

## Guidelines for Routing of Resettable Analogue LHDC

### 1. Before installing Linear Heat Detection Cables the following points should be observed:

- 1.1 The cable should not be in contact with any material that can act as a heat sink and delay the sensing of temperature increase from the area being monitored. **DO NOT PAINT**
- 1.2 The correct size and type of cable gland must be used on all junction boxes etc.
- 1.3 Due to the high impedance of the system, all connections at zone monitors, end of line units, junction boxes and interposing cable must be protected with silicone grease.
- 1.4 The cable should be installed so that it is not severely compressed and is not in contact with sharp objects that may damage the outer sheath. Mechanical tightening of cable ties must be avoided, as this will severely compress the LHDC and trigger a Fire / Fault.
- 1.5 The minimum bending radius is 10mm.
- 1.6 Cable ties shall not be used directly on the cable. The neoprene sleeve must be employed.
- 1.7 The LHDC must not be over tensioned between supports especially at changes in direction.
- 1.8 The distance between supports shall be between 0.6 and 1.2 metres dependant on fixing positions available.
- 1.9 The routing of the LHDC shall be chosen to avoid contact or close proximity with any local sources of heat eg. light fixings, steam pipes etc.
- 1.10 The minimum number of joints should be made in any zone and these connections should be in the recommended Patol Junction Box. P/N 700-508.
- 1.11 Adjacent zones should overlap by a minimum of 600mm.
- 1.12 Approved fixing clips and brackets shall be used.
- 1.13 All interposing cables shall have a screen/braid/sheath/armour as part of its construction, and this should be connected to earth to improve RFI and EMI immunity.

### 2. Special Guidelines for Cable Way Protection:

In addition to the recommendations in 1-13 above, the following should also be observed:

- 2.1 The LHDC should be installed to cover each cable tray or ladder rack intended for supporting cables.
- 2.2 The LHDC should be installed such that it can rapidly respond to heat convected and / or radiated from any source. In general it should be between 150mm and 200mm vertically above the cables that are to be protected.

#### **Horizontal Cables:**

- 2.3 Generally one run of LHDC should be provided centrally above each level of tray or ladder rack with a further run of cable below the bottom level.
- 2.4 On short lengths of vertical racking used for carrying cable between horizontals, the LHDC shall be located across the top of the rising group of cables in a similar manner to the horizontal racks / trays.

#### **Vertical Cables:**

- 2.5 The LHDC should be installed in a zig zag pattern across the cable tray or ladder racking, typically at an angle of 45° up the full length of the cables.

### 3. Special Guidelines for Space Protection on Ceilings:

In addition to the recommendations in 1-13 above, the following should also be observed:

- 3.1 The LHDC should in general be spaced on the ceiling above the area to be monitored such that in accordance with BS5839 Part 1, the cable is no more than 5.3 metres away from any zone boundary or wall and no more than 10.6m between adjacent runs. (Local Standards may vary)
- 3.2 The LHDC should not transverse other zones to reach control equipment or end of line units, an interposing cable should be used.
- 3.3 The LHDC should be installed such that it is between 25mm and 150mm from the ceiling.

### 4. Heat/Flame Test (Non-hazardous areas)

To test correct response to a true alarm condition, an extra length of Resettable Analogue LHDC (approx. 2-3m) should be accessible, apply heat or flame to the test length to generate an alarm.

**This must not be carried out in a hazardous areas.**

#### **NOTE**

The above are general recommendations for guidance only, there may be conditions at site or client requirements where some of the above criteria need to be varied.

#### **Contact Details:**

Patol Limited  
Archway House, Bath Road,  
Padworth, Reading,  
Berkshire  
RG7 5HR  
Tel: +44 (0)1189 701 701  
Fax: +44 (0)1189 701 700  
Email: [info@patol.co.uk](mailto:info@patol.co.uk)  
Web: [www.Patol.co.uk](http://www.Patol.co.uk)