LIQUID LEAK DETECTION SYSTEMS

Case Study

TTK WATER LEAK DETECTION SYSTEM In URSSAF DATA CENTER, FRANCE

Project Requirements

In this cutting-edge data center, where an in-row cooling solution is implemented, the client seeks a reliable water leak detection system to monitor various zones within the facility and seamlessly integrate it with the building management system.

PROJECT OVERVIEW

Client & Project	URSSAF DATA CENTER FRANCE
Client	URSSAF
Location	Greater Lyon Region, France
Application	Data Center Building
Project Type	New Project
Project managed by	TTK France
Contract Scope	TTK assures project study, engineering, material supply and delivery, insallation and Test & Commissioning of the digital leak detection systems.
Completion Date	April 2024
Technology	Digital leak detection systems FG-NET, water sensing cables FG-EC.

Areas of Focus for Protection

Some examples of areas protected:

- Server room, data hall
- Cooling Units
- Technical Room: Transformer Room, Batteries, UPS
- Overhead Chiller Supply and Return Pipes

TTK's Solutions

TTK France recommended its digital water leak detection system, which includes the FG-NET digital monitoring panel and FG-EC addressable water sensing cables, to monitor critical areas.

Sensing Cables:

Pre-connected FG-EC sensing cables of varying lengths (3, 7, or 15 meters) were installed both beneath the raised floor and above the ceiling to monitor pipework and critical areas. When water contacts any point along the cable, it alerts the monitoring panel with the precise leak location.

The choice of FG-EC addressable sensing cables is based on their advanced features facilitated by the embedded microcontroller in the female connector. This allows each individual cable within the same output functions independently, unaffected by the status of neighboring cables. As a result, multiple leaks within a single detection line. can be detected and reported simultaneously to the Building Management System (BMS).

Furthermore, the cable's unique dust-resistant structure effectively prevents false alarms caused by dust, condensation, or metal particles, providing operators peace of mind.

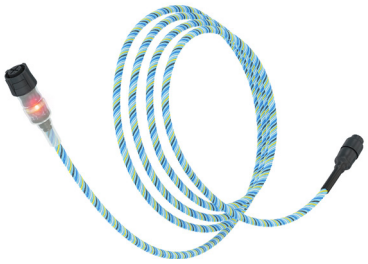
Digital monitoring panel:

The FG-NET monitoring panel was placed in proximity to the data hall. All three circuits on the panel were utilized, connecting sensing cables spread across various areas and levels within the data center.

The system covers a wide area, with sensing cables installed along the perimeter of different zones, forming a barrier between cooling units and equipment.

In the event of a leak, the FG-NET panel displays the location on its touch screen with pinpoint accuracy, down to 1 meter. It also drives dynamic drawings on the BMS, which can be simultaneously viewed on screens in the central building control room.

TTK FG-NET panel installed on site



FG-EC addressable water sense cable

TTK water sense cable installed under the raised floor, alongside the pipework

TTK water sense cable installed around critical equipment

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