

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 to 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

1 channel models	1, 2, 4, 6, or 10 km sensor cable (distance range)
2 channel models	1, 2, 4, 6, or 10 km sensor cable per channel
4 channel models	1, 2, 4 or 6 km sensor cable per channel

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



The New Standard in Modern Fire Detection

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