

## Applications: Underground and Multi-storey Car Parks

Multi-storey or underground car parks are frequently built as an integral part of office and shopping developments.

One of the major fire hazards that pose a threat to a building is the car park. For obvious reasons there can be no control over the condition of the vehicles as they enter the car park and their fire risk cannot be measured. As a result sprinkler systems are generally installed in all such covered car parking, however a typical sprinkler installation may take many minutes to respond to a fire condition. During this period a considerable amount of heat and smoke may be generated prior to the activation of the sprinkler system.



Unlike many other risks within the building, car park areas cannot be reliably monitored for the early stages of fire by point smoke detectors or smoke sampling systems due to the high incidence of unwanted alarms caused by vehicle exhaust emissions.

Point heat detectors may be used, however the structure of the ceiling reinforcing usually results in a large number of compartments and each requiring an individual detector. The installation cost of point detectors is high and the number required may result in an increased number of zones being required, further increasing the total installation cost.

Heat sensing cables provide a very cost effective alternative to conventional point type heat detectors. Our Signaline Fixed Temperature 68°C and Signaline HD heat sensing cables are particularly suited to this application since they have a relatively low alarm temperature and will provide a rapid response to a vehicle fire.

A Signaline Heat sensing cable installation can usually be installed at between 50% and 75% of the cost of a point heat detector system.

Signaline Fixed Temperature system can easily be integrated with conventional fire alarm systems. Intelligent building systems using ApolloXP95 protocol can utilise the loop powered Apollo zone monitor unit to effectively monitor the condition of the Signaline cable for fire and faults.

Signaline HD when used with the loop powered Signaline-SKM-95 controller is also totally compatible to an ApolloXP95 intelligent system.

The diagram on the following page shows a typical layout designed to conform to European norms. System designers should bear in mind that it may be necessary to run the cable centrally through any compartments created by the ceiling support structure.



# SIGNALINE

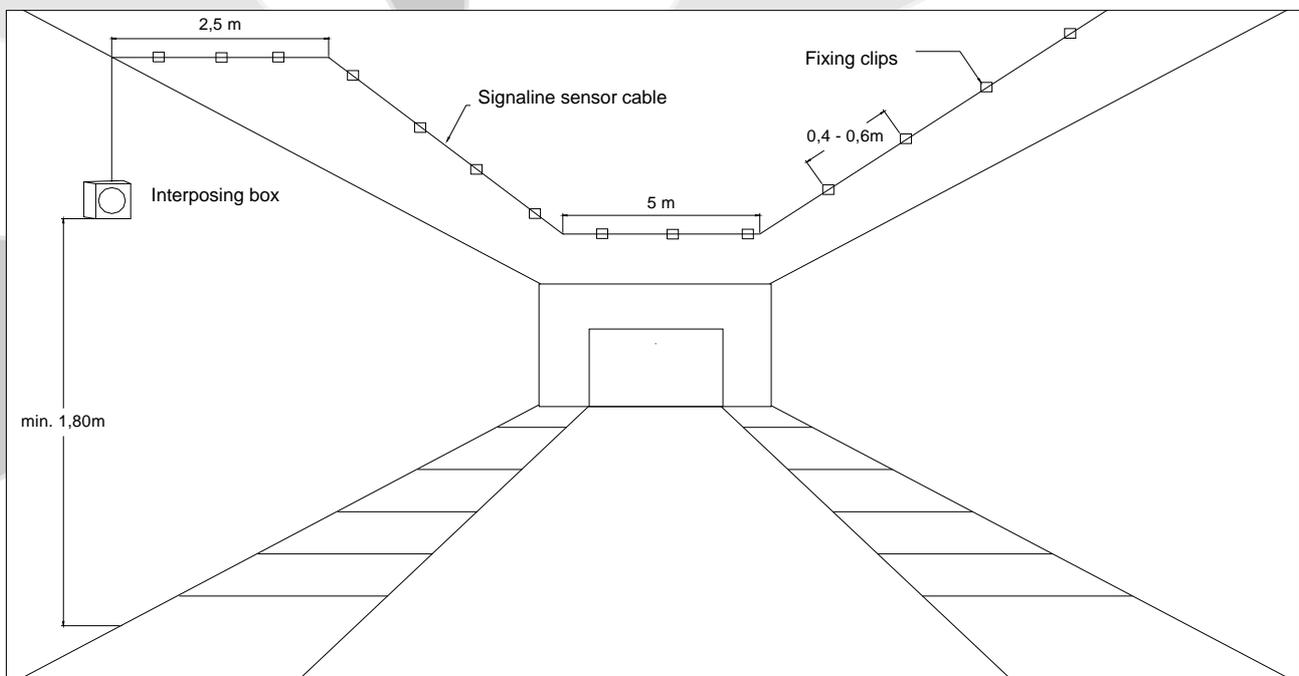
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Signaline Heat sensing cable should not be directly fixed to the ceiling but should be mounted on the recommended ceiling clips which provide a 15mm standoff to ensure that the cable is in the hot gases which rise from any event. See our web site for a wide a selection of suitable cable fixings. The cable should be 2.5 metres from adjacent walls and 5 metres between runs, see below.

Signaline Heat sensing cable, mounted in accordance with these recommendations, will give the same response as an EN54 Class C point heat detector system.

If the Signaline Heat sensing cable is vandalised or accidentally damaged, sections may be repaired or replaced using standard IP66 junction boxes.

The overall area of the car park should be divided into conventional zones as with other forms of detection. Where interconnecting cables are required between the control equipment and the Signaline heat sensing cable, the cable installation should comply with your local authority fire regulations.



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