Integrates seamlessly with common industry automation and/or alarm systems

The LBW-420/420-1 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 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. 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 (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.

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, remote alarm light & horn unit, ABS washdown/utility tube, external service switch, LCD door monitor, and battery back-up.

The LBW-420/420-1 detector is housed in a custom-made safety yellow, NEMA 4X, UL-listed, CSA, IEC, IP66 enclosure with viewing window.

The LBW-420/420-1 is manufactured in the USA and comes with our standard 36-month limited warranty.
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; progressive LED light tree

**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; Early Warning (low alarm) relay, Alarm (high alarm) & Auxiliary relays (aux. relay operates with alarm relay); 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: 115/230 VAC, 50/60 Hz; LBW-420-1: 24 VDC


**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 with box & 50 ft. of cable (std.)
- Remote sensor for safety relief vent line
- 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), models LBW-420 or LBW-420-1, 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: 115/230 VAC, 50/60 Hz, or LBW-420-1: 24 VDC.

Detector(s) shall be certified by TUV Rheinland.

Detector(s) shall be manufactured in the USA.

Warranty

The LBW-420/420-1 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.