

COOL AIR

INCORPORATED

Ammonia Leak Detector

Model LBW-420



An affordable, dependable, and virtually maintenance-free detector manufactured by the leading supplier of quality ammonia refrigeration leak detectors

Standard Features

- Semi-conductor, long-life sensor cell
- Cleaner simple look, fewer LEDs
- Remove the "P" indicating PPM
- NO need to enter sensor group number
- Selectable display start point 0PPM or 25 PPM (d)
- Selectable Service Mode timeout 15 (d), 30, 45 or 60 minutes
- Auxiliary relay is for detector errors only (d), or it can be programmed to activate with the Low Alarm or High Alarm relays as well
- Certified by TÜV Rheinland of North America
- Made in the USA



(d) denotes default setting

Available Options

- Remote sensor for safety relief vent line
- Remote sensor with box and 50 ft. of shielded cable (std.).
Note: Remote sensor maximum distance is 500 ft.
- Indoor/Outdoor remote alarm light & horn unit
- ABS washdown/utility tube
- External service switch
- LCD door monitor
- Battery back-up

Typical Applications

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

Integrates seamlessly with common industry automation and/or alarm systems

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 semi-conductor, long-life ammonia sensor cell that provides fast and accurate detection of ammonia gas. **The sensor cell will not deplete during an ammonia leak, from background ammonia vapors, or during testing &/or calibration.** The low alarm relay gives you time to react before ammonia levels reach the high alarm level.

The front panel display indicates ammonia concentration in parts per million (PPM). Front panel LEDs give you a quick indication of alarm status. The detector has a 4-20 mA analog output for PPM that will seamlessly integrate with your existing automation system. It also comes equipped with dry-contacts for communicating with common industry alarm systems. Additional dry-contacts allow the detector to operate auxiliary equipment such as exhaust fans, king valves, compressors, or additional alarm beacons/horns.

To reduce nuisance alarms during cleaning, servicing, testing, and/or calibration, the LBW-420 has a service mode that temporarily disables the detector's relays and 4-20 mA signal. To further enhance the value of this detector, Cool Air Incorporated offers these beneficial options: remote sensor that allows the local sensor to be remotely located up to 500 ft. maximum from the detector main box, remote sensor for relief line vents, indoor/outdoor remote alarm light & horn unit, ABS washdown/utility tube, external service switch, LCD door monitor, and battery back-up.

The LBW-420 detector is housed in a custom-made safety yellow, NEMA 4X, UL-listed, CSA, IEC, IP66 enclosure with viewing window.

The LBW-420 is manufactured in the USA and comes with our standard 36-month limited warranty.

Ammonia Leak Detector Model LBW-420 Guide Specifications

Specifications

Ammonia detection sensitivity: 0 to 1000 ppm

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

Display: 0.8", 7-segment LED, 4-digit readout;
two LED lights: one for Low Alarm, one for High Alarm

Controls: Service mode switch, Pushbuttons (Up, Down and Enter), 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: Qty. (3) 5A, form C (SPDT), normally-open, normally-closed; Low Alarm relay, High Alarm relay & programmable Auxiliary relay (errors only or activate with Low Alarm or High Alarm relays); Normal mode: energized in normally-open/closed state.

Outputs: Isolated dry-contacts for: Early Warning. Alarm & Auxiliary relays; 4-20 mA for ammonia concentration.

Operating temperature: -50°F to 125°F

Operating humidity: 5% to 95% RH, non-condensing; condensing kits available.

Power requirements: LBW-420: 115 VAC, 60 Hz;
LBW-420-1: 24 VDC; LBW-420-2: 220/230/240 VAC, 50/60 Hz

Approvals: TUV Rheinland, cTUVusa, UL
61010-1:2004 R7.05, CAN/CSA-C22.2 No.
1010-1:2004.



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

Weight: 5 lbs.

Note: All dimensions and weights are approximate and should not be used for installation planning purposes.

Enclosure: Custom safety yellow, NEMA 4X rated, UL listed, CSA, IEC, IP66, with viewing window.

Options:

- Remote sensor for safety relief vent line
- Remote sensor with box & 50 ft. of cable (std.)
Note: Remote sensor maximum distance is 500 ft.
- Indoor/Outdoor remote alarm light & horn unit
- ABS washdown/utility tube
- External service switch
- LCD door monitor
- Battery back-up

Suggested Specifications Text

Ammonia (NH₃) Vapor Detector System

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

Ammonia leak detector(s) shall be stand-alone, wall-mounted unit(s), and have a solid-state instrument panel and sensor capable of sensing ammonia vapor concentrations of 0 to 1000 parts per million (PPM). Sensor shall not deplete during an ammonia leak, from background ammonia vapors, or during testing &/or calibration.

Detector(s) shall have a field-adjustable Early Warning (low alarm) setpoint and a field-adjustable Alarm (high alarm) setpoint.

Detector(s) shall contain no radioactive materials.

Detector(s) shall have: an early warning system, a front-panel progressive LED light tree display and digital readout providing ammonia concentration (in PPM), 4-20 mA analog output for PPM, dry-contacts for operating auxiliary equipment, and a service mode for avoiding nuisance alarms during cleaning, servicing, testing, &/or calibration.

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

Optional remote sensor, remote sensor for safety relief vent line, remote alarm light & horn unit, ABS washdown/utility tube, external service switch, LCD door monitor, and battery back-up shall be available from the detector manufacturer.

Power supply shall be LBW-420: 115 VAC, 60 Hz; LBW-420-1: 24 VDC; LBW-420-2: 220/230/240 VAC, 50/60Hz

Detector(s) shall be certified by TUV Rheinland.

Detector(s) shall be manufactured in the USA.

Warranty

The LBW-420 comes with a 36-month limited warranty on workmanship from the time of shipment. An optional 60-month limited warranty is available.

Cool Air Incorporated reserves the right to make changes in the design without notification.

COOL AIR
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