



LIQUID LEAK DETECTION SYSTEMS

Case Study

TTK WATER LEAK DETECTION SYSTEM In HONGKONG'S LARGEST SPORTS COMPLEX

ABOUT THE PROJECT

Covering approximately 28 hectares, Kai Tak Sports Park is Hong Kong's largest sports complex. It includes a 50,000-seat main stadium, a 10,000-seat arena, and a 5,000-seat public sports ground. Designed by AECOM engineering firm, the venue officially opened to the public on 1 March 2025.

PROJECT REQUIREMENTS

As part of the client's goal to integrate smart technologies across the venue, a reliable and intelligent water leak detection system was required to monitor all key technical areas and ensure operational safety and continuity.



PROJECT OVERVIEW

Project	Hongkong Tai Tak Sports Park
Client	Kai Tak Sports Park Limited
Location	Hongkong, China
Application	Multi-purpose stadium
Project Type	New Project
Project managed by	TTK Asia
Contract Scope	This project is jointly assured by TTK and our local partner
Completion Date	Q1 2025
Technology	Digital monitoring units FG-SYS with water and corrosive liquids sense cables FG-AC, point sensors FG-ECP-L, FG-ECP-U

AREAS PROTECTED

Over **40 kilometres of TTK sense cables** protect a large number of technical areas, here are a few examples:

- Plant room, equipment room, ELV room, IT Hub, ICT room, Gas heater pump room, LV Switch room;
- Transformer room, utility room, mechanical room, electrical rooms, pipe room, corridor, lift pit, storage area, kitchen etc.

TTK's SOLUTIONS

Following an on-site assessment, TTK Asia recommended deploying its FG-SYS digital locating leak detection system, each panel offering up to 120 independent addresses on three outputs. The system integrates FG-AC sense cables for water and corrosive liquids and FG-ECP point sensors, strategically installed across critical zones.

■ Digital Monitoring Panel (FG-SYS)

The FG-SYS panel continuously monitors for leaks 24/7 in mission-critical environments. Compatible with various TTK digital sensing cables and probes, it precisely locates leaks (to within 1 metre) and maintains system integrity even if a cable break occurs. It can be seamlessly integrated with BMS platforms.

■ Point Sensor (FG-ECP-L, FG-ECP-U)

Compact and durable, the FG-ECP point sensor comes in several models.

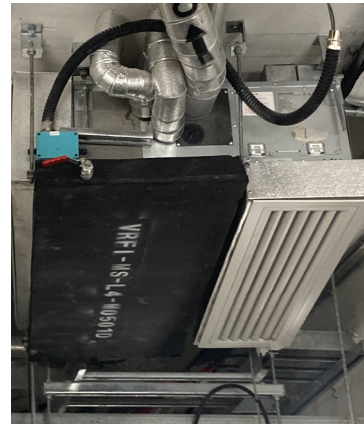
For this project, L-shaped and U-shaped versions are used to adapt to different environments. They communicate with the digital panel via a TTK bus cable, and the highly visible LED on the front of the box clearly indicates its real-time status.

■ Water and Acids Sense Cable (FG-AC)

Constructed from corrosion- and abrasion-resistant materials, the FG-AC cable detects and locates water or acids leaks along its entire length. Its non-absorbent and reusable design allows fast cleaning and reset, providing a cost-effective long-term solution.

■ Project Scale

In total, around 170 monitoring panels, 3000 sense cables, and 1000 sensors were installed, protecting all sensitive technical zones with more than 40 kilometres of sense cables. All TTK systems are fully integrated into the client's Building Management System (BMS) for centralized monitoring and control.



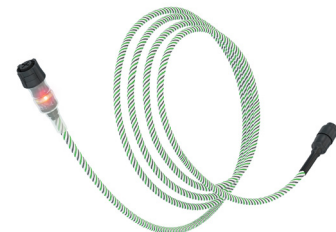
Point sensor installed onsite



Digital monitoring units FG-SYS



Point sensor FG-ECP-L, FG-ECP-U models



Addressable water and acids sense cable: FG-AC

