TASC

Product Sheet

Reference: LHD-FO
Type: F.O. Linear Heat Detection
Distributor: T.A.S.L., S.L.

FIBER OPTIC LINEAR HEAT DETECTION (LHD-FO).

System Features: The Fiber Optic Linear Detection Technology enables the best coverage for fire detection in a wide range of applications. Conventional technology often fails to provide a reliable and cost-effective protection solution. Forced by conditions, conventional detectors tend to result in false alarms and often lead to significant disbursements in maintenance. The **Fiber Optic Linear Detection System** is designed to minimize operating costs and to operate with maximum reliability even in adverse conditions, Cable technology is long lasting, and maintenance-free. Imagine thousands of detection points just by installing a simple cable. Immunity to electromagnetic Interferences. Fire surveillance, not just detection. Surveillance even in case of cutting. Up to 256 alarm zones and up to 5+2 alarm parameters per zone. Easy integration into your management system. ModbusTCP communication protocol (option-060), SCPI. Relay board included (4 inputs, 44 outputs), PC connection via USB, Ethernet (LAN), etc...

• DTS System Specifications – Main Features:

	N4387B-001	N4387B-002	N4387B-004	N4387B-006	N4387B-008	N4387B-010
Range Distance and Redundancy	1, 2 or 4 Channels - up to 1km per channel (max. 4km) Loop Config., max. 2 loops of 1 km (total 2 Km)	1, 2 or 4 Channels - up to 2km per channel (max. 8km) Loop Config., max. 2 loops of 2 km (total 4 Km)	1, 2 or 4 Channels - up to 4km per channel (max. 16km) Loop Config., max. 2 loops of 4 km (total 8 Km)	1, 2 or 4 Channels - up to 6km per channel (max. 24km) Loop Config., max. 2 loops of 6 km (total 12 Km)	1 or 2 Channels - up to 8km per channel (max. 16km) Loop Config., max. 1 loop of 8 km (total 8 Km)	1 Channel-up to 10km per channel (max. 10km) Loop Config.: NO
Sampling interval	Minimum 0.5m					
Spatial resolution	Minimum of 1 m. (0.5 m) up to 8.0 m. (adjustable)					
Temperature accuracy	+ / - 0.5ºC					
Measuring time interval	Minimum of 10 sec to 30 s (adjustable), per channel					
Available measurement modes	Individual end (open loop, can be done with 1 channel or with 2 channels, depending on installation requirement). Double end (closed loop, requires 2-channel option "additional channel code N4387B-200").					
Laser class (IEC 60825-1:2001)	Class type 1M (view safe). In case of cable cutting and when exposed by the operator to eye contact, it would not be damaged.					
Laser Power Output	<20 mW. In case of cable cut, there is no risk of explosion.					
Fire Certification	European: VdS certification "EN54-Part 5 A1/A2 as Heat Detector and EN54-part 22 Linear Heat Detector. USA: UL521, FM, CANADA: ULC S530					
ATEX Certification	EX II (1) GD; I M2					
Maximum Detection of Temp.oC	<1000ºC in a short period, < 750ºC for 2 hours TEST IEC 60331-25. It allows to accompany the progression of the fire.					
Number of Programmable Zones	Up to 256 for each channel, freely programmable individually (5+2 Detection criteria per zone).					
Fiber break detection	Yes.					
Fire detection criteria	5 different criteria for fire detection: (+ 2 optional negative temp detection criteria) - 1º- Maximum temperature at ºC 2º- Average Temperature ºC in zone and - 3º- 3 Temperature gradients (temperature increase over time "thermovelocimetry")					

• Interfaces and connections:

Optical Connector	E2000 APC 8º angle
Number of channels	1 (N4387B-100), 2 (N4387B-200) or 4 (N4387B-400)
Interface	USB, Ethernet (LAN) / External Interface RS232, 422/485
Communication protocol	SCPI, Modbus TCP/IP (Option N4387B-060)
Relays	4 inputs and 44 outputs (potential-free output contacts) / Possibility of up to 256 relay outputs.
Power supply	10 V to 30 VDC 2 Amp
Power consumption	15 W, at 20 ºC environment temperature; Max. 40 W (under full operating conditions)

• Housing and environmental conditions:

Operating temperature range	-10 to +60 ºC (2-channel option: -5 to +60 ºC)
Storage temperature range	-40 to +80 ºC
Operating Humidity Range	0% to 95% n.c. (2-channel option: 15% to 85% n.c.) non-condensing
Dimensions (H x W x D)	88 x 448 x 364 mm (for 19" rack mount, use 2 units height.)
Weight	9 kg
Option with IP Housing 66	IP 66 enclosure for installation of DTS instrument outdoors (Box Code IP 66 "N438XX-HW2D")

• F.O. Cable Information:

	Metal Free Cable (MFC)	Steel Tube Cable (STC)
Construction	FRNC Outer Coverage / Aramid Tube / Damping crown	FRNC Outer Coverage / Stainless Steel Wire Crown. / Steel tube
fibre	MM 50/125 mm [MM 62.5/125om]	MM 50/125 mm [MM 62.5/125 m]
Cable Ø	4.0 mm	3.8 mm
weight	17 kg/km	25 kg/km
Minimum radius of curvature	20xD mm (with tensile) / 15xD mm (without tensile)	20xD mm (with tensile) / 15xD mm (without tensile)
Max impact resistance	100 N/cm	960 N/cm
Resistance max. voltage	1000 N (short term) / 800 N (long term)	1500 N (short term) / 1100 N (long term)
Operating temperature	-40 to +85 ºC	-40 to +85 ºC
Storage temperature	-40 to +70 ºC	-40 to +70 ºC