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Liebert LT410

Liebert LT410 Leak Sensor Instruction Manual

Model: **LT410** | Brand: **Liebert**

1. Introduction

This manual provides essential instructions for the proper installation, operation, and maintenance of the Liebert LT410 Leak Sensor. The LT410 is designed to detect leaks and provide contact closures for alarm notification, ensuring the protection of critical environments. Please read this manual thoroughly before proceeding with installation or operation.

2. Setup and Installation

2.1 Unpacking

Carefully remove the Liebert LT410 Leak Sensor from its packaging. Inspect the unit for any signs of damage during transit. Report any damage to your supplier immediately.

2.2 Mounting

The LT410 sensor is designed for wall or surface mounting. Ensure the mounting location is stable, dry, and free from excessive vibration. Use appropriate fasteners for the mounting surface. The unit should be mounted in a location where it can effectively detect leaks without being obstructed.

2.3 Wiring

Refer to the wiring diagram on the product label for correct electrical connections. All circuits are Class 2. Ensure power is disconnected before performing any wiring.



Figure 1: Liebert LT410 Leak Sensor Wiring Diagram. This image displays the Liebert LT410 Leak Sensor unit, highlighting its label with electrical specifications and contact wiring. The label indicates 'ALL CIRCUITS: CLASS 2', '24V @ 0.1A, 50/60 HZ, DC INPUT POWER' (Red wires), and 'CONTACTS RATING: 24V, 3A' for both sets of contacts. The first set of contacts (Orange wires) includes 1-NO (Normally Open), 1-NC (Normally Closed), and 1-COM (Common). The second set of contacts (Yellow wires) includes 2-NO (Normally Open), 2-NCV (Normally Closed), and 2-COM (Common). The label also states 'Contacts shown in POWERED, NON-ALARM state.' The unit is a dark gray rectangular box with a mounting bracket.

- **Input Power:** Connect 24V @ 0.1A, 50/60 HZ, DC power to the designated input terminals (Red wires).
- **Contact Outputs:** The sensor provides two sets of dry contact outputs, each rated at 24V, 3A.
  - **Contact Set 1 (Orange wires):** 1-NO (Normally Open), 1-NC (Normally Closed), 1-COM (Common).
  - **Contact Set 2 (Yellow wires):** 2-NO (Normally Open), 2-NCV (Normally Closed), 2-COM (Common).
- Connect these contacts to your alarm panel, building management system, or other monitoring equipment as required. The diagram shows contacts in a powered, non-alarm state.

3. Operation

3.1 Powering On

Once wiring is complete and verified, apply power to the unit. The sensor will typically enter a normal operating state. Observe any indicator lights for proper power-on sequence (if applicable, not specified in provided data).

3.2 Normal Operation

In a normal, non-alarm state, the sensor's contacts will be in the configuration shown in the wiring diagram (1-NO open, 1-NC closed; 2-NO open, 2-NCV closed relative to COM). The sensor continuously monitors for the presence of liquid at its detection point.

3.3 Alarm Conditions

When liquid is detected, the sensor will trigger an alarm. This causes the internal relays to change state, reversing the NO and NC contact positions. Your connected monitoring system should be configured to recognize this change in contact state as an alarm event.

4. Maintenance

Regular maintenance ensures the continued reliability and performance of your Liebert LT410 Leak Sensor.

- **Periodic Inspection:** Visually inspect the sensor and its wiring periodically for any signs of damage, corrosion, or loose connections.
- **Cleaning:** Keep the sensor's detection area clean and free from dust, debris, or other contaminants that could interfere with its operation. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Functional Testing:** It is recommended to periodically test the sensor's functionality by simulating a leak condition (e.g., applying a small amount of water to the detection point, if safe and appropriate for the specific sensor type) to ensure it triggers an alarm correctly. Always restore the sensor to a dry state after testing.

5. Troubleshooting

This section provides guidance for common issues you might encounter with the Liebert LT410 Leak Sensor.

Problem	Possible Cause	Solution
Sensor not powering on.	No power supply, incorrect wiring, or faulty power supply.	Verify 24V DC power supply is active. Check wiring connections against the diagram. Ensure power supply is functioning correctly.
Sensor not detecting leaks.	Detection area is obstructed or dirty, sensor is faulty, or liquid is not reaching the detection point.	Clean the detection area. Perform a functional test. Relocate the sensor if the leak source is not reaching it.
False alarms.	Condensation, high humidity, or foreign material on the detection surface.	Ensure the environment is suitable. Clean the detection area. Check for sources of condensation.
Alarm contacts not changing state.	Incorrect wiring to monitoring system, faulty sensor contacts, or monitoring system issue.	Verify contact wiring to the monitoring system. Test the sensor's contacts directly if possible. Check the monitoring system's input.

If troubleshooting steps do not resolve the issue, contact Liebert technical support for further assistance.

6. Specifications

Attribute	Value
Manufacturer	CAI - LIEBERT
Brand	Liebert
Model Number	LT410
Item Weight	4.86 pounds
Product Dimensions	6.35 x 2.25 x 4.46 inches
Input Power	24V @ 0.1A, 50/60 HZ, DC
Contact Rating	24V, 3A (Class 2 Circuits)
Safety Rating	UL, C-UL, CE, FCC
Date First Available	January 23, 2012

7. Warranty and Support

For information regarding the product warranty, please refer to the warranty documentation provided with your purchase or visit the official Liebert website. For technical support, service, or replacement parts, please contact Liebert customer service or your authorized distributor.
You can find more information and support resources by visiting theLiebert Store on Amazon.

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