LIEBERT® LIQUI-TECT® 460 KIT
ZONE LEAK-DETECTION SENSOR WITH CABLE

Product Specification/Installation Guide

The Liebert Liqui-tect 460 (LT460) provides zone detection of leaks, protecting equipment by constantly monitoring the area for leaking liquids. The LT460 is the ideal solution for perimeter sensing or serpentine coverage of areas requiring up to 100 ft of cable.

Selectable modes of operation provide flexible alarming options and protection for the cable. The LT460 constantly monitors a zone for leaks, internal faults, and power failures and warns of any abnormal conditions. Top-cover LEDs provide status indication and also ensure that the cable is properly installed and operational under raised floors.

Two independent outputs provide a signal to a local alarm panel, Liebert environmental unit, remote building-management system, or external equipment, such as motorized water shut-off valves.

LT460 APPLICATIONS

The LT460 is ideally-suited for:

- Glycol and chilled-water cooling,
- Humidification supply water piping,
- Condensate pumps and drains,
- Unit and ceiling auxillary drip pans,
- Overhead piping troughs.

LOCATIONS/PLACEMENT

The LT460 is an excellent choice for:

- Large-scale network control centers,
- Data centers,
- MRI and CAT-scan rooms
- Server rooms and closets,
- Unattended, remote shelters,
- Mechanical equipment rooms,
- Sensitive areas with overhead piping,
- Industrial process-control rooms.

COMPONENTS

Liqui-tect 460 Module

The LT460 consists of a metal enclosure with a hinged top door providing access to the internal circuit board for wiring termination and configuration of DIP switches. The LT460 will monitor up to 100 feet of connected LT500Y leak detection cable.
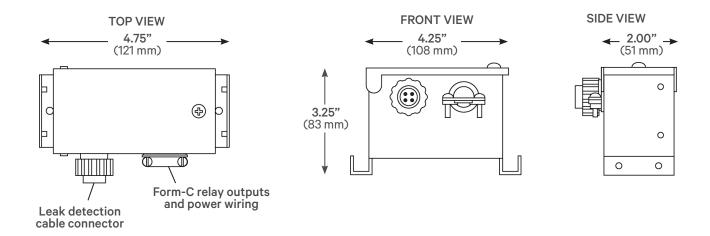
LT500Y Leak Detection Cable

The cable material and construction allow the cable to lie flat when used with hold-down clips. The LT500Y is plenum-rated and UL-listed for safe operation.

- If purchased separately, cables are available in lengths of 15, 35 and 50 feet. These cables can be connected incrementally to monitor from 15 feet up to 100 feet. An end terminator and hold-down clips (two clips required for each 6-8 ft. of cable) must be ordered separately.

- If included in a kit, cables are available in lengths of 20, 25, 30, 35 and 45 feet. Cables in kits cannot be lengthened. Hold-down clips are provided.

DIMENSIONS - TOP, FRONT AND SIDE

TOP VIEW
4.75"
(121 mm)

FRONT VIEW
4.25"
(108 mm)

SIDE VIEW
2.00"
(51 mm)

3.25"
(83 mm)

Leak detection cable connector

Form-C relay outputs and power wiring

SPECIFICATIONS

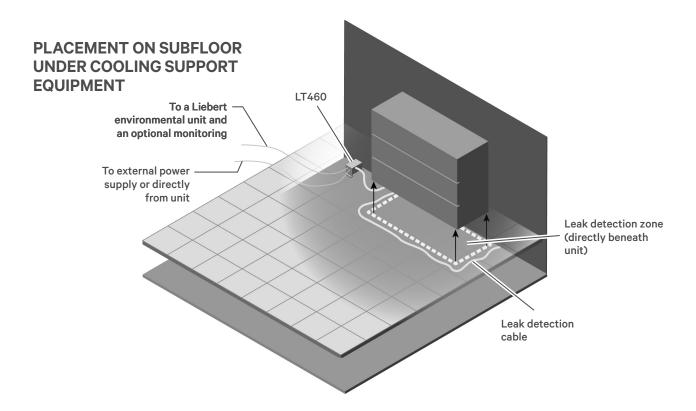|	
Power Requirements	24 VAC 120 mA, 50/60 Hz, 3 VA (max.)
Dimensions, W x D x H	5.35 x 3.23 x 3.5 in. (135.9 mm x 82 mm x 88.9 mm) Mounting-holes require #8 screws.
Weight (assembled)	2.0 lb (0.9 kg)
Leak-detection Cable Compatibility	All Liebert LT500 sensing cables
Maximum Leak-detection Cable Length	100 ft (30.5 m)
Metal Enclosure	NEMA 1, IP 30

ENVIRONMENTAL CONDITIONS

Operating Temperature	50°F to 104°F (10°C to 40°C)
Operating Humidity	10% to 95% relative humidity (non-condensing)
Operating Altitude	0 to 10,000 ft (0 to 3,048 m)
Output Relay Contact Rating	2 Form-C; 3 A rating at 24 VAC

AGENCY LISTINGS

UL	UL916
C-UL	C22.2, No. 205-M1983
CE	Yes
FCC Compliance	47 CFR, Part 15

PLACEMENT ON SUBFLOOR UNDER COOLING SUPPORT EQUIPMENT

LT460

To a Liebert environmental unit and an optional monitoring

To external power supply or directly from unit

Leak detection zone (directly beneath unit)

Leak detection cable
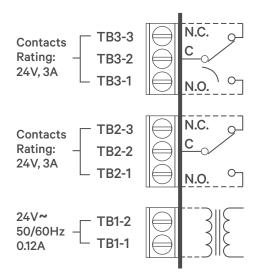
CONFIGURATION-SWITCH SETTINGS

A 4-position DIP switch selects two alarm (filter) delays and three mutually-exclusive alarm modes. The switches are located next to the wiring termination blocks.

SWITCH SETTINGS	OFF	ON
1. Leak Detect Filter	10 sec	2 min
2. Alarm Latch	No	Yes
3. Alarm Retest Delay	No	1 hr
4. Not Used	–	–

CONNECT ENCLOSURE TO EARTH GROUND

ALL CIRCUITS: CLASS 2

Contacts shown in POWERED, NON-ALARM state

Contacts Rating: 24V, 3A
TB3-3 — N.C.
TB3-2 — C
TB3-1 — N.O.

Contacts Rating: 24V, 3A
TB2-3 — N.C.
TB2-2 — C
TB2-1 — N.O.

24V~ 50/60Hz 0.12A
TB1-2
TB1-1

POWER WIRING

The LT460 is rated for 24 VAC, 50/60 Hz, and 0.12 A.

Liebert DS, DSE, CW, PDX, or Mini-Mate2 (8 ton) | **LT460**

	TB1			TB1	
T5 (24V)	■	—	—	■	Red
G5 (Ground)	■	—	—	■	Red

TB1

24V — T2, T3, T4, T5, G2, G3, G4
GRD — G5

Location of T5 (24V) connection on main controller board of Liebert unit.

Liebert Mini-Mate2 (1 to 5 ton) | **LT460**

		TB1	
From 24V Transformer	—	■	Red
	—	■	Red

Requires external transformer (there are no designated terminal connections on the unit)

Liebert CRV | **LT460**

Medium Control Board			TB1	
6	■	—	■	Red
4	■	—	■	Red

Transformer | **LT460**

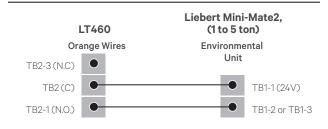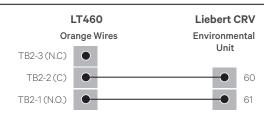|		TB1	
From 24V Transformer	—	■	Red
	—	■	Red

WIRING TO AUXILIARY ALARM PANELS

The LT460 has two Form-C dry-contact alarm-output contacts (TB2 and TB3). Each contact is rated for 24 VAC at 3 amp..
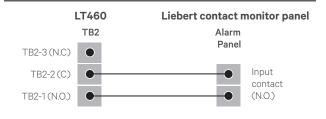
LT460 Orange Wires | **Liebert DS, DSE, CW, PDX or Mini-Mate2 (8 ton)** Environmental Unit

TB2-3 (N.C)	■				
TB2-2 (C)	■	—	—	■	24 (24V)
TB2-1 (N.O.)	■	—	—	■	50, 51, 55 or 56

Note: Terminal 50 not available on Mini-Mate2 (8-ton)

LT460 Orange Wires | **Liebert Mini-Mate2, (1 to 5 ton)** Environmental Unit

TB2-3 (N.C)	■				
TB2 (C)	■	—	—	■	TB1-1 (24V)
TB2-1 (N.O.)	■	—	—	■	TB1-2 or TB1-3

LT460 Orange Wires | **Liebert CRV** Environmental Unit

TB2-3 (N.C)	■				
TB2-2 (C)	■	—	—	■	60
TB2-1 (N.O.)	■	—	—	■	61

NOTE: In iCOM, use the Service Options menu to add that the Liqui-tect is installed.

LT460 TB2 | **Liebert contact monitor panel** Alarm Panel

TB2-3 (N.C)	■				
TB2-2 (C)	■	—	—	■	Input contact (N.O.)
TB2-1 (N.O.)	■	—	—	■	

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