

## Analogue

### Linear Heat Detection Cable LHDC



The Patol Analogue Linear Heat Detection Cable (LHDC) is designed to provide early detection of fire and overheating in circumstances where other forms of detection would not be viable, either due to inability to sustain the environment requirements or through prohibitive costs.

Extensive single zonal lengths of the LHDC may be installed with the ability to trigger alarms for hot spots occurring on very small sections of the overall cable.

LHDC Analogue is a coaxial cable constructed with a copper coated steel central conductor, an inner insulation (dielectric), a tinned copper braid layer and an overall protective sheath.

The primary mechanism of heat (fire) detection is that the resistance of the dielectric, monitored between the central conductor and braid layer, has a negative temperature coefficient (NTC).

Analogue cable is employed in conjunction with an end of line terminating device and a zone monitoring unit or control panel with an appropriate LHDC interface channel.

LHDC may be installed in Hazardous areas by means of Intrinsically Safe Zener Barriers. Similarly when the protected area is remote from the monitoring equipment interposing cables may be employed.

## Features

Adjustable Alarm set point

Recoverable and resettable operation

Can detect hot spots

Zones of up to 500m in length

Mechanical & Chemical protection available

Easy to install

Compatible with a full range of monitoring devices

RoHS compliant — Lead Free

## Applications

Cable Tunnels, Ducts & Mezzanines

Escalators & Moving Walkways

Petro-Chemical Storage Tanks / Rim Seal Protection

Paint Shops & Spray Booths

Conveyors - Coal, Biomass, Sulphur. etc

Ceiling Voids & Attic Spaces

Road & Rail Tunnel Carriageways

Nuclear Reactor Plant Areas

Refrigerated Stores & Cold Rooms

Electrical Control & Switchgear Cabinets

Warehouse High Rise Pallet Racking

Oil Rigs & Off Shore Platforms

Fume Cupboards & Glove Boxes

Grain Silos & Agricultural Storage

Road / Rail Vehicle Engine Compartments

Steam pipe Leaks & Trace Heating Faults

Product Lines - Flanges, Valves & Pumps

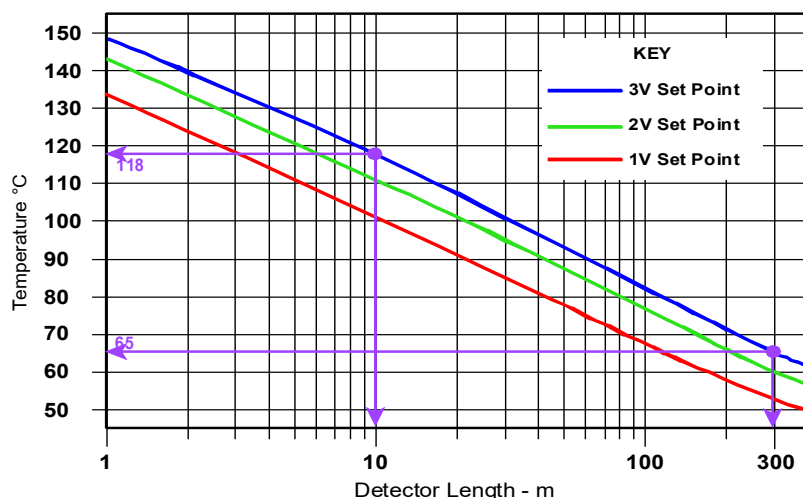
Computer Room under Floor Cable Voids



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## Linear Heat Detection Cable

DETECTION POINT ALARM CHARACTERISTICS

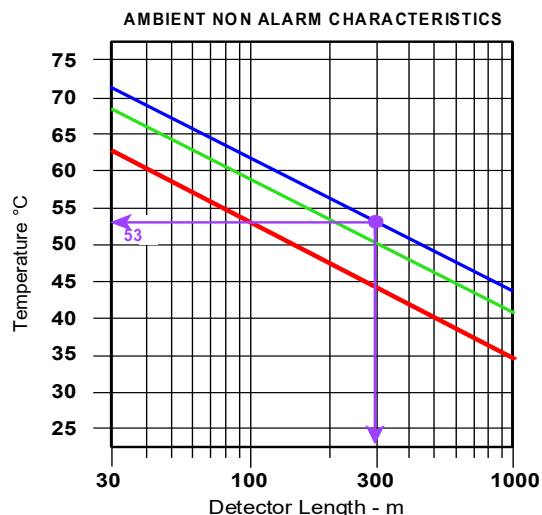


LHDC Interface Modules are equipped with sensitivity/trip adjustments. The graphs show three typical settings; 1V, 2V and 3V.

This example shows a typical application where 300m of LHDC is employed in conjunction with an Interface Module adjusted for a 3 Volt set point.

- The upper graph shows that a temperature elevation of a 10m section of the zone **will** produce an alarm trigger at a maximum of 118°C
- The lower graph shows that the whole of the zone will withstand ambient temperatures up to 53°C **without** any alarm triggers
- Margin and tolerance are applied to the curves. In practice the ambient temperature will be greater than 53°C.

Note: For further information refer to full LHDC Data Sheet.



### Specification

#### Outer Sheath:

Red PVC - Standard

Black Nylon (Rilsan) - Chemical Protection

Stainless Steel & PVC - Mechanical Protection

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#### Outer Diameter:

Red PVC: 2.8 - 3.0 mm

Black Nylon (Rilsan): 4mm

Stainless Steel & PVC: 5 mm

Stainless Steel & Nylon (Rilsan): 5 mm

Minimum Operating Temperature: -20°C

Minimum Installation Temperature: 0°C

#### Weight 1km on the reel:

Red PVC: 19kg

Black Nylon (Rilsan): 19kg

Stainless Steel & PVC: 21kg (500m reel)

Stainless Steel & Nylon (Rilsan): 21kg (500m reel)

Tensile Strength: 200 Newtons

### Ordering Information

Controllers and Termination Boxes used with Analogue Cables:

Description	Part Number
LDM-519-LP	700-201
LDM-519-SEN-N	700-305
LDM-519-ACT-N	700-304
EU-R 19" Rack Mount	refer D1216
EOL & Through boxes	refer D1120

#### LHDC Analogue Cables

Description	Part Number
Red PVC	700-001
Red PVC S.S*	700-005
Black Nylon	700-003
Black Nylon S.S*	700-004
*Stainless Steel Braid	