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.

www.de-tect.pro

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: 2007
- VdS approval prEN 54-22 G 211030
- UL approval (in progress)

Road and Railway Tunnels ▪ Conveyor Belts ▪ Mining ▪ Service Tunnels ▪ Cable Ducts ▪ Storage Facilities ▪ Warehouses ▪ and many other Special Hazard Facilities

DE.TECT

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: 2007)

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	In progress

CE VdS G211030 AEO VdS •ISO 9001 •approved products

LIOS TECHNOLOGY

Deloitte. Deloitte Cert Umweltgutachter GmbH Certified DIN EN ISO 14001 Registration No. Z1084 IEC IECEE TÜVRheinland DE 2-015165

The New Standard in Modern Fire Detection

LIOS Technology GmbH – Linear Optical Sensors
Schanzenstrasse 39 / Building D9-D13
51063 Cologne, Federal Republic of Germany
Phone +49 221 99887-0 / Fax +49 221 99887-150
info@lios-tech.com / www.lios-tech.com