to our robust detectors, we offer an extensive array of options and accessories to meet almost any need your remote monitoring application requires, offering a complete custom solution.

Within this catalog you will find the necessary information for outlining your next ammonia gas detection system. Additional information regarding the calibration process, wiring diagrams and installation methods can be found on our website (www.coolairinc.com) or call us if you have further questions and need technical assistance.

Mission Statement

Cool Air Incorporated is committed to provide all industries using or storing ammonia, the equipment necessary to protect personnel and property. We do this by providing high quality, exceptionally reliable, affordable ammonia gas detection systems.

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Affordable
Dependable
Virtually
Maintenance-Free

Ammonia detectors manufactured by the leading supplier of quality industrial refrigeration ammonia gas monitoring equipment.



LBW-WATCHMAN

\$915.00

A Compact, Affordable Solution

The LBW-Watchman Ammonia Gas Detector from Cool Air Inc. is our most simplified and compact detector offering. This ammonia detector has the industry standard features needed to protect your personnel and product, right out of the box. One of its strongest features is noticeable at first glance – the highly visible digital readout for displaying the ammonia concentration in parts per million (ppm) – this detector provides instantaneous information about the ammonia levels inside the room. The detector will also seamlessly integrate with your existing PLC or automation control system via its 4-20 mA analog output. Need to notify personnel of an ammonia leak? The LBW-Watchman can also connect to alarm light and horn devices, notifying personnel of an ammonia leak. All of these features are packaged in our standard safety yellow enclosure, allowing for quick identifications in crowded equipment rooms or from across the facility, ultimately making it easier to identify ammonia leak sources keeping your personnel safe.



Applications

- Storage Freezers
- Storage Coolers
- Dock Areas
- Production Areas
- Cold Storage Warehouses
- Penthouse Units

Features

- Compact, affordable solution
- Bright LED display, indicating NH₃ concentration in real time
- Industry standard 4-20 mA output for connecting to controllers and PLCs
- Calibration process is very simple and quick, reducing maintenance costs
- Safety yellow NEMA 4X enclosure protecting detector electronics for any harsh environment
- Sensors mounted on the outside of the enclosure for instant response to ammonia gas
- Two programmable alarm set points for adhering to site specific requirements

Specifications

Input Power	18 to 36 VDC (24 VDC nominal)
Display	0.8" High, 7-Segment LED, 4-Digit Readout
Ammonia Sensors*	
• Solid State, Range	0-1000 ppm
• Electrochemical, Range.....	0-500 ppm
Alarm Set Points	Qty (2)
• Low Alarm, Range.....	5-900 (EC Capped at 500 ppm)
• High Alarm, Range.....	25-1000 (EC Capped at 500 ppm)
Outputs	
• 4-20 mA for Ammonia Concentration	
- Multiple Ranges	0-100, 0-250, 0-400, 0-500, 0-800, 0-1000
Operating Temperature (Sensor Dependent)	
• Solid State.....	-50°F to 125°F
• Electrochemical	-20°F to 110°F
Operating Humidity	5% to 95% RH, Non-Condensing
Dimensions.....	4-1/2" H x 7-1/2" W x 4-1/2" D
Weight	1.5 lbs.
Enclosure	Safety Yellow, Rated NEMA 4X and IP66
Calibration Requirement	Annually

**For additional specifications reference maintenance items section*



LBW-420

\$1375.00

Our most versatile detector offering

The LBW-420 Ammonia Gas Detector from Cool Air Inc. is our most versatile detector offering. Right out of the box, this ammonia leak detector has all the features you need to protect your personnel and product, in any harsh environment. One of its strongest features is the highly visible digital readout for displaying the ammonia concentration in parts per million (ppm), providing instantaneous information about the ammonia levels inside the room. The front panel contains LEDs to provide a quick indication of alarm status. The detector will also seamlessly integrate with your existing PLC or automation control system via its 4-20 mA analog output. Need to operate auxiliary equipment such as exhaust fans, king valves, compressors, or additional alarm beacons/horns? The LBW-420 can do that too, as it comes equipped with three output relays for connecting to that type of equipment. All of this packaged in a bright, safety yellow enclosure allowing for quick identifications in crowded equipment rooms or from across the facility, ultimately making it easier to identify ammonia leak sources keeping your personnel safe.

Applications

- Engine Rooms
- Machine Rooms
- Compressor Rooms
- Relief Line Vent
- Control Rooms
- Air Handling Units



Features

- Our most versatile detector offering
- Bright LED display, indicating NH₃ concentration in real time
- Industry standard 4–20 mA output for connecting to controllers and PLCs
- Three relay output contacts (Low Alarm, High Alarm and Auxiliary)
- Calibration process is very simple and quick, reducing maintenance costs
- Safety yellow NEMA 4X enclosure protecting detector electronics for any harsh environment
- Sensors mounted on the outside of the enclosure for instant response to ammonia gas
- Programmable alarm set points for adhering to site specific requirements

Specifications

- Input Power
- Model #LBW-420..... 100 to 130 VAC (115 VAC nominal)
 - Model #LBW-420-1 18 to 36 VDC (24 VDC nominal)
 - Model #LBW-420-2 210 to 240 VAC (220 VAC nominal)
- Display 0.8" High, 7-Segment LED, 4-Digit Readout
- Ammonia Sensors*
- Solid State, Range0-1000 ppm
 - Electrochemical, Range.....0-500 ppm
- Alarm Set PointsQty (2)
- Low Alarm, Range.....5-900 (EC Capped at 500 ppm)
 - High Alarm, Range..... 25-1000 (EC Capped at 500 ppm)
- Relays
- Qty (3) 5 A, Form C (SPDT), Normally-Open, Normally-Closed
 - Low Alarm Relay
 - High Alarm Relay
 - Auxiliary Relay
 - Errors Only or Activate with Low Alarm or High Alarm Relays
- Outputs
- Isolated Dry-Contacts for Low/High Alarm & Auxiliary Relays
 - 4-20 mA for Ammonia Concentration
 - Multiple Ranges.....0-100, 0-250, 0-400, 0-500, 0-800, 0-1000
- Operating Temperature (Sensor Dependent)
- Solid State.....-50°F to 125°F
 - Electrochemical-20°F to 110°F
- Operating Humidity 5% to 95% RH, Non-Condensing
- Dimensions..... 9-1/2" H x 8" W x 4-1/4" D
- Weight..... 5 lbs.
- Enclosure..... Safety Yellow, NEMA 4X Rated, IP66
- Approvals.....TUV Rheinland, cTUVusa, UL 61010-1:2004 R7.05, CAN/CSA-C22.2 No. 1010-1:2004
- Calibration Requirement.....Annually

*For additional specifications reference maintenance items section

LBW-50

\$995.00

Proven, Robust, Analog Detector Model

The LBW-50 Ammonia Gas Detector from Cool Air Inc. has been around since the company started. Over the years, it has evolved into a more robust detector offering, with features you need to protect your personnel and product, in any harsh environment. The front panel of the ammonia detector contains five LEDs to notify personnel of increasing ammonia concentration, providing information about the potential ammonia level inside the room. Early Warning and Alarm LEDs are paired with the detectors respective low and high alarm set points. In addition to the LEDs, the LBW-50 detector comes equipped with three output relays, which energize three normally-open, normally-closed dry contacts for connecting to alarm beacons/horns and auxiliary equipment such as ventilation, king valves and compressors. All of this is packaged in a bright, safety yellow enclosure allowing for quick identification.



Features

- Proven, robust, analog detector model
- Bright LEDs for indicating increasing NH_3 concentration
- Three relay output contacts (Low Alarm, High Alarm and Auxiliary)
- Safety yellow NEMA 4X enclosure protecting detector electronics for any harsh environment
- Sensors mounted on the outside of the enclosure for instant response to ammonia gas
- Service mode to eliminate nuisance alarms during calibration and testing
- Annual calibration, reducing maintenance costs

Applications

- Engine Rooms
- Compressor Rooms
- Tank Rooms
- Relief Lines
- Control Rooms
- Cold Storage

Specifications

- Input Power
- Model# LBW-5085 to 264 VAC
 - Model# LBW-50-122 to 26 VDC or 16 to 24 VAC
- Ammonia Sensors*
- Solid State, Range25-800 ppm
 - Electrochemical, Range25-500 ppm
- Alarm Set PointsQty (2)
- Early Warning Alarm (Factory Set)
 - Main Alarm, Range35-800 (EC Capped at 500 ppm)
- Relays
- Qty (3) 5 A, Form C (SPDT), Normally-Open, Normally-Closed
 - Low Alarm Relay
 - High Alarm Relay
 - Auxiliary Relay (Auxiliary Relay Operates at Same Time as Alarm Relay)
- Outputs
- Isolated Dry-Contacts for Low/High Alarm and Auxiliary Relays
- Operating Temperature (Sensor Dependent)
- Solid State-50°F to 125°F
 - Electrochemical-20°F to 110°F
- Operating Humidity5% to 95% RH, Non-Condensing
- Dimensions7-1/2" H x 7-1/2" W x 4-1/4" D
- Weight4 lbs.
- Enclosure Safety Yellow, Rated NEMA 4X and IP66
- Calibration Requirement Annually

*For additional specifications reference maintenance items section

LBW-420-LEL

\$1425.00

Specifically purposed for catastrophic leak detection

The LBW-420-LEL Ammonia Gas Detector is a versatile detector offering that rounds out the Cool Air Inc. ammonia gas detection system product line. The LBW-420-LEL is specifically purposed for the detection of high ammonia concentrations in the event of a catastrophic leak in industrial ammonia applications. To do this, a catalytic bead sensor, with a range of 0-10%, monitors for potentially explosive levels of ammonia, creating a notification and response prior to achieving the lower explosive limit (LEL) of the target gas. It has all the features you need for emergency response and the protection of personnel and product, in any harsh environment. One of its main features is noticeable at first glance, with its highly visible digital readout for displaying the ammonia concentration in %NH₃. This ammonia leak detector can also seamlessly integrate with your existing PLC or automation control system via its 4-20 mA analog output. Finally, the LBW-420-LEL comes equipped with three output relays that can be used for shutting down compressors and other equipment.

Features

- Specifically purposed for catastrophic leak detection
- Bright LED display, indicating concentration in %NH₃
- Industry standard 4–20 mA output for connecting to controllers and PLCs
- Three relay output contacts (1 alarm set point, all latched)
- Safety yellow NEMA 4X enclosure protecting detector electronics in any harsh environment
- Programmable alarm set point for adhering to site specific requirements
- Service mode to eliminate unnecessary shutdowns during calibration and testing
- Annual calibration, reducing maintenance costs



Applications

- Engine Rooms
- Machine Rooms
- Compressor Rooms
- Penthouse Units

Specifications

Input Power	
• Standard	18 to 36 VDC (24 VDC nominal)
• Optional	85 to 264 VAC
Display	0.8" High, 2-digit readout
Ammonia Sensors*	
• Catalytic Bead, Range	0-10%
Alarm Set Point	Qty (1)
• Main Alarm Range	.1-9.9% (in .1% Increments)
Relays	
• Qty (3) 5 A, Form C (SPDT), Normally-Open, Normally-Closed	
• 1 Alarm Set Point, All Latched	
Operating Temperature	-50°F to 125°F
Operating Humidity	5% to 95% RH, Non-Condensing

Dimensions	9-1/2" H x 8" W x 4-1/4" D
Weight	5 lbs.
Outputs	
• Isolated Dry-Contacts, All Latched	
• 4-20 mA for Ammonia Concentration	
- Multiple Ranges	0-1%, 0-2%, 0-10%
Enclosure	Safety Yellow, NEMA 4X Rated, IP66
Calibration Requirement	Annually

*For additional specifications reference maintenance items section

LBW-RLV (RELIEF LINE VENT)

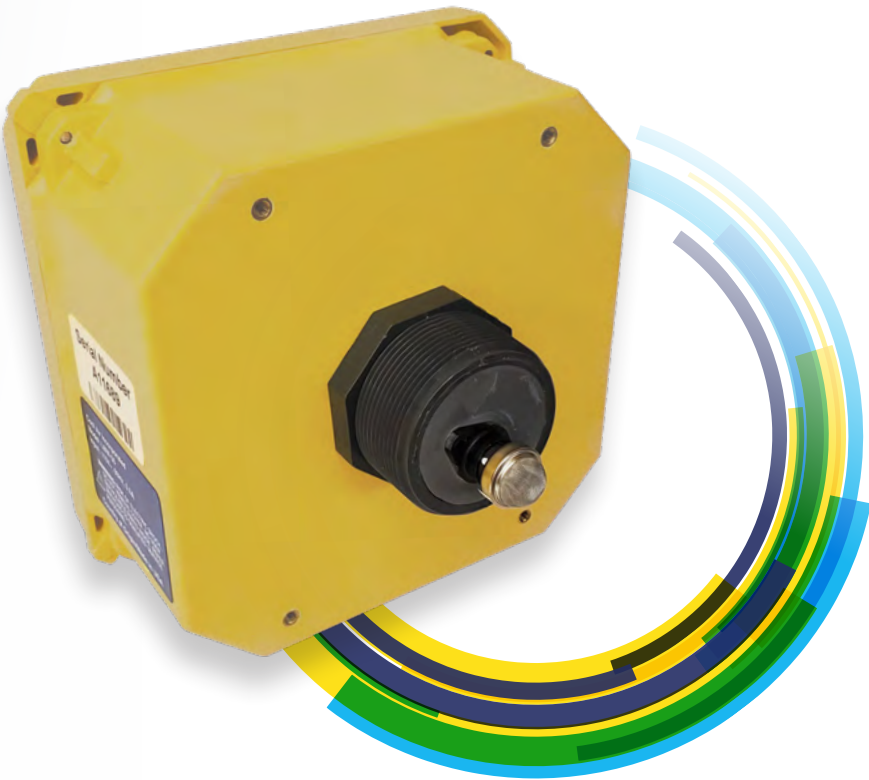
LBW-420-RLV	\$1675.00
Detector \$1375 + Remote Sensor \$300	
LBW-50-RLV	\$995.00
LBW-WATCHMAN-RLV	\$915.00

Excellent Durability to Ammonia Exposure

Often in applications, ammonia detection monitoring is also required for the refrigeration systems relief line vent (RLV), located somewhere in the engine room. Cool Air Inc. also offers a full line of RLV detectors to suit the needs of your application. We use our proven, LBW-420, LBW-50 or the LBW-Watchman detector models as the heart of our RLV detectors. Each RLV detector is retrofitted with a 2-inch schedule 80 relief line vent fitting, potted electronics, and robust solid-state sensor to detect ammonia leaks. Paired with our 0-1000 ppm solid state sensor, the detector can sense any ammonia in your relief line vent header, that may be coming from a weeping valve or during a release due to system overpressure. All the same features available with our standard detector offering can be utilized to meet the needs of your vent line applications.

Applications

- Engine/Compressor Room Relief Line Vent



Features

- Excellent durability to ammonia exposure
- Early, low concentration detection reducing costly repairs and/or plant downtime
- Direct mount on back of detector or remote mount sensor options¹
- Safety yellow NEMA 4X enclosure protecting detector electronics for any harsh environment
- 2-inch threaded union allowing for quick disconnect from relief line vent
- Long-life solid-state sensor technology (0-1000ppm detection range)²

¹ LBW-420 remote mount only

² Reference solid state sensor specifications located in the maintenance items section for additional information



LBW-HHS-II

\$1700.00

- NH3-HHS-500..... \$525.00*
(0-500 ppm Range Sensor)
- NH3-HHS-2000..... \$650.00*
(0-2000 ppm Range Sensor)

*Sensors are additional

To complement the Cool Air Inc. fixed ammonia gas detectors, we also offer a portable handheld device. This versatile tool can be used for performing routine checks in engine rooms, around evaporator coils in processing areas, coolers, freezers, or in confined spaces prior to entry. The LBW-HHS-II portable gas detector has all the features you need to identify potential leak sources with pinpoint accuracy. The unit is designed for easy one-hand operation, contains an internal sampling pump for drawing in the target gas, and uses a flexible wand for identifying potential ammonia leak sources. The LCD screen displays your measurements in real time. For low-light environments, a backlight ensures readability. Sensors used in the LBW-HHS-II are smart sensor modules. Each sensor module is a sensor, amplifier, and memory module all contained in one compact package. Because of this design, sensor modules can be calibrated independently and simply plugged into any detector for immediate use.



Applications

- Engine/Machine Rooms
- Machine Rooms
- Refrigeration Piping
- Valve Packages
- Compression Fittings
- Penthouse Units
- Process Areas

Features

- Gas concentration displayed in real time
- Easy to read back-lit color graphics LCD
- Touch screen
- 10-inch sampling wand
- One-hand pistol grip design
- 10 hours of continuous run time
- Visual and audible alarms
- Internal data-logging (4 GB)

Specifications

Range..... NH₃*, 0-500 ppm or 0-2000 ppm
Display Backlit, Touch-Sensitive Color Graphics LCD
Accuracy Sensor Dependent but Generally ± 5% of Value
(Limited by Cal. Gas)
Sensitivity Typically 0.1-1% of Sensor Module Range
Output USB Transfer of Stored Gas Values
Memory 4 Gb (Millions of Data Points)
Storage Interval Programmable from 1 Minute to 60 Minutes
Alarms Three Concentration Alarms
(Caution, Warning, and Danger with Adjustable Setpoints)
Power Rechargeable NiMH D Cell Battery
(Alkaline D Cell Battery May Also Be Used)

Typical Battery Life Roughly 10 Hours of
Continuous Run Time
Charger 2-Cell Charger, 100-240 VAC Input
Operating Temp -13°F to 131°F
Humidity 0-95% Non-Condensing
Detector Material Glass Filled Polycarbonate
Size 3-1/2"(W) x 9"(H) x 5-1/2"(D)
Shipping Weight 7 lbs.
Environmental Compliant

*Other Gas Sensors Available Upon Request

DCSAP

(DIGITAL CENTRAL
SUPERVISORY ALARM PANEL)

- DCSAP-8.....\$2450.00
- DCSAP-16.....\$3350.00
- DCSAP-24.....\$4250.00
- DCSAP-32.....\$5100.00

The Cool Air Incorporated Digital Central Supervisory Alarm Panel (DCSAP) is perfect for monitoring all your ammonia gas detectors from a central location. Just like our popular ammonia detection systems, this panel has a bright LED display, which provides the ammonia concentration for each detector that is connected to it. A smaller digital display informs the user which specific detector zone is currently selected. Using toggle switches, the user can move through the detector zones effortlessly, allowing for a quick ammonia concentration check of every detector connected to the panel. LEDs for each zone indicate whether or not the detector is in early warning or alarm status. Toggle switches provide the ability to easily silence any detector with an alarm going off. Global early warning and alarm relays allow for additional functionality if there is a need to connect the panel to an automation and/or other auxiliary alarm monitoring systems.

Applications

- Engine Rooms
- Machine Rooms
- Compressor Rooms
- Control Rooms

Features

- Bright LED display, indicating NH₃ concentration in ppm for the selected zone
- Can monitor up to 32 individual zones, all from one location
- Safety yellow NEMA 4X enclosure protecting panel electronics for any harsh environment
- Two global output contacts (early warning and alarm)
- Alarm LEDs and silence toggle switches, for each individual zone
- Able to provide 24 VDC power for all connected detectors
- Optional fieldbus communication cards (ControlNet, Ethernet/IP, Modbus RTU, Modbus TCP)

Specifications

- Input Power90 to 264 VAC
- Display
 - 0.8" High, 7-Segment LED, 4-Digit Ammonia Concentration
 - 0.3" High, 7-Segment LED, 2-Digit Unit/Zone Indicator
- Relays
 - Qty (2) 8 A, Form C (SPDT), Normally-Open, Normally-Closed
 - Early Warning Relay
 - Alarm Relay
- Outputs
 - Isolated Dry-Contacts for Early Warning and Alarm Relays
- Operating Temperature..... -50°F to 125°F
- Operating Humidity..... 5% to 95% RH, Non-Condensing
- Dimensions..... 15-1/2" H x 13-1/2" W x 6-1/4" D
- Weight..... DCSAP-8 (11 lbs.), DCSAP-16 (11.5 lbs.), DCSAP-24 (12 lbs.), DCSAP-32 (12.5 lbs.)
- Enclosure..... Safety Yellow, NEMA 4X Rated, IP66



REMOTE SENSOR

LBW-XXX-RS*	\$160.00
Remote Sensor with NEMA 4X Box, No Cable	
LBW-XXX-RS-50*	\$230.00
Remote Sensor with NEMA 4X Box, 50 ft of Cable	
LBW-XXX-RS-100*	\$315.00
Remote Sensor with NEMA 4X Box, 100 ft of Cable	
LBW-XXX-RL-RS-50*	\$375.00
Relief Line Version of Remote Sensor with NEMA 4X Box, 50 ft of Cable, Vent Line Fitting	

*Substitute model number
(420, 50 or Watchman) for XXX

The remote sensor accessory from Cool Air Inc. adds additional flexibility to meet the needs of your application. When utilizing this accessory, the sensing element (transmitter) can be placed far away from the detector (receiver), allowing for the detector to be placed in one spot, and the sensor in another. For example, this can prove valuable when you would like to display the ammonia concentration at a door entrance using the display on the detector, while ammonia detection is happening inside the room, keeping personnel safe prior to room entry. The remote sensor can also be utilized when needing ammonia detection for an air handling unit. A possible scenario would be to mount the detector on the exterior of the air handler, with the remote sensor mounted inside the unit to detect ammonia that may get drawn into the air supply. Our remote sensors can be placed up to 500 feet away from the detector, creating the flexibility needed for any application.

Features

- Remote sense up to 500 ft away from the detector
- Safely detect ammonia concentration prior to room entry
- Both Cool Air Electrochemical and Solid-State sensors can be configured for remote sensing
- NEMA 4X enclosure, similar to our popular detector models
- Multiple cable lengths available, pricing for 50 and 100 ft lengths shown above
- Configure without cable as well
- Stainless steel mounting bracket

LCD DOOR MONITOR

DM-LCD	\$375.00
Door Monitor LCD	
DM-LCD-50	\$420.00
Door Monitor LCD, with 50 ft of Cable	
DM-LCD-RALHU-SW	\$895.00
Door Monitor LCD, Locally Mounted Alarm Light/Horn, with Switch	
DM-LCD-RALHU-SW-50	\$945.00
Door Monitor LCD, Locally Mounted Alarm Light/Horn, with Switch, with 50 ft of Cable	

Simply put, the LCD Door Monitor from Cool Air Inc. allows for the remote display of an ammonia concentration from a single detector. The door monitors can be mounted near door entrances for engine rooms or refrigerated areas that may have ammonia present, to notify a worker of a potential ammonia leak prior to entry. The door monitor utilizes the 4-20 mA output from either our LBW-Watchman or LBW-420 detectors to display the ammonia concentration in parts per million.

Features

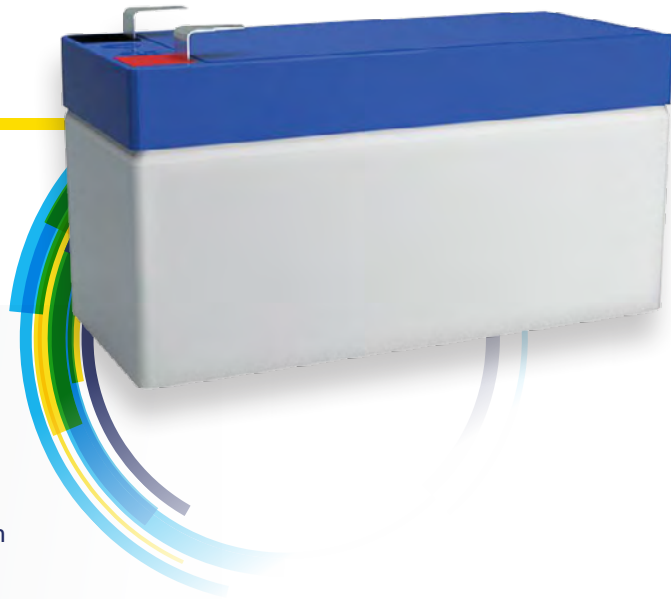
- Bright LED display, indicating NH₃ concentration in ppm
- Safety yellow NEMA 4X enclosure protecting electronics for any harsh environment
- Factory scalable 4-20 mA input range (in ppm)
- Connect up to two door monitors to a single detector



BACKUP BATTERY

LBW-50/420/RL-BB.....\$160.00
LBW-50 or LBW-420 Back-Up Battery

Should a power outage occur in your facility, the Back-up Battery can provide additional operation for your LBW-420 or LBW-50 leak detector models. By design, the battery is on a continuous trickle charge, keeping it fully charged and ready to take over in the event of a line power loss. This can provide additional ammonia leak detection for added protection of your employees and property.



Features

- Continuous operation in the event of a short-term power outage
- Mounts inside enclosure for protection from the elements

Specifications

Nominal Voltage..... 12 VDC
Type Rechargeable Sealed Lead-Acid Battery
Technology AGM (Absorbent Glass Mat)
Detector Run Time ~1-2 Hours, After Line Power Loss
Temperature Not Recommended for
Environments Colder than 32°F

CALIBRATION KIT

CAI-CAL-KIT	\$315.00
Cool Air Inc. Calibration Kit for Electrochemical and Catalytic Bead Sensor Cells	

To calibrate your Cool Air Inc. detectors fitted with electrochemical or catalytic bead sensor cells, you will need some adapters, a flow regulator, and some rubber tubing. The calibration kit from Cool Air Inc. contains the required tools and equipment needed to properly calibrate the detectors. Included in the kit is a rubber adapter, which connects to the bottom of the sensor during calibration, adapters for other sensors on the market, .3 LPM flow valve and 3 ft of high-grade tubing.



Kit Includes

- Sensor cell rubber adapters for Cool Air Inc. electrochemical sensors
- Nickle plated brass, .3 LPM flow regulator, male C-10 connection fitting
- 3 ft of high-grade rubber tubing
- Additional space for two 34L calibration gas cylinders

WASHDOWN TUBES

ABS-WDT	\$130.00
Washdown Utility Box for Detectors	
Configured with the Solid-State Sensor	

ABS-WDT-EC	\$70.00
Washdown Tube for Detectors Configured with the Electrochemical Sensor	

Protecting the sensor in harsh environments is crucial to sensor life and performance. Our sensors are placed on the exterior of the enclosures for the fastest detection response possible in the event of an ammonia leak. If your detector is located in an area that requires wash down or is outdoors and exposed to various weather elements, our wash down utility tubes will provide the added protection needed to keep your sensor working.



Features

- Protect the sensor for detectors mounted in washdown areas and outdoors
- Solid-state version has a door to provide access to the cell for calibration
- Electrochemical version easy to install and remove when needed for calibration

INDOOR/OUTDOOR ALARM
BEACON AND HORN

PRICING (SINGLE RED LIGHT EXAMPLES)

REM-1L=RED, FLASH..... \$490.00*
Remote Alarm Light/Horn, Color=Red, Flashing LEDs

REM-1L=RED, FLASH-50 \$525.00*
Remote Alarm Light/Horn, Color=Red, Flashing LEDs, with 50 ft of Cable

REM-1L=RED, FLASH-SW \$580.00*
Remote Alarm Light/Horn, Color=Red, Flashing LEDs, with Switch

REM-1L=RED, FLASH-SW-50 \$615.00*
Remote Alarm Light/Horn, Color=Red, Flashing LEDs, with Switch, with 50 ft of Cable

LOC-1L=RED, FLASH \$395.00*
Locally Mounted Alarm Light/Horn, Color=Red, Flashing LEDs

LOC-1L=RED, FLASH-SW \$510.00*
Locally Mounted Alarm Light/Horn, Color=Red, Flashing LEDs, with Switch

**Each additional light adds the following price = \$85.00
Notes: Additional cable lengths possible, call for availability*

When an alarm condition occurs, the indoor/outdoor alarm light and horn from Cool Air Inc. can be used to inform personnel of an ammonia leak, protecting the health and safety of employees. Per industry standards, horn/strobe equipment should be located inside compressor rooms and at entrances. Our alarm light and horns are specifically purposed to be used in both indoor and outdoor applications for any harsh environment. Select from up to fourteen different colors and stack them up to five rows high, in any combination. In some situations, the user may need to silence the alarm horn. After evacuations are complete, protected personnel need to be able to concentrate while working on the equipment. With our optional, silence/normal/test toggle switch, the user can place the horn in silence mode whenever needed. As a failsafe, the LED lights will continue to blink, indicating ammonia gas is still present and the concentration is above the alarm level. Pair these alarm units with any of our popular fixed leak detector models to complete your ammonia leak detection system.



Light Color Options



Features

- Brighter light (14 different colors available) via long-life LED lights
- Stack up to 5 rows of LED lights
- Steady or flashing versions of the LED lights available
- Sealed omni-directional alarm horn (continuous)
- Equipped with or without Test/Normal/Silence toggle switch
- Remote or locally mounted versions available
- Stainless steel mounting bracket
- Horn can be configured to pulse or be continuous

Specifications

Input Voltage	10 VDC to 30 VDC
Ingress Protection Rating	IP67
NEMA Rating	NEMA/UL Type 13
Operating Temperature.....	-50°F to 125°F
Operating Humidity	5% to 95% RH, Non-Condensing
Audible Alarm Horn	99 dB Horn at 1 m or 3.3 ft, 2.1 kHz ± 250 Hz Oscillation Frequency
Dimensions.....	18" H x 4" W x 4" D*

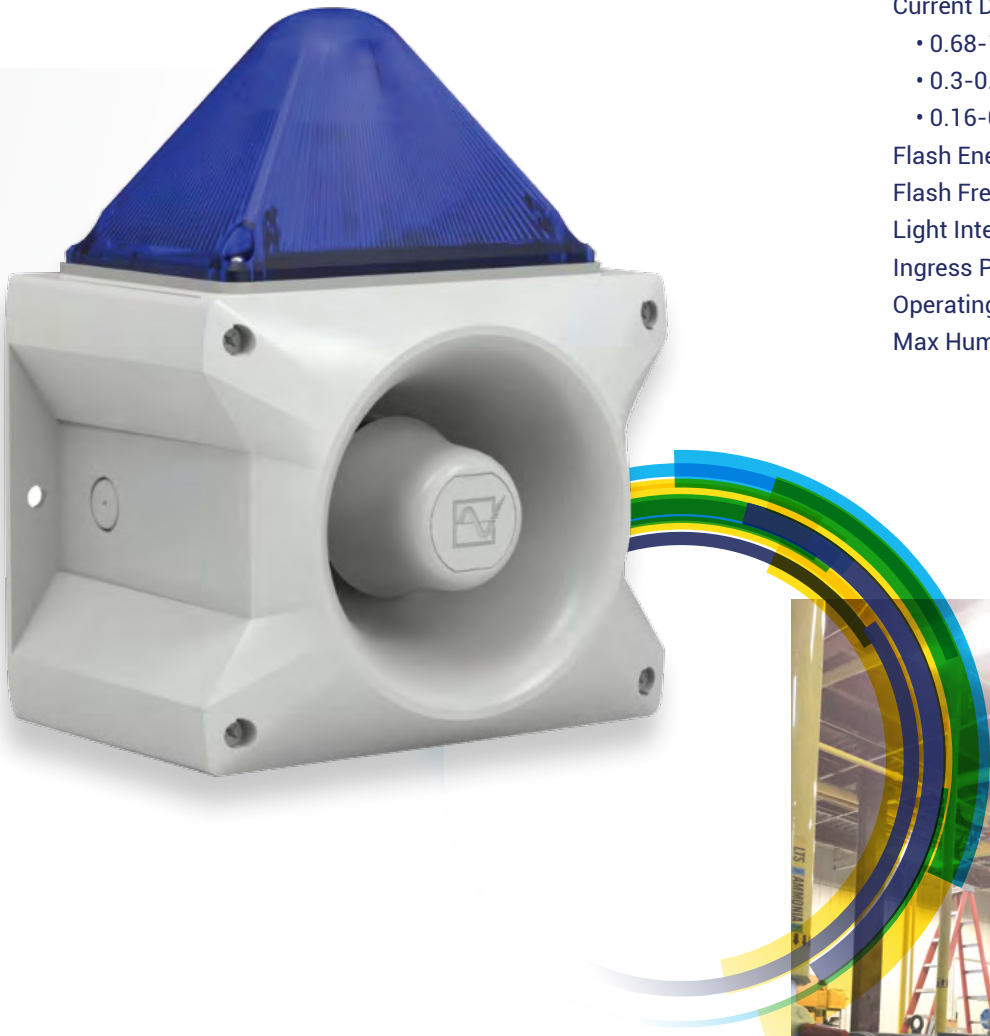
**Dimensions for single light, each additional row of LED lights will add roughly 1" to overall height*



HIGH OUTPUT REMOTE HORN/STROBE

- HO-REM-HU-ST-24 \$560.00**
High Output Remote Horn and Strobe, 24 VDC version
- HO-REM-HU-ST-120..... \$560.00**
High Output Remote Horn and Strobe, 120 VAC version
- HO-REM-HU-ST-230..... \$560.00**
High Output Remote Horn and Strobe, 230 VAC version

When an alarm condition occurs, the High Output Horn and Strobe from Cool Air Inc. can be used to inform personnel of an ammonia leak, thereby protecting the health and safety of employees working at the facility. Per industry standards, an audible alarm providing leak notification shall be capable of achieving a sound pressure level of 15 decibels (dB) above the average ambient sound level and 5 dB above the maximum sound level of the area in which it is installed. This alarm light and horn is specifically purposed to be used in areas that are especially loud, with a powerful 117 dB(A) audible alarm horn. Making it a great choice for noisy engine rooms, process areas, busy docks, etc.



- Features**
- Great for engine rooms and other areas with loud equipment
 - Available in multiple voltage configurations to meet the application needs
 - Separate circuits for the horn and strobe providing multiple wiring options
 - 80 different field adjustable tones
 - Bright Xenon strobe light
 - 10-year warranty

- Specifications**
- Audible Alarm Horn 117 dB(A) horn
 - Operating Voltages:
 - 18-30 VDC (24 VDC rated)
 - 90-135 VAC (115 VAC rated)
 - 187-255 VAC
 - Current Draw:
 - 0.68-1.48 Amp (24 VDC version)
 - 0.3-0.63 Amp (120 VAC version)
 - 0.16-0.36 Amp (230 VAC version)
 - Flash Energy 10 Joules
 - Flash Frequency 1 Hz
 - Light Intensity..... 149 cd (Candela)
 - Ingress Protection Rating.....IP66
 - Operating Temperature..... -40°F to 130°F
 - Max Humidity 90%

- Material:**
- Housing = PC (Polycarbonate) / ABS Blend
 - Lens = PC (Polycarbonate)
- Dimensions.....10.6" H x 8.4" W x 6.1" D
- Weight2.1 kg



AMMONIA SOLUTION TEST BOTTLES

\$40.00/EACH

FOR CALIBRATING SOLID STATE SENSORS



To calibrate your detector(s) configured with solid-state sensors, you will need an aqua-ammonia solution. We provide this solution in a small, clear bottle with removable cap, allowing for quick and easy calibration. We recommend calibrating your detector(s) at the main alarm ('high alarm') set point. For example, if your high alarm set point is 100 ppm, calibrate the device with a TB-100 (100 ppm concentration) ammonia bottle. Alarm set points can be confirmed by checking the detectors system information (LBW-420 and LBW-Watchman only). Consult your detector manual for information regarding accessing the detectors system information. Ammonia solution safety data sheet can be downloaded from our website.

Specifications

Solution: Refrigeration Grade Anhydrous Ammonia
(NH₃) Diluted with Bottled Water

Available Concentrations

- TB-25.....25 ppm
- TB-50.....50 ppm
- TB-100..... 100 ppm
- TB-150..... 150 ppm
- TB-200..... 200 ppm
- TB-250..... 250 ppm
- TB-300..... 300 ppm
- TB-500..... 500 ppm
- TB-1000..... 1000 ppm

CALIBRATION GAS

\$310.00/EACH

FOR CALIBRATING ELECTROCHEMICAL SENSORS



To calibrate and bump test your Cool Air Inc. detectors fitted with electrochemical or catalytic bead sensor cells, you will need to use Ammonia Calibration Gas, pressurized in a cylinder with Air as the balance gas. We have multiple concentrations available in 34-liter sized bottles.

Features

- Female C-10 connection fitting
- 34 Liter aluminum bottles
- Roughly 20 calibrations per bottle
- Balance Gas = Air

Available Concentrations

- TG-25-34L..... 25 ppm Ammonia
- TG-50-34L..... 50 ppm Ammonia
- TG-100-34L..... 100 ppm Ammonia
- TG-250-34L..... 250 ppm Ammonia
- TG-500-34L..... 500 ppm Ammonia
- TG-1000-34L..... 1000 ppm Ammonia
- TG-1%-34L 1% (10,000 ppm) Ammonia
- TG-2%-34L 2% (20,000 ppm) Ammonia

LOW CONCENTRATION RANGE (0-1000 ppm)
SENSORS

NH3-S-RPL \$110.00

SOLID STATE SENSOR

The solid-state sensor from Cool Air Inc. is a robust, long life gas sensor, that can serve as alternative to other sensor options on the market. Although solid-state sensors can be sensitive to other gases, it is still a great option in areas, such as engine rooms, freezers, coolers, etc. where it is likely that ammonia gas is the only gas present. Additionally, when it comes time to replace the sensor it is very inexpensive and easy to replace.



NH3-420-EC..... \$365.00
NH3-WATCHMAN-EC \$365.00
NH3-50-EC \$365.00

ELECTROCHEMICAL SENSOR

The electrochemical sensor from Cool Air Inc. is a highly selective ammonia sensor. It has been specifically designed to eliminate nuisance false alarms in applications that have other types of gases present. Pair this long life, highly selective, durable sensor with any of our popular low concentration detector models.



Features

- Annual calibration requirement
- Life span, 3-5 years
- Low replacement cost
- Excellent durability to ammonia exposure
- 3-year warranty

Specifications

Concentration Range0-1000 ppm
Operating Temperature -50°F to 125°F
Operating Humidity 5% to 95% RH, Non-Condensing
Linearity +/- 1% of Full-Scale
Repeatability +/- 1% of Full-Scale
Response Time:
 • T50 = Less Than 20 Seconds
 • T90 = Less Than 50 Seconds
Accuracy +/- 1% of Value:
 • Dependent on the Following Variables
 - Calibration Bottle Accuracy (typ. +/- 2%)
 - Time Passed Since Previous Calibration
Required Calibration Frequency Annually*

*Bi-Annually is also acceptable, but not required

Cross Sensitivity Data

Typical response to interference gases.

GAS	APPLIED CONCENTRATION (ppm)	RESPONSE CONCENTRATION (ppm)
AMMONIA	100	100
BUTANE	1000	60
CARBON MONOXIDE	100	5
CARBON DIOXIDE	1000	0
ETHANOL	20	40
HYDROGEN	500	30
HYDROGEN SULFIDE	4	80
METHANE	5000	0
NITROGEN DIOXIDE	1	0
OZONE	0.1	0
PERCHLOROETHYLENE	50	0
PROPANE	5000	100
SULFUR DIOXIDE	20	100
TOLUENE	10	5

*List is not intended to be all inclusive.

Features

- Highly selective to ammonia
- Annual calibration requirement
- Long life
- Excellent durability to ammonia exposure
- 3-year warranty

Specifications

Concentration Range0-500 ppm
Operating Temperature -20°F to 110°F
Operating Humidity 5% to 95% RH, Non-Condensing
Linearity +/- 1% of Full-Scale
Repeatability +/- 1% of Full-Scale
Response Time:
 • T50 = Less Than 20 Seconds
 • T90 = Less Than 40 Seconds
Accuracy +/- 1% of Value:
 • Dependent on the Following Variables
 - Calibration Bottle Accuracy (typ. +/- 2%)
 - Time Passed Since Previous Calibration
Required Calibration Frequency Annually*

*Bi-Annually is also acceptable, but not required

Cross Sensitivity Data

Typical response to interference gases.

GAS	APPLIED CONCENTRATION (ppm)	RESPONSE CONCENTRATION (ppm)
AMMONIA	100	100
CARBON MONOXIDE	100	0
CARBON DIOXIDE	5000	0
ETHANOL	200	0
ETHYLENE	100	0
ETHYLENE	1.5%	0
HYDROGEN	1000	0
HYDROGEN SULFIDE	25	22
ISOBUTENE	100	0
PROPANE	100	0

*List is not intended to be all inclusive.

HIGH CONCENTRATION RANGE
SENSORS

LEL-SENSOR \$525.00

CATALYTIC BEAD

The catalytic bead sensor from Cool Air Inc. is designed to detect very high concentrations of ammonia. The sensor is used to satisfy engine room requirements for detection of a catastrophic leak detection and will provide response prior to achieving the lower explosion level (LEL) of ammonia.

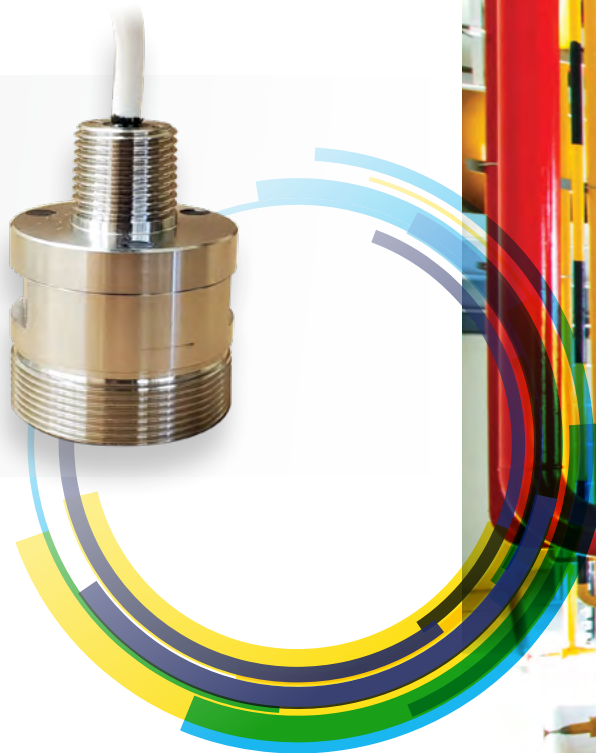
Features

- Annual calibration requirement
- Detection of high levels of concentration
- Long life
- 3-year warranty

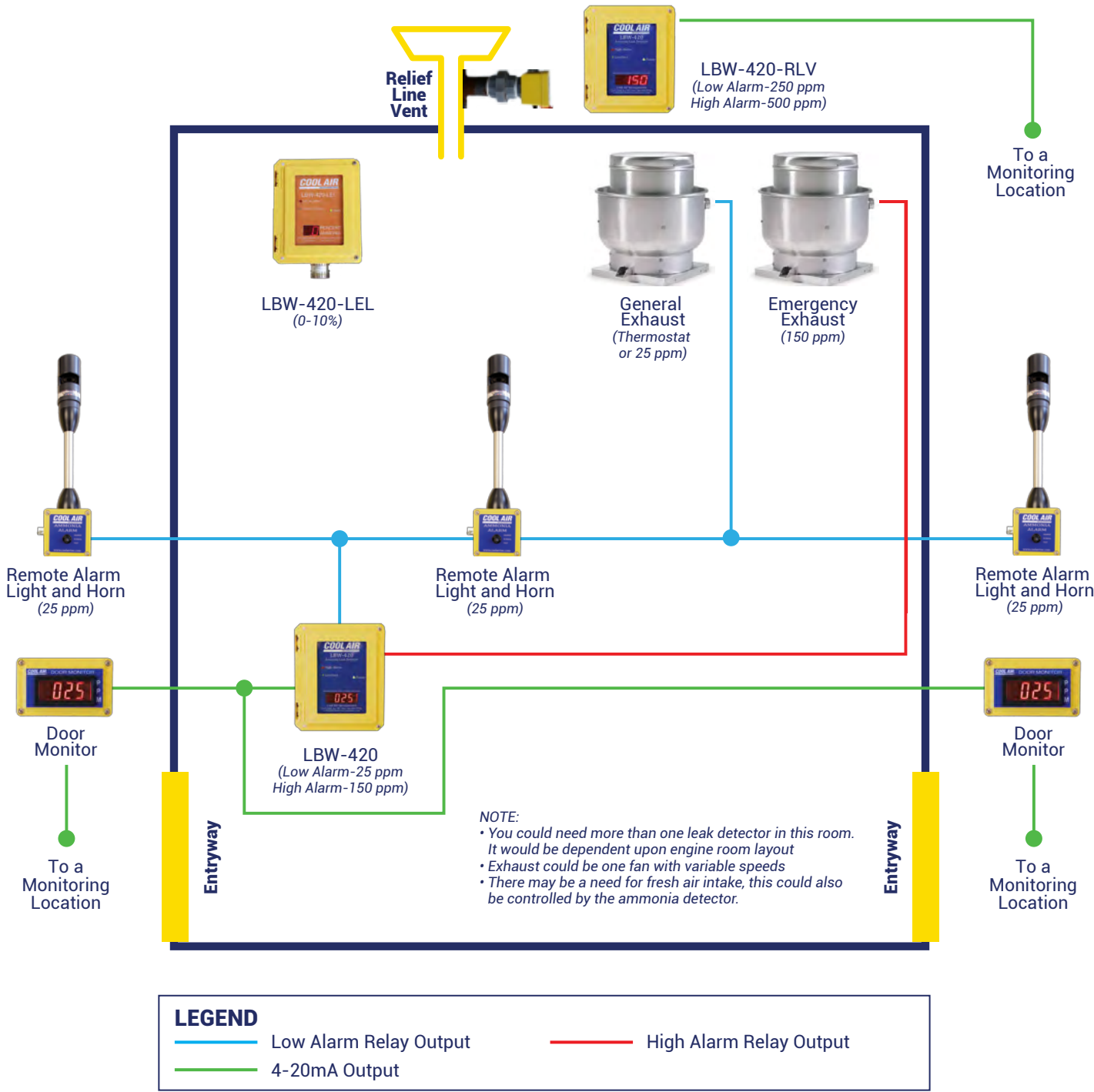
Specifications

Concentration Range 0-10%
Resolution..... 0.1%
Operating temperature..... -50°F to 125°F
Operating humidity..... 5-95% RH Non-Condensing
Required calibration frequency Annually*

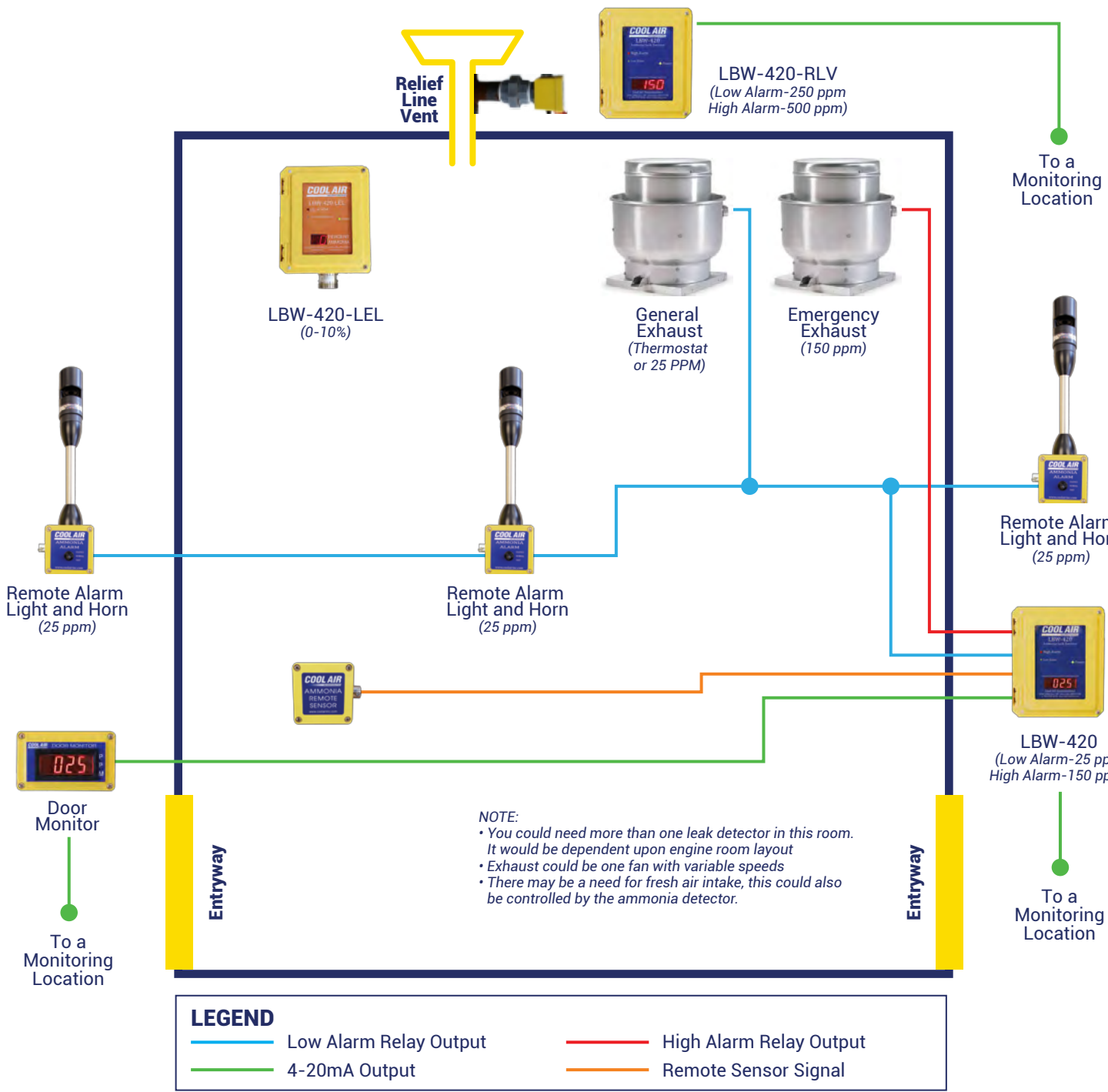
**Bi-Annually is also acceptable, but not required*



ENGINE ROOM SYSTEM

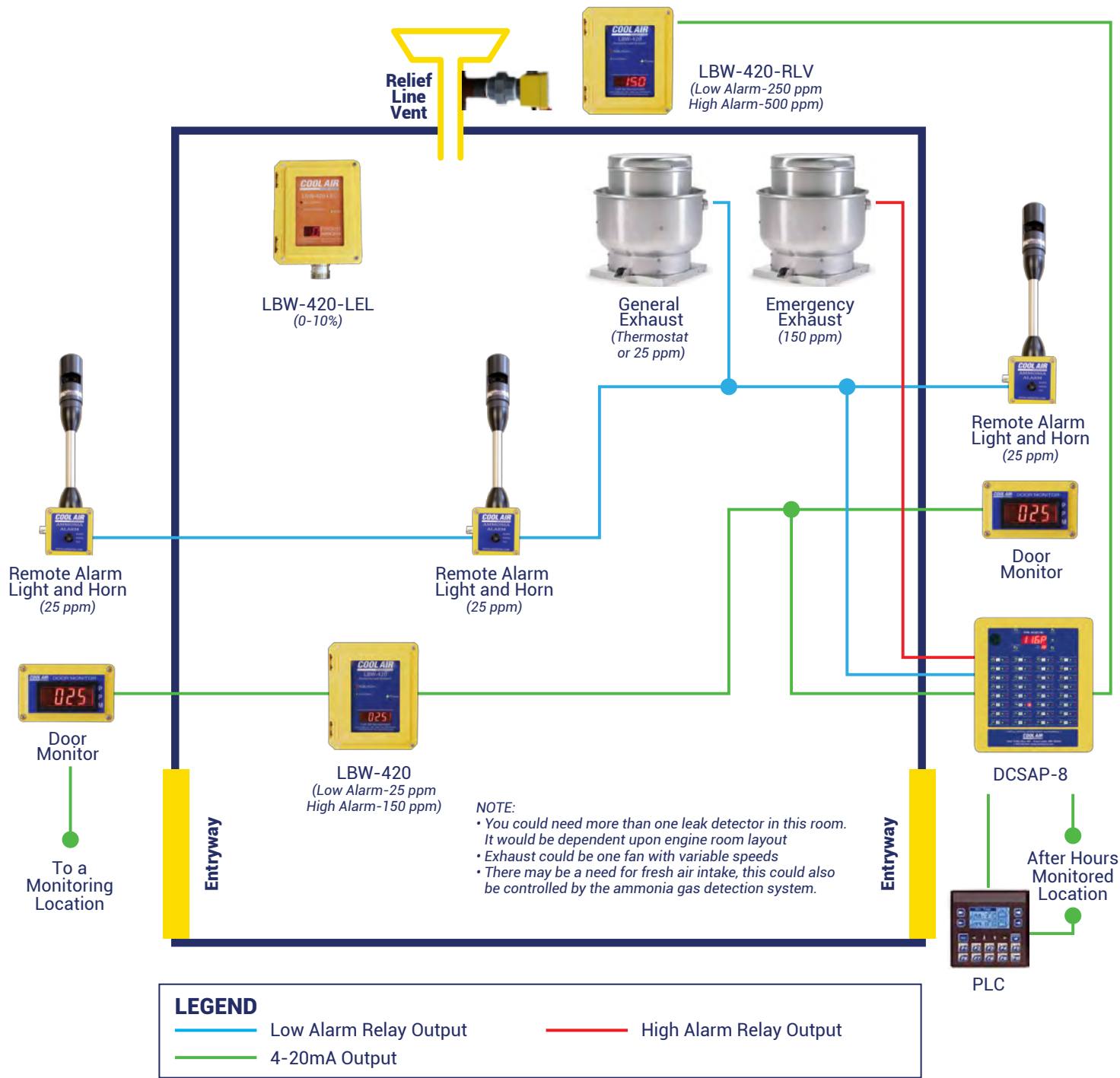


ENGINE ROOM SYSTEM WITH REMOTE SENSOR



ENGINE ROOM SYSTEM

WITH CONTROL PANEL





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