Fibre Optic Linear Heat Detection
Optimum Safety in Tunnels and Special Hazard Buildings

DE.TECT® LHD3
Linear Heat Detector for Fire Detection

LIOS DE.TECT is the state of the art fire detection system to provide optimum safety for fire detection in tunnels and other special hazard areas due to its ability to cope with extreme environmental conditions.

Rising demand for fire surveillance in facilities like rail and service tunnels, cable routes and ducts, storage facilities and warehouses or conveyor belts and many other special hazard facilities motivated LIOS Technology to offer a measuring system tailor-made for these industrial applications.

A single evaluation unit of the DE.TECT series provides fast and spatially well-resolved fire detection along optical fibres with ranges of up to 10km per channel.

Technical Highlights

- Linear heat detector for quick fire detection and precise localization of the fire source
- Alarm and pre-alarm for each zone
- Selectable alarm and pre-alarm criteria
- High spatial resolution – down to 0.25 m
- Signal processing based on OFDR-Technology (Optical Frequency Domain Reflectometry)
- Available with 1, 2 and 4 channels
- 1000 free programmable zones for each channel
- Information regarding magnitude and the direction of the fire spread
- Redundant sensor system applicable
- Suitable for wind speeds of up to 10 m/s
- Laser product class 1M according DIN EN 60825-1
- VdS approval prEN 54-22 G 211030
- UL approval S25135

Road and Railway Tunnels ▪ Conveyor Belts ▪ Mining ▪ Service Tunnels ▪ Cable Ducts ▪ Storage Facilities ▪ Warehouses ▪ and many other Special Hazard Facilities
**DE.TECT LHD models – LINEAR HEAT DETECTION**

<table>
<thead>
<tr>
<th>Model Type</th>
<th>Sensor Cable Options</th>
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</thead>
<tbody>
<tr>
<td>1 channel models</td>
<td>1, 2, 4, 6, or 10 km sensor cable (distance range)</td>
</tr>
<tr>
<td>2 channel models</td>
<td>1, 2, 4, 6, or 10 km sensor cable per channel</td>
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<tr>
<td>4 channel models</td>
<td>1, 2, 4 or 6 km sensor cable per channel</td>
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**Mechanical data**

- **Controller**: 19” Rack / 3 units of height
- **Dimensions (H x W x D)**: 13.5 x 44.9 x 29 cm
- **Colour**: grey
- **Weight**: 13kg

**Electrical data**

- **Operating voltage (DC Controller)**: DC 12 … 48 V
- **Mains voltage (AC Controller)**: AC 100 … 240 V
- **Power consumption (DC Controller)**: <25W (max. 45 W/60°C)
- **Programmable inputs**: 4 (optional up to 40)
- **Programmable outputs (potential-free)**: 12 (optional up to 106)
- **Communication interfaces**: LON, TCP/IP, Modbus, RS232, USB

**Optical data**

- **Fibre Type**: Gradient index 62.5/125 μm multimode
- **Optical connector**: E2000 / APC
- **Laser classification**: Class 1M (EN60825-1)

**Environmental conditions**

- **Storage temperature**: -35 … +75 °C
- **Operating temperature**: -10 … +60 °C
- **Humidity (non condensing)**: ≤95 % rel.
- **Protection class (IEC 60529)**: IP51

**Approvals**

- VdS (pr EN 54-22): G 211030, response classes A1N, BN, CN
- UL: S25135