



Water Leak Sensors and Detectors

Water damage is one of the leading causes of loss in commercial property claims. Water-related issues such as leaking pipes, frozen pipe bursts, clogged drains, and water back up can damage vital equipment and mechanical systems. In addition to damaging equipment, it can cause mold. Cleanup and downtime can be costly.

Steps that can be taken to reduce and eliminate this exposure include prevention and detection. Preventative maintenance on equipment is key, but additional detection and monitoring can assist in loss prevention. Water detection systems cannot prevent the loss, but they can help mitigate the overall loss costs and downtime by providing early notification.

Prevention

- Identify an individual to oversee prevention activities.
- Identify and label all shut-off valves.
- Repair cracked surfaces and seal openings.
- Ensure that all sensitive equipment and materials, like servers and necessary papers, are off the ground.
- Inspect the roof semiannually at a minimum. This should include roof drains, flashing, and seams.
- Ensure exterior drain systems are clear of debris.
- Re-insulate “cold spots” in the building to help prevent freezing.
- Test sump pumps quarterly.
- Have HVAC equipment serviced according to a set schedule.
- Ensure that all repairs are completed by a competent, licensed contractor. This will ensure that similar metals are used to prevent corrosion.
- Ensure an appropriate response plan is in place in the event of leaks or water backup. This includes notification, cleanup kits, and identifying a restoration company for immediate response.

Detection – Wired and Wireless Systems

Water Leak Detection and Monitoring – If and when a leak or water backup occurs, the amount of damage and business interruption is attributed to the amount of time the water flows and seeps into other areas of the building. Early detection can occur if the water is flowing during normal working hours. However, the duration can be longer during off-hours or when the building is unoccupied. Leak detection can be key to reducing overall loss costs.

Benefits:

- Early notification that will allow for an immediate response
- Capability to shut-off water to prevent further damage

How Do Water Sensors Work?

A water sensor detects the presence of water, often by measuring the electrical conductivity of the water present and completing a circuit to send a signal. For installations that are not monitored by a professional alarm monitoring company, the sensor and its control module can send out a notification through an app that can be read on a smartphone. After receiving the notification of a leak, the recipient responds to prevent further damage.

Some water sensor systems can be programmed to shut off the water to prevent a small leak from becoming a large one. If the property is heated by an older steam heating system, or if it's protected by an automatic fire sprinkler system, check with a qualified professional before installing a sensor-activated water shut-off device.

- Flow Devices – flow sensors are used for measuring the flow rate or quantity of a moving liquid.
- Pressure Devices – monitor surges in pressure that can result in burst pipes or a drop in pressure, and show abnormalities in the system.
- Water leak detection equipment should be UL-Listed/FM-Approved.

Additional Resources:

- [RMA 5-R-1295 – 4 Tips to Prevent Surface Water Flooding »](#)
- [RMA 5-R-538 Minimizing Property Loss Due to Water Damage](#)

Sources: FM Global, Kangaroo Water & Leak Detection, ISO, Utica National

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Utica Mutual Insurance Company and its affiliated companies, New Hartford, NY 13413
www.uticanational.com • 1.800.598.8422