

A complete fire detection solution.

Increasingly Linear Heat Detection Cable is being recognised as the fire protection of choice for car parks. Its unique factors mean it is ideally suited for the harsh environmental conditions that are present.



Modern car parks face an ever increasing fire risk. Developments in the car industry mean that the material used in vehicle manufacturing can be often highly combustible, which can generate intense fires that generate very high temperatures. Once a fire has started they often rapidly spread between vehicles, and adjacent floors and buildings.

Fire detection systems need to be able to detect quickly and reliably, with minimum long term maintenance and crucially without causing unwanted alarms. Fire detection systems not only have to protect life, but also the building and infrastructure.

Fast, reliable detection can reduce damage and the high cost of repair or replacement, minimise down time and consequential loss and lessen the impact for potential pollution and the possible inhalation of toxic fumes.

Patol is a global leader in the design and manufacture of specialist fire detection products for Industrial applications. Founded in 1968 Patol is a privately owned British company located near Reading UK.

Risk

Car parks are often prone to high air flows, this coupled with exhaust fumes that are generated can cause severe problems for conventional smoke detectors. Linear Heat Detection Cable (LHDC) is not affected by these conditions. Similarly it is also unaffected by environments that are prone to damp and high humidity.

The suitability of LHDC to work effectively in this environment means that it is not prone to generating false alarms, which is an issue caused by traditional smoke detectors.

Application

LHDC is installed on the ceiling of the car park using specialist clips and fixings. The small bend radius means that it is capable of providing total area coverage, even for the most difficult layouts.

Its discreet nature means that it is less likely to suffer from vandalism, which is common for other point type detectors. It is also possible for Patol to supply braided LHDC, to offer additional mechanical strength.

System

Patol offers two LHDC systems for this type of application. A resettable (Analogue) system or a non-resettable (Digital) system. Both systems are made up of a control device (optional for Digital cable), LHDC and End of Line device.



LDM-519-LP

The LDM-519-LP is a control device for the resettable (Analogue) LHDC and monitors the LHDC for Short Circuit and Open Circuit Fault using a Patol End of Line device.

Linear Heat Detection Cable

The Patol Linear Heat Detection Cable is designed to provide early detection of Fire conditions and overheating in circumstances where other forms of detection would not be viable, due to the inability to sustain the environment requirements.

A single detection zone of LHDC can cover between 1600 sq metres to 2000 sq metres in accordance with BS5839 pt1 and various European standards. Each zone sends an alarm signal back to a control device, which can be connected to a conventional fire alarm panel or fully integrated with an Analogue addressable system.

Analogue - Resettable

Zonal lengths of up to 300m of Analogue cable can be installed. With the ability to trigger for hot spot detection on small sections of the cable and additionally for an ambient temperature increase across the entire zone.

Analogue cable is used in conjunction with a Patol LDM-519-LP controller. This is a loop powered controller which can be fully integrated on either a conventional fire panel or an analogue addressable system.

Digital - Non Resettable

Extensive single zonal lengths of the LHDC Digital may be installed with the ability to trigger alarms for hot spots occurring on very small sections of the overall cable. The LHDC may be employed in a wide variety of applications but is particularly suited where there are harsh environmental conditions.

The DDL controller is used in conjunction with Digital cable where a distance locator is required for the fire condition. It has a 4 digit display which activates on fire condition and displays the distance into the zone the alarm has occurred. Digital LHDC may be employed in lengths up to 2km (1999m). The unit has an adjustment to accommodate interposing cables.

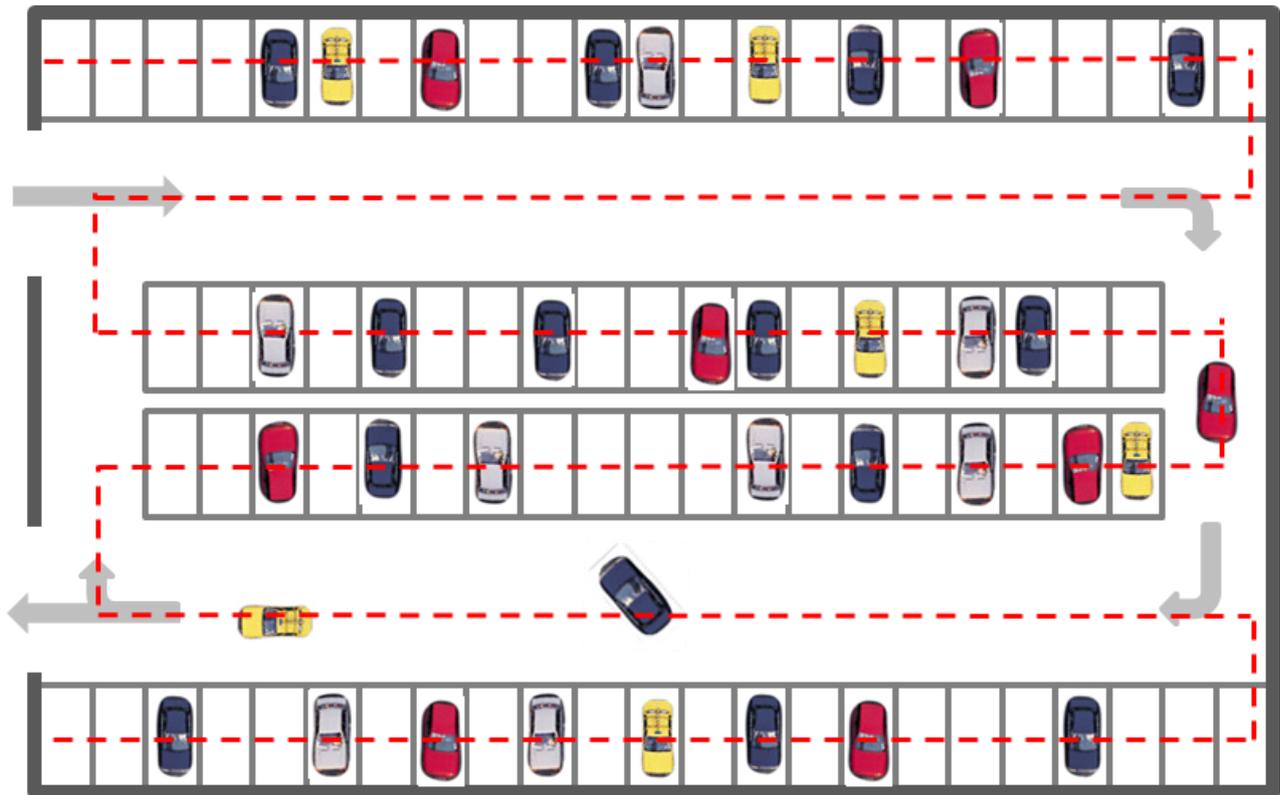
Installation

Linear Heat Detection Cable is installed either on the ceiling of the car park or a dedicated cable tray; using specialist clips and fixings. It is installed so that there is an air gap between the ceiling or cable tray ensuring that they do not act as a heat sink towards the heat sensitive cable.

The LHDC is typically installed in parallel runs; the maximum spacing between each run is in accordance with BS5839 pt1 10.6m (5.3m either side of the cable centre).

LDM-519-DDL

The LDM-519-DDL is a Digital Interface with Distance Display. The unit monitors Digital LHDC once activated, the distance into the zone that the fire has occurred will be displayed.



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