

LHS™

Linear Heat Sensor



A UTC Fire & Security Company



F-73-05

FEATURES

- Fixed Temperature Digital Heat Detector
- Five Alarm Temperatures Available - 68°C, 85°C, 105°C, 176°C and 240°C
- Compatible with All Fire Control Panels
- Connect Directly to Initiating Circuit
- Cost-Effective Solution for Hazardous Locations
- Ideal for Use in Applications Where Spot-Type Heat Detectors are Unsuitable
- Fire Zone Location Using LHS with FenwalNET™ 2000 Control Panel
- FM Approved

DESCRIPTION

The LHS™ Linear Heat Sensor cable is a flexible, durable and cost-effective fixed-temperature fire detector, suitable for protecting a wide range of commercial and industrial fire applications.

LHS is a small diameter cable capable of detecting heat from a fire over its entire length. The sensor cable consists of a twisted pair of 19 AWG copper coated steel conductors covered by a temperature sensitive insulation, and protected by either a plastic braid or jacket for various environmental applications.

The LHS Linear Heat Sensor is Factory Mutual Approved and is designed for open area as well as proximity detection. A wide range of jackets and operating temperatures are available for proper system design, including confined areas or harsh environments which prohibit the use of other forms of detection. LHS is compatible with any fire control panel that is capable of accepting contact closure type initiating devices.

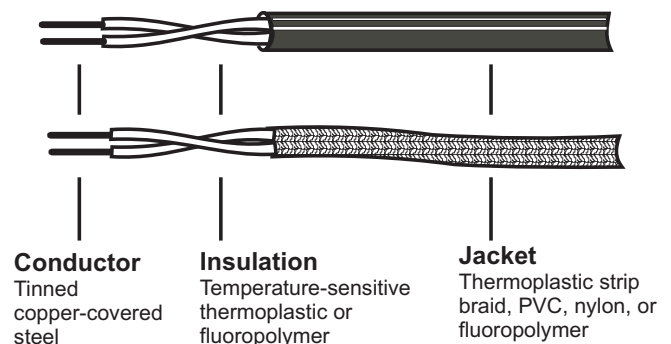
APPLICATIONS

- Open Area Protection
- Belt Conveyers
- Tunnels
- Aircraft Hangars
- Cable Trays
- Floating Roof Tanks
- Classified Hazardous Areas (when used with intrinsic safety barriers)



OPERATION

The heat from a fire causes the LHS cable's special insulation to melt at a specific temperature, allowing the two conductors to short together, thus creating an alarm condition on the fire control panel. The LHS cable may also be used as a stand-alone contact device. The LHS normal operating state is an open circuit. For installation details refer to "LHS Installation Instructions" (73.201).



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FIRE ZONE LOCATION WITH LHS

An Intelligent Linear Heat Detection System is recommended for applications where fire zone location requires zone output control for notification appliances, HVAC control, suppression control and annunciation. In this system, each discrete addressable LHS cable zone will report an individual alarm to the FenwalNET 2000 fire control panel.

Addressable LHS cable zones are created by attaching each LHS cable zone to an Addressable Input module (P/N 70-407008-001). Each discrete LHS cable zone location can be displayed on the FenwalNET 2000 panel 80-character LCD display with programmable text zone description. Up to 255 devices (any mix of devices including smoke detectors, manual pull stations, waterflow switches, LHS zones, etc.) can be connected to a single FenwalNET 2000 addressable loop.

Installing an Intelligent Linear Heat Detection System results in substantial installation cost savings over traditional hard-wired linear heat detection systems.



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SPECIFICATIONS

Part Number	73-200000-001	73-200000-011	73-200000-002	73-200000-012	73-200000-003	73-200000-004	73-200000-005
Alarm Temperature	155°F (68°C)	155°F (68°C)	185°F (85°C)	185°F (85°C)	220°F (105°C)	350°F (176°C)	465°F (240°C)
Ambient Storage Temp. **	Up to 113°F (45°C)	Up to 113°F (45°C)	Up to 113°F (45°C)	Up to 113°F (45°C)	Up to 158°F (70°C)	Up to 221°F (105°C)	Up to 392°F (200°C)
Min. Installation Temp.	5°F (-15°C)	5°F (-15°C)	5°F (-15°C)	5°F (-15°C)	32°F (0°C)	32°F (0°C)	-4°F (-20°C)
Min. Operating Temp. *	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-22°F (-30°C)	-40°F (-40°C)	-58°F (-50°C)
Application	Indoor Only	Indoor/Outdoor	Indoor Only	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor
Approved Spacing	20 ft. (6 m) maximum	20 ft. (6 m) maximum	20 ft. (6 m) maximum	20 ft. (6 m) maximum	20 ft. (6 m) maximum	Proximity Detection	Proximity Detection
Flame Detection	5 seconds (max)	5 seconds (max)	5 seconds (max)	5 seconds (max)	12 seconds (max)	20 seconds (max)	20 seconds (max)
Outer Jacket Material	Polypropylene Braid	Nylon	Polypropylene Braid	Nylon	PVC	PVC	FEP
Outer Jacket Color	Red/Green Tracer	Black Marked H8040N	Red/Black Tracer	Black Marked H8045N	Black	Red	White
Conductor Insulation	EVA	EVA	EVA	EVA	Polythene	Polypropylene	FEP
Conductor Color	1 Black 1 Red	1 Black 1 Red	1 Black 1 Red	1 Black 1 Red	1 Black 1 Red	1 Black 1 Black/White	1 Black 1 White
External Diameter	0.146 inch (3.7 mm)	0.132 inch (3.35 mm)	0.146 inch (3.7 mm)	0.132 inch (3.35 mm)	0.167 inch (4.25 mm)	0.171 inch (4.35 mm)	0.138 inch (3.5 mm)
Electrical Rating	1 Amp maximum, 110 Vdc maximum						
Conductor Resistance	30.48 ohms/1000 ft. @ 68°F (100 ohms/1000 m) @ 20°C						
Conductor Capacitance	20.21 pF/ft. (66.32 pF/m)	20.21 pF/ft. (66.32 pF/m)	25.42 pF/ft. (83.41 pF/m)	25.42 pF/ft. (83.41 pF/m)	19.96 pF/ft. (65.48 pF/m)	17.52 pF/ft. (57.48 pF/m)	19.22 pF/ft. (63.07 pF/m)
Insulation Rating	1000 megohm per 3280 ft. (1000 m) after 1 minute @ 500 Vdc Minimum						
Weight	11.29 lb./1000 ft. (16.8 kg/km)	10.65 lb./1000 ft. (15.85 kg/km)	11.29 lb./1000 ft. (16.8 kg/km)	10.65 lb./1000 ft. (15.85 kg/km)	15.25 lb./1000 ft. (22.7 kg/km)	12.67 lb./1000 ft. (18.85 kg/km)	14.65 lb./1000 ft. (21.8 kg/km)

* When not subjected to vibration

** Do not store in direct sunlight

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