



Fire Protection in Aircraft Hangars

UAE

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

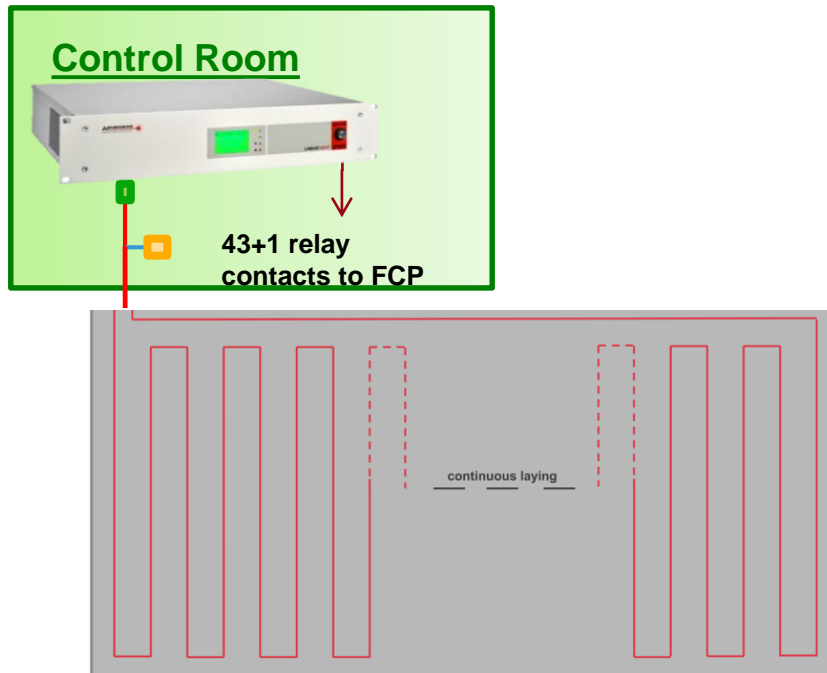
The operators selected one AP Sensing Linear Heat Series device with 2 channels and a 4km range. The device is located in a protected remote control room. A Modbus TCP interface was included and is used to communicate with the SCADA system.

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



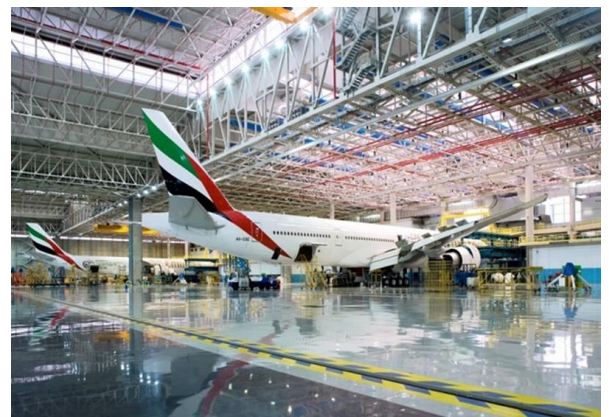
Fire tests in the hangar

A fiber-optic based DTS (distributed temperature sensing) solution is highly reliable, even in the challenging conditions inside a hangar. More conventional systems tend to trigger unnecessary false alarms, an error that can prove very expensive and in extreme cases can even lead to a grounding of the aircraft. Even with ceiling heights of up to 40m (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. 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. A valuable infrastructure remains protected.



Successful cable installation in the hangar