



# Leak Detection Checklist:

## System Design Worksheet

### Every Facility Needs Leak Detection

Fluid leaks are the single most common cause of easily preventable business downtime. Fortunately, the right monitoring equipment can keep a small leak from becoming a disaster.

### 1) Choose the Right Fluid Sensing Cables

**Fluid sensing cables** - Run leak detection sensing cable around a room's perimeter, encapsulate critical equipment within the room, and route the cable in a serpentine pattern under raised floors. Sensing cables provide near-comprehensive protection for your critical spaces.

When calculating the cable needed, include:

- 1) Perimeter of the selected space
- 2) Length of any serpentine pattern for raised floors (with six foot spacing between runs)
- 3) Length of any overhead piping
- 4) Perimeter of any CRAC units (with at least six feet between output and cable)

Tips:

For a serpentine installation, a good rule of thumb is to allow .25 feet of sensing cable for every square foot of space you'd like to protect.

*Example: If you have a 10,000 square foot, rectangular facility, you would need roughly 2,500 linear feet of sensing cable to protect it (10,000 x .25).*

Use corrosion-resistant cables where there may be leaks of strong acids or bases that could damage standard fluid sensing cable.

Fluid sensing **cables** are preferable to sensing **tape** products, which are fragile and difficult to work with.

*This area needs cable that is (check all that apply):*

Conductive fluid sensing \_\_\_\_\_ft       Corrosion-resistant \_\_\_\_\_ft

*How much of the above cable must be rodent deterring? \_\_\_\_\_ft*

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## 2) Choose a Controller: *Zone or Distance-Read?*

Controllers come in a variety of configurations and capabilities. Generally speaking, controllers are chosen based on the length of cable they monitor (200, 300, 1,500, 5,000 or 10,000 feet), and multiple controllers may be networked together to protect a facility. Consult an expert to select the controller(s) best suited to the facility.

**Zone controllers** sound the alarm when a leak is detected anywhere along the length of an attached sensing cable. They are best for:

- Smaller, open areas
- Shorter cable runs
- Readily visible monitoring areas

**Distance-read controllers** pinpoint the exact location of a leak. They are best for:

- Large, multi-room, or complex monitoring areas
- Long cable runs
- Under raised floors & difficult to access areas
- Out-of-sight monitoring areas

*This area needs:*  Zone controller(s) \_\_\_\_\_  Distance-read controller(s) \_\_\_\_\_

## 3) Choose Spot Detectors

**Spot detectors** are the best choice for small, isolated, or enclosed spaces. They are ideal for monitoring areas like:

- HVAC drip pans
- Floor drains
- Very small, confined spaces
- Under condensation outlets or other known emergency water outlets

Because spot detectors only identify leaks in a specific location, they are **not** a good choice for:

- Large open areas such as under raised floors
- Any time you can't determine - without a doubt - which way water will run when a leak occurs.
- Underneath piping

*How many spot detectors does this area need?* \_\_\_\_\_

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### 4) Materials List

To protect this area, here is the final tally of what is needed:

Item	Qty.
Conductive fluid sensing cable	
Corrosion-resistant cable	
<i>Amount of the above cable that needs to be rodent deterring</i>	
Zone controller	
Distance-read controller	
Spot detectors	
Accessories	Qty.
Leader cable & EOL <i>(connect the cables to the controller and complete the leak detection circuit)</i>	
Non-sensing cable <i>(bridge areas where sensing cable is unnecessary without needing a separate controller)</i>	
Reference map <i>(provide a cross-reference of cable distance to floorplan placement for quick location of leaks)</i>	
Weighted cable connector <i>(use with distance-read panel to provide distinct separation between sections of cable; used between floors or rooms)</i>	
X-connector <i>(branch the cables in 3 separate directions)</i>	
J-clips <i>(prevent the cable from shifting, placed 5-6 feet apart - 3 feet in front of CRAC units)</i>	
Caution tags <i>(clearly mark and measure any exposed cables)</i>	

Notes:

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