

# LIEBERT® SN™ LEAK DETECTION SENSOR

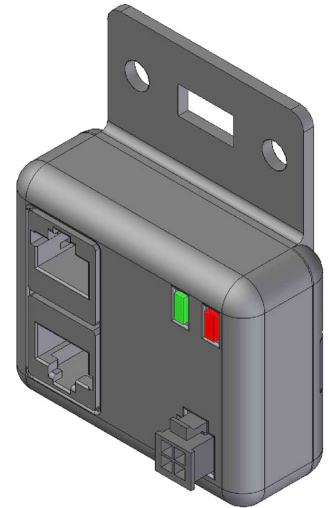
## Quick-Start Guide

### Description

This guide provides installation instructions for the Liebert SN Leak Detection Sensor (P/N SN-L20). The unit senses when liquid contacts a special cable and reports that to a monitoring device.

- Liebert SN sensors may be connected in a string, including a combination of modular and integrated sensors.
- The maximum string length is 65.6 ft. (20m); the maximum number of probes that may be connected depends on the Liebert monitoring product (see the Liebert monitoring product’s user manual for details).

Liebert SN sensors may be placed in any area—for example, in a Knurr® rack—that will be monitored to protect it from damage from liquids. The connection cable is 3 ft. (0.9m) long, so placing the sensor near the bottom of the rack will conserve more leak detection cable for encircling the monitored area.



### What’s Included

The SN-L20 kit includes these components:

Components	Quantity
Liebert SN Leak Detection Sensor module	1
Leak connection cable	1
CAT5 cable	1
20 ft. (6.1m) leak cable	1
Quarter-turn fastener	1
Hold-down clips	10
Quick-start guide	1

### Installation

Follow these steps to mount and connect sensors.

#### Step 1 Record the Sensor Address

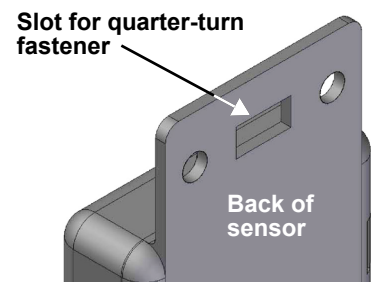
During configuration, the Web interface of your Liebert monitoring product will display the addresses of all connected sensors. Proper monitoring requires determining which address belongs to each sensor. The sensor address can be found on the sensor. Record each sensor’s address before mounting and connecting sensors.

#### Step 2 Mount the Sensor on a Knurr Rack Frame or 19-Inch Rail

The sensor may be mounted in a Knurr rack or other type of rack. Place the sensor where it will not impede airflow.

To mount the sensor on the frame or 19-inch rail of a Knurr rack, use the factory-supplied quarter-turn tool-less fastener to secure the sensor and bracket to the frame or rail (slot shown at).

- Insert the quarter-turn tool-less fastener through the slot in the sensor to mount the sensor on the rack frame or 19-inch rails.
- Turn the fastener clockwise 90° to attach the sensor to the rack.



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### Step 3 Connect the Sensor

Each sensor is shipped with an Ethernet cable to connect to the Liebert SN sensor port on your Liebert monitoring product. Use this cable or another standard straight-through cable to connect to the Liebert monitoring device or to another modular or integrated sensor.

To connect a sensor or string of sensors to a Liebert monitoring product:

- Insert either end of an RJ45 connector on the factory-supplied RJ45-RJ45 cable (or user-supplied cable) into the Liebert SN sensor port on the Liebert product (see user manual).
- Connect the other end to the sensor. If using multiple sensors, connect them in a string using the factory-supplied RJ45-RJ45 cables or other straight-through cables. See the user manual for your Liebert monitoring product to determine the maximum number of sensors that may be connected on a string.

### Step 4 Configure the Sensor

Use the Web interface to acknowledge the connection and configure sensor parameters. You will need the sensor address, recorded in **Step 1**. Examples of parameters to be configured include:

- Assign a label to each sensor.
- Configure leak detection sensor to trigger warnings and alarms.

Refer to the user manual of your Liebert monitoring product for detailed configuration instructions.

### Step 5 Connect Leak Detection Cable to the Connection Cable

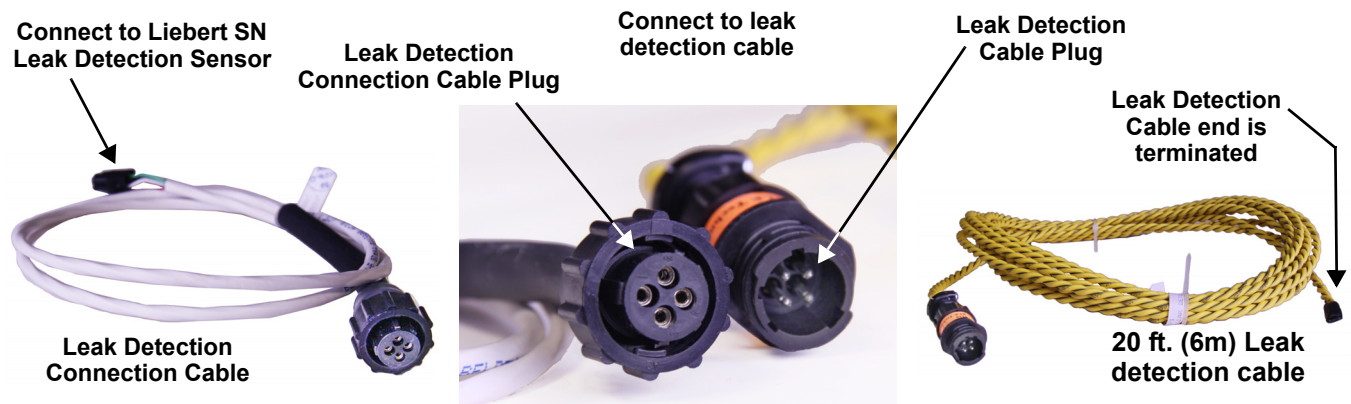
The connection cable has a black fitting on one end that will fasten securely to the fitting on one end of the leak detection cable—see **Figure 1**. Push these ends together, being careful to insert the protruding ends of the leak detection cable into the holes in the connection cable connector. Twist the connector ring to link the cables. Connect the Leak Detection Cable to the Liebert SN Leak Detection Sensor as noted in **Figure 1**.



#### NOTE

*Make sure the male end of the leak detection cable is installed close enough to the Liqui-TECT panel to reach the fitting on the 3-foot-long (0.9m) connection cable.*

**Figure 1 Fittings on leak detection cable and connection cable**

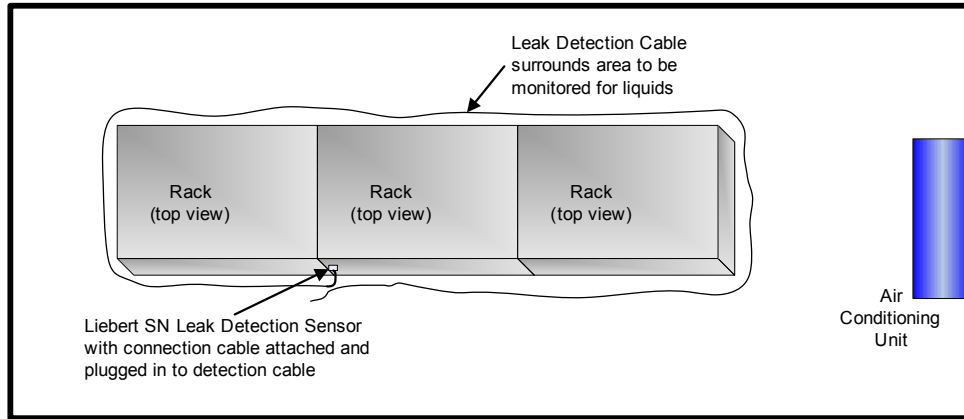


After making this connection, lay the leak detection cable around the area to be monitored.

The monitored area would include any equipment or objects that might be damaged by liquids.

**Figure 2** shows one possible layout. In the example, the detection cable crosses between air conditioning units and computers to alert personnel when the electronic equipment is threatened by a leak. If there is a liquid source in the ceiling, the cable can be placed there. If a raised floor is used for cooling, the cable can be placed underneath the raised surface.

**Figure 2 Typical leak detection cable layout**



Follow these steps in laying the detection cable:

1. Connect the connection cable to the sensor.
2. Plug the connection cable into the leak detection cable.
3. Lay the leak detection cable around the area to be monitored, leaving enough distance between the cable and the protected area to permit adequate response time to prevent damage.
4. Verify that power is connected and test the detection cable by touching the detection cable with a clean, moist cloth or paper towel.

If the cables are connected properly, an alarm will be generated. Dry the detection cable to end the alarm condition. (A hair dryer can be used to speed up the drying.)

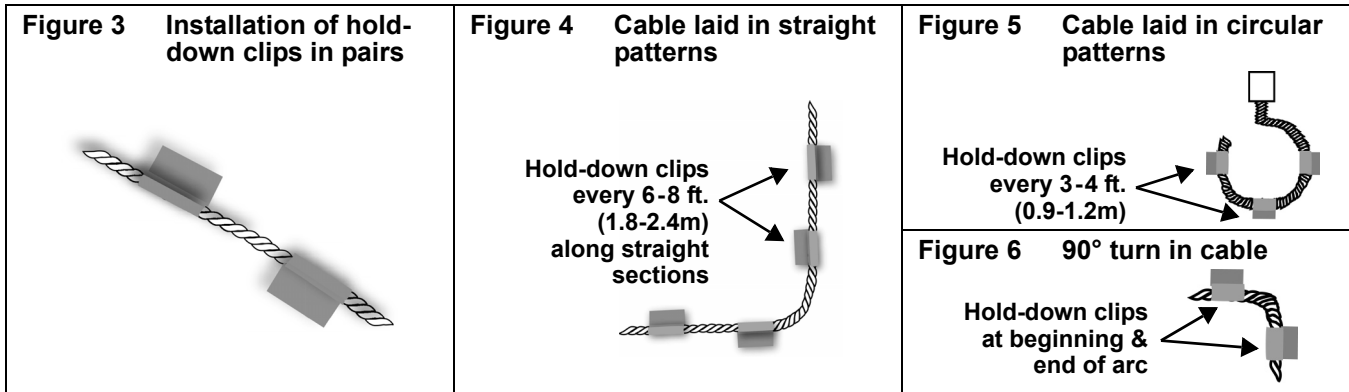
**Note:** Do not saturate the detection cable for testing. It requires only a small amount of water to alarm. The detection cable will have to dry for the alarm condition to clear.

5. Once the cable passes the test, lay it in the pattern desired. Pay special attention to the following cable placement precautions.

#### DETECTION CABLE PLACEMENT PRECAUTIONS

- Do not use detection cable that is damaged or dirty—for example, from plaster, spackling or debris. Mild dishwashing liquid can be used to clean the detection cable of many contaminants.
- Detection cable should not be dragged through contaminants (dirty or greasy areas). Floor must be clean for the detection cable to function properly and for the hold-down clips to adhere to the floor.
- Place detection cable out of the direct discharge airflow of environmental equipment. This type of equipment can discharge moisture into the airflow. Place cable 6 ft. (1.8m) from discharge to avoid nuisance alarms during humidification.
- Heavy objects and foot traffic can damage the leak detection cable. Never lay or drop tools or other objects on the cable. Caution personnel about stepping on the detection cable.
- Do not use any type of adhesive tape to secure the detection cable.
- Do not allow soldering or welding near the detection cable without protecting it from heat and contaminants. (Avoid installing the detection cable in or near areas where soldering or welding is done.)

6. Install the hold-down clips in pairs, as shown in **Figure 3**, with the following considerations:
  - a. The floor must be clean and dry or the adhesive used to install the hold-down clips will not bond with the surface.
  - b. The adhesive used to install the hold-down clips must NOT come in contact with the detection cable.
  - c. One pair every 6 to 8 ft. (1.8-2.4m) in straight patterns (see **Figure 4**).
  - d. One pair every 3 to 4 ft. (0.9-1.2m) in circular patterns (see **Figure 5**).
  - e. One pair at the beginning and end of the arc when turning 90 degrees (see **Figure 6**).
  - f. One pair as needed to maintain consistent uniform contact between the floor and detection cable.



7. Once the adhesive is dry, snap the cable into each hold-down clip.
8. Check that there are no gaps between the floor and detection cable. (Add clips as required.)
9. Be certain there are no alarms present on the module.
10. Do final testing as per instruction in **Step 4**.

## Specifications

<b>Dimensions - W x D x H, in. (mm)</b>	2 x 3/4 x 1-5/8 (51 x 19 x 41)
<b>Weight, lb. (kg)</b>	
Shipping Weight	1.9 (.86)
<b>Sensing Cable Length</b>	20 ft. (6m)
<b>Temperature (SN-T and SN-TH models), °F (°C)</b>	
Ambient Operating Environment	41 to 131 (5 to 55)
<b>Humidity (SN-TH models)</b>	
Humidity	10 to 95% RH (non-condensing)
<b>Door Switch Supports (SN-2D models)</b>	Non-powered door switch contact rated for minimum of 5V, 1mA
<b>Dry Contact Supports (SN-3C models)</b>	Non-powered contact rated for minimum of 5V, 1mA

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