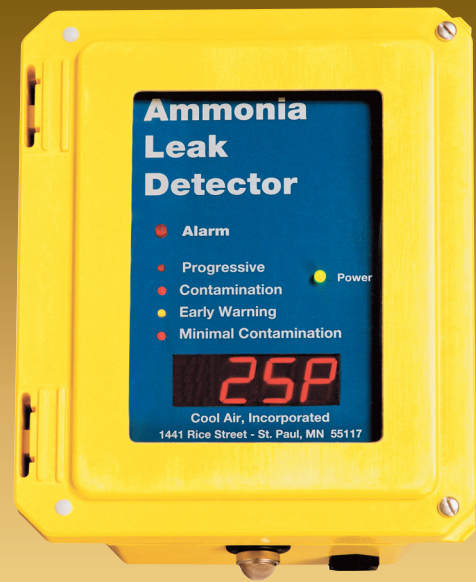


# Model LBW-420 Ammonia Leak Detector

**COOL AIR**  
INCORPORATED



*Integrates seamlessly with common industry alarm systems*

**An affordable, dependable, and virtually maintenance-free detector manufactured by the leading supplier of ammonia refrigeration controls and systems**

#### Standard Features

- Displays ammonia concentration and alarm status
- Easy-to-program alarm set points
- Solid-state, long-life sensor
- 4-20 mA analog output
- Contacts for common industry alarm systems
- Contacts for operating auxiliary equipment
- Service mode for avoiding nuisance alarms
- Extra set of contacts for auxiliary equipment
- NEMA 4X, UL-listed enclosure
- Certified by TÜV Rheinland of North America



#### Available Options

- Remote ammonia sensor with cable up to 500'
- High-low temperature sensor with cable and programmable alarm set points
- Back-up battery
- Remote alarm light & horn unit
- Stainless-steel washdown tube

#### Typical Applications

- Industrial coolers and freezers
- Compressor rooms
- Control rooms
- Loading docks
- Storage tank areas
- Production area
- Valve groups

The LBW-420 Ammonia Leak Detector from Cool Air Incorporated has all the features you need to protect your personnel and product. It has a solid-state, long-life ammonia sensor that provides fast and accurate detection of ammonia. In addition to the main alarm system, an early warning system gives you time to react before ammonia levels reach full-alarm status.

The front panel display indicates ammonia concentration in parts per million and temperature in degrees Fahrenheit (with optional temperature sensor installed). Front panel LEDs give you a quick indication of alarm status. The detector has a 4-20 mA analog output for seamless integration with your existing factory systems. It also comes equipped with contacts for communicating with common industry alarm systems. Additional contacts allow the detector to operate auxiliary equipment such as exhaust fans, king valves, compressors, and additional alarm systems.

To reduce nuisance alarms, the LBW-420 has a service mode that temporarily disables the detector's relays during service and testing. And to further enhance the value of this detector, Cool Air Incorporated offers these beneficial options: a temperature sensor and alarm relay with programmable set points, a remote ammonia sensor, a remote alarm light & horn unit, and a back-up battery to keep your detector operating during power failures—all options you would expect from the refrigeration equipment experts!

The LBW-420 detector is housed in a NEMA 4X, UL-listed, CSA, IEC, IP66 enclosure, and comes with Cool Air Incorporated's standard 12-month warranty.

# Ammonia Leak Detector Model LBW-420 guide specifications

## Specifications

**Ammonia detection sensitivity:** 25 to 1000 ppm

**Ranges:** 0-100, 0-250, 0-400 (std.), 0-500, 0-800, 0-1000

**High and low temperature set point range:** -50°F to 50°F

**Display:** 0.8", 7-segment LED, 4-digit

**Controls:** Service mode switch. Enter, Up, and Down pushbuttons. Rotary selector switch. Jumper.

**Ammonia sensor:** Metal oxide semiconductor. 833 mW integral heater. Alumina ceramic base. 100 mesh SUS 316 double gauge. Flame arrestor.

**Relays:** Alarm, pre-alarm, and auxiliary (auxiliary relay operates at same time as alarm relay). 5A, form C (SPDT), normally-open, normally-closed, energized in normally-open state.

**Outputs:** Contacts for: alarm, pre-alarm, and auxiliary relays, and external temperature sensor. 4-20 mA DC conforming to S50.01 ratings, Type 2L and Type 2H.

**Operating temperature:** -50°F to 125°F

**Operating humidity:** 5% to 95% RH, non-condensing

**Power requirements:** 115/230 VAC, 50/60 Hz, 16 VAC, or 24 VDC

**Dimensions:** 9-1/2"H x 8"W x 4-1/2"D

**Weight:** 6 lbs.

**Enclosure:** NEMA 4X rated, UL listed, CSA, IEC, IP66

### Options:

- High-low external temperature sensor with cable and programmable alarm set points
- Back-up battery
- Remote ammonia sensor with cable up to 500'
- Remote alarm-horn assembly
- Stainless-steel washdown tube

## Suggested Specifications Text

Ammonia (NH<sub>3</sub>) Vapor Detector System

Provide ammonia leak detector(s), model LBW-420, as manufactured by Cool Air Incorporated, St. Paul, Minnesota.

Ammonia leak detector(s) shall be wall-mounted and have a solid-state instrument panel and sensor capable of sensing ammonia refrigerant concentrations of 25 to 1000 parts per million, the adjustable range beginning at 25 parts per million.

Detector(s) shall not contain radioactive substances.

Detector(s) shall also have: an early warning system, a front-panel digital readout providing ammonia concentration and temperature, programmable alarm set points, a 4-20 mA analog output, contacts for operating auxiliary equipment, and a service mode for avoiding nuisance alarms.

Detector(s) shall be capable of initiating a supervised alarm, resulting in corrective action.

Optional high-low temperature sensor, back-up battery, remote ammonia sensor, remote alarm light & horn unit, and stainless-steel washdown tube shall be available from the detector manufacturer.

115/230 VAC, 50/60 Hz, or 16 VAC or 24 VDC. Please call to specify or discuss other power supply options

## Warranty

The LBW-420 comes with a 12-month warranty on workmanship from the time of sale.



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