

# **ProReact** Linear Heat Detection Cable

## Applications Guide

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- **ProReact Digital Linear Heat Detection Cable**
- **ProReact Analogue Linear Heat Detection Cable**

# 1. Applications

## 1. Overheat Sensing in Cable Trays

Cable trays, including multi-tier cable trays, can be protected from overheat or fire using ProReact Linear Heat Detection cable.

For trays up-to 0.6m (2ft) wide, a single run of linear heat detection cable should be positioned in the centre of the cable tray.

For trays over 0.6m (2ft) in width, two runs of linear heat detection cable should be positioned, spaced equally apart, in the cable tray.

Linear Heat detection cable should be located between 150mm and 250mm above the tray, free from obstructing any power or data cables within the tray itself.

Using a 'v-clip', linear heat detection cable may be located underneath the cable tray to provide protection for multi-tier cable trays.

### Suitable clips:

V-Clip (A1174)

L-Clip (200mm) (A1168/A1169)



## 2. Overheat Sensing on Conveyor Belts

ProReact Linear Heat Detection cable may be used in multiple locations for detecting overheat conditions on conveyor belts.

A high risk area is in close proximity to the roller bearings. Friction can ignite material which has fallen from the belt and builds up near the bearings. Suitable clips and fastenings should be used to secure the linear heat detection cable near the point of risk.

Linear Heat Detection cable may also be located above the conveyor belt to detect an overheat condition caused by material on the belt.

Nylon coated or, preferably, stainless steel braided, linear heat detection cable should be chosen to provide the maximum robustness and protection against physical damage.

### Suitable clips:

Dual height L-Clip (A1164/A1165)

Standard L-Clip (A1166/A1167)

L-Clip (200mm) (A1168/A1169)



### 3. Rim-seal Protection on Floating Roof Tanks

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ProReact Linear Heat Detection is ideal for early detection of a fire due to a damaged or worn rim seal on a floating roof tank. Similarly lightning strikes may cause fires on floating roof tanks making early warning a necessity.

The earlier a fire can be detected on a storage tank containing highly flammable contents, the better chance a suppression system has of preventing a catastrophe.

ProReact Linear Heat Detection cable should be clipped to the foam dam using clips which position the linear heat detection cable close to the rim seal.

The addition of a nylon coating on the linear heat detection cable is strongly recommended for maximum protection against environmental conditions.

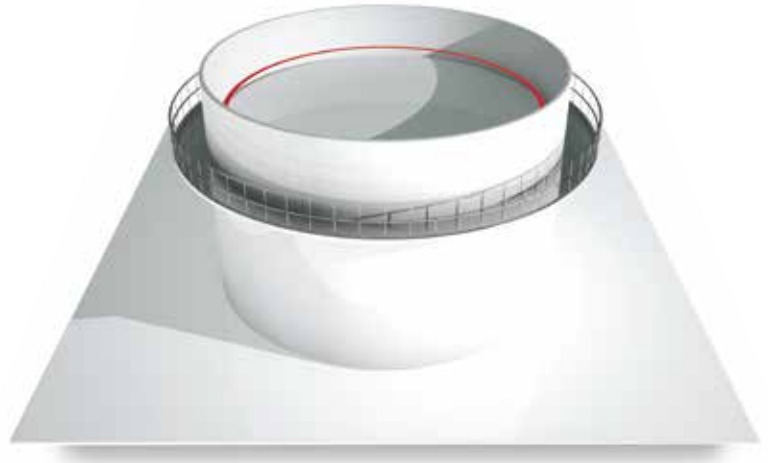
#### Suitable clips:

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Dual height L-Clip (A1164/A1165)

Standard L-Clip (A1166/A1167)

L-Clip (200mm) (A1168/A1169)



### 4. Overheat Sensing on Fixed Roof Tanks

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Tank farms require effective overheat sensing solutions, especially when many tanks are in close proximity to one another.

ProReact Linear Heat Detection cable can be used to provide a high level of protection on fixed roof storage tanks. It can be installed close to the points of risks such as vents, flanges or gauging points.

By linking the detection system to a fire suppression system, a highly effective fire protection system can be created, minimising the risk of catastrophe.

Nylon coated linear heat detection cable should be chosen to provide the maximum robustness and protection against environmental conditions.

#### Suitable clips:

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Dual height L-Clip (A1164/A1165)

Standard L-Clip (A1166/A1167)

L-Clip (200mm) (A1168/A1169)

## 5. Overheat Sensing in Tunnels

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For increased coverage, linear heat detection cable may be installed in tunnels over the roadways. An optional ProReact Alarm Point Distance Locator may be beneficial to quickly locate whereabouts along the cable the alarm has occurred. Alternatively, zoning the cable in separate lengths can provide discrete detection zones.

An extra nylon coating is recommended on the detection cable to ensure maximum longevity in the environmental conditions likely to be encountered.

Linear Heat Detection cable may also be sited at low levels in the tunnel, if practical, to improve response time in certain situations.



### Suitable clips:

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Dual height L-Clip (A1164/A1165)

Standard L-Clip (A1166/A1167)

Channel Bracket (A1172/A1173)

L-Clip (200mm) (A1168/A1169)

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## 6. Overheat Sensing in Car Parks

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ProReact Linear Heat Detection is ideal for the early detection of fires and overheating in car parks. Fires in multi-storey and underground car parks are prone to spread rapidly and burn at extremely high temperatures and with high intensity. Therefore, increased coverage, high sensitivity and reliability are all important features of any fire detection system in this application.

Nylon coated cable may be used to provide a low maintenance, long-life option in the presence of exhaust fumes and other environmental factors.

ProReact LHD cable may be run perpendicular to the car park spaces, as show below, to protect a large area using a single zone of detection cable. Furthermore, ProReact Analogue can provide an additional pre-alarm option to offer the most rapid response to an incident.

For applications where the LHD cable is attached to the ceiling, a minimum of 20mm/0.8in spacing should be maintained between the ceiling and the LHD cable. The spacings between runs of LHD cable and minimum bend radius should be according to the technology being used (see corresponding installation manual for details)



### Suitable clips:

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Dual height L-Clip (A1164/A1165)

Standard L-Clip (A1166/A1167)

L-Clip (200mm) (A1168/A1169)

## 7. Overheat Sensing for Escalators

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Escalators are susceptible to overheating which can lead to a fire because of the continuous operation for long periods. ProReact Linear Heat Detection can be located at the point of risk due to its small size and flexibility, protecting bearings, motors, rollers and other high risk areas.

Care should be taken during installation to minimise the impact moving parts may have on the detection cable and for this reason, a stainless-steel braided cable should be chosen to prevent the detection cable from excessive wear.

Additionally, ProReact Analogue provides an early warning, pre-alarm, option to alert the presence of an overheating component or part, before a fire develops.

### Suitable clips:

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- Dual height L-Clip (A1164/A1165)
- Standard L-Clip (A1166/A1167)
- Channel Bracket (A1172/A1173)
- L-Clip (200mm) (A1168/A1169)



## 8. Overheat Sensing for Warehouse Racking

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Linear Heat Detection cable is suitable for detection at the point of risk of items stored on dense racking. The nature of the ProReact detection cable, sensitive only to heat, makes this type of detection system ideally suited to the noisy, dusty and industrial application.

ProReact Digital and Analogue can be used to initiate a pre-action sprinkler system often used in these situations, such that once a fire has been detected it is rapidly brought under control.

Depending upon the height of racking, or the perceived risk, linear heat detection cable can be located at different levels to improve the overall system sensitivity. ProReact Linear Heat Detection is also ideal for use in large freezer warehouses to provide early warning of abnormal temperatures.

### Suitable clips:

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- Dual height L-Clip (A1164/A1165)
- Standard L-Clip (A1166/A1167)
- Channel Bracket (A1172/A1173)
- L-Clip (200mm) (A1168/A1169)









