# Fire Protection in Aircraft Hangars

## The United Arabic Emirates

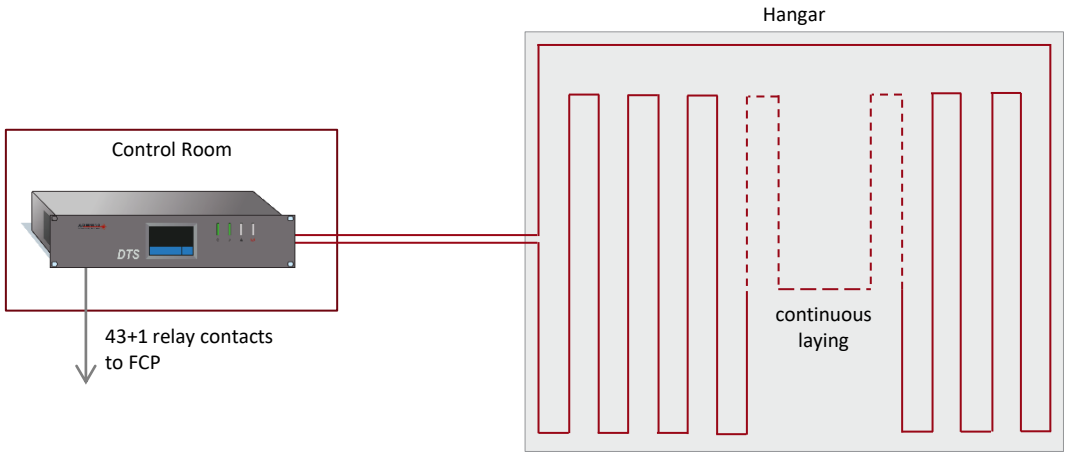
**AP Sensing was selected to monitor a large and valuable infrastructure in the Middle East: an aircraft hangar, where aircrafts are brought for maintenance and inspections. Unlike more conventional beam detectors, our fiber optic Linear Heat Detection (LHD) solution is immune to dirt, dust, humidity, corrosive materials, building movement and electromagnetic interference (EMI).**

The site operators chose one AP Sensing LHD device with two channels and a 4 km range to monitor the aircraft hangar. The monitoring device is located remotely in a protected control room. A Modbus TCP interface is included and is used to communicate with the SCADA system.

The passive sensor cable is covered in a stainless-steel tube with a halogen-free plastic coating and is virtually maintenance free. In the event of a fire, information regarding the size and spread of the fire is immediately available to fire-fighting personnel. Up to 256 individual alarm zones and different alarm criteria can be defined, thereby matching the detection requirements to the physical hangar layout. This can also include adjustments for seasonal temperature fluctuations.

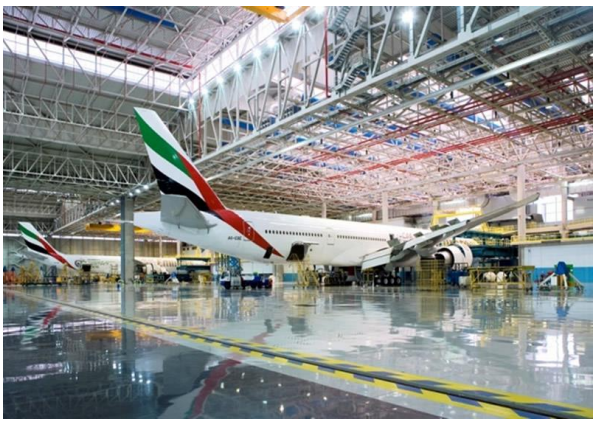

***Fire simulation in the hangar***

A fiber optic-based Distributed Temperature Sensing (DTS) solution is highly reliable, even in the challenging conditions inside a hangar. The spacious buildings often contain various non-threatening fire sources and are a subject to radio frequency interference (RFI). More conventional systems tend to trigger unnecessary false alarms, an error that can prove very expensive and, in extreme cases, can lead to a grounding of the aircraft. Even with ceiling heights of up to 40 m (unsuitable for commercial fire detection technologies), the fiber optic cable reacts quickly if the temperature exceeds pre-defined levels.




***Schematic diagram of the installation: complete hangar coverage***

The installation was carried out as planned and on time, and AP Sensing provided classroom training for the operators. Planning is underway for future monitoring projects in other hangars, as well as other areas at the airport that would benefit from a DTS solution such as fuel and oil tanks, cable trays, and conveyor belts.



***Successful cable installation in the hangar***