

Water Leak Detection Systems - Frequently Asked Questions

1. Why do the installation instructions recommend routing leak sensing cable eight feet away from floor standing HVAC units.

Most users want to place the leak sensing cable as close as possible to a potential water leak hazard, often placing the cable directly under the HVAC systems. This exposes the leak sensing cable to an increased potential for false alarms. The HVAC downdraft often contains particles of moisture that been condensed from the cool surfaces inside the HVAC unit. Also, these HVAC units often have humidifiers which can add to the problem. Finally, over time, the high velocity air can embed fine particles of dust and dirt into the sensing cable, degrading its performance. Worse, if the sensing cable is not tightly fastened to the subfloor, the internal conductors may break from the constant movement.

2. The recently installed system seems to “false” alarm frequently. Why?

- a. *The primary reason for false alarms is that the cable has been installed too close to an HVAC downdraft.*
- b. *Cable has been installed under a pipe that is sweating (condensation) or is heavy and is pinching (shorting) the conductors.*

3. Our system has been working well for years, but is now indicating “false” leak detected alarms. Why?

- a. *The cable has become contaminated from dust and dirt over time.*
- b. *Another possibility is contamination from mineral salts absorbed from an unsealed concrete subfloor.*
- c. *Cable is contaminated from a previous leak.*

4. Our system has been working well and detected a water leak. After the leak was cleaned up the system stays in alarm. Why?

When a leak sensing cable becomes wet from a system water leak, often there will be mineral salts and other contaminants from the subfloor that remain in the cable after the water has evaporated. The more times the cable has been wet and dry, the more likely it is there will be contamination. Sometimes the cable can be cleaned. Sometimes replacement is required.

5. The leak locating system is indicating a leak near the end of the cable, but there is no water present anywhere. What is going on??

Almost all “footage measuring” leak detection systems calculate the electrical resistance of the sensing conductors to determine the location where water has contacted the sensing cable. When a water leak contacts the cable, an area of low resistance forms at the point of contact. On occasion, conditions will cause a small decrease in resistance over a large section of cable. Electrically, this is like a short circuit over a single spot. When the total decrease in resistance is enough to cause a false alarm, it will logically be indicated as being at the end of the cable because that is the normal point of highest resistance. This condition is usually caused by an HVAC unit blowing a fine “mist” of water particles from the condensate pan or humidifier.

Technician’s Note: Refer to system manuals for information about setting the calibration and sensitivity settings as well as general system design criteria.