CHUBB®

Protecting the Vital Work of Life Science Clients

Using Internet of Things (IoT) water sensors to reduce or eliminate the damage a water leak can cause.

When your clients are working on research, medications, or equipment that can save or change lives, damage from a water leak or frozen pipes can be disastrous, leading to FDA or regulatory infractions or warning letters, and setting the project back months or even years. By installing an Internet of Things (IoT) water sensor solution, your life science clients can protect their important work from harm or delay, prevent losses, and positively contribute to corporate ESG water waste management goals.

Did you know?

250 gallons

of water can leak from a 1/8-inch pipe crack in just one day.
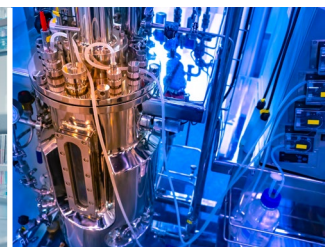
Water leaks can damage:

Buildings and contents

Personal property

Research and development property
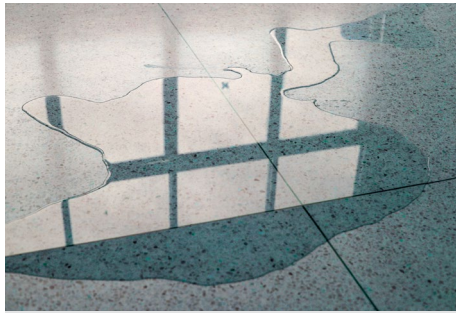
Sensitive equipment including bioreactors

Controlled environments like cleanrooms

What is an IoT water sensor solution?

StreamLabs, Inc. a Chubb subsidiary, offers a wide range of water leak management solutions:

- "Flow-based" devices that monitor the amount of water that flows through pipes or is used by appliances such as toilets or sinks, to detect leaks or other issues. This is a great way to manage water waste for corporate ESG goals.

- "Leak-detection" sensors that detect water leaks or temperature fluctuations and alert the client via text or email when a leak occurs. This lets building management know the exact location of the leak so they can avoid a catastrophic loss that could lead to regulatory violations like FDA 483 Observations and Warning Letters.

- Entire water loss prevention programs that include Control valves with patented ultrasound technology for real-time water monitoring, smart leak detection, and automatic water shut-off devices – with all sensors utilizing a cellular connection (not ethernet).

- Water sensor systems can be installed in any building to assist in quickly detecting the presence of a leak. Leaks might not be caught for hours or days and can cause extensive damage over time.

Your life science clients may be at risk. Could this happen to them?

Water sensor systems can help your clients avoid issues like:

- Mold growth and water damage resulting from a failure to investigate water leaks

- Overhead water supply pipes leaking onto the floor where raw materials are stored

- Water leaking from a ceiling into an encapsulation or packaging room

- Leaks from a pump within the water purification system, compromising the purity of that system

Heating line fitting failed in upstairs mechanical room

Total loss:
$1.4M

When a heating line fitting at a pharmaceutical manufacturing plant failed after hours, over 12,000 gallons of water leaked from the top floor into clean rooms where pharmaceuticals were. The water damaged the building including ceilings, walls, drywall, HVAC and HEP filtration systems, and major electrical components. The water was shut off after an hour and a half.

Ruptured water pipe caused damage to three floors

Total loss:
$900,000

When a water pipe ruptured on the ninth-floor heat exchange system of a sequencing lab, water cascaded down through the three floors below. Four labs with sensitive R&D equipment and research specimens, including ongoing drug discovery research, were damaged. Because the pipe broke during business hours, the water was shut off within 15 minutes. However, the damage was still extensive.

Water leak damaged surgical equipment manufacturing tools

Total loss:
$1.2M

When water started leaking from a toilet on the third floor of a surgical equipment manufacturing facility, damage was widespread, including floors, ceilings, production equipment and circuit boards used to manufacture the sensitive surgical devices. Because water damaged the electrical equipment and completed devices, the manufacturing process was no longer in compliance with FDA Good Manufacturing Practices and therefore much of the inventory and in-process equipment had to be scrapped. Luckily, the manufacturer was able to continue production in another part of the building, mitigating a business income loss as well.

A relatively small cost compared to the risk:

Building	Water Sensor Solution	Cost per Year (approximate)
Laboratory with two stories, 200,000 sq ft, vivarium and storage	5 water sensor gateways and 41 sensors	**$4,452**
Medical device building with one story, 700,000 sq ft, precision manufacturing and warehouse	2 water sensor gateways and 15 sensors	**$1,680**
Drug manufacturing facility with four stories, 155,000 sq ft	4 water sensor gateways and 40 sensors	**$4,080**
Class A office building with 10 stories, 200,000 sq ft	6 water sensor gateways and 10 sensors	**$9,000**

Have questions? Need to quote?

For answers to your questions or a quote on a water sensor system that will meet your client's specific needs, contact your local Underwriter, Risk Engineer, or our Digital IoT Operations Lead on the right:

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