

# LHS™ Linear Heat Sensor Cable



## Fixed Temperature Digital Heat Detector

Effective: January 2026  
K-73-201 Rev. AF

### FEATURES

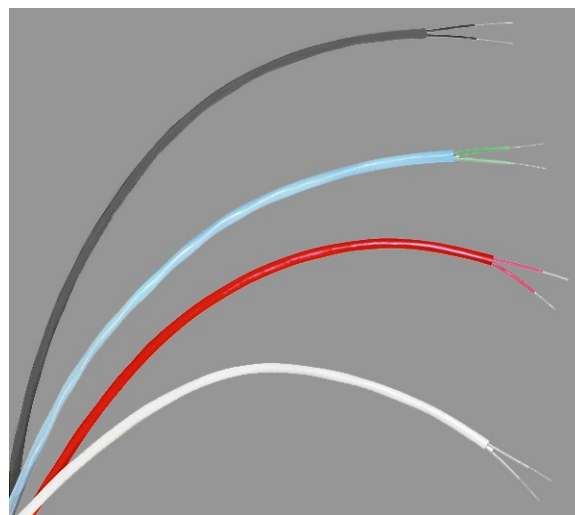
- **Alarm Temperatures Available: 155°F (68°C), 190°F (88°C), 220°F (105°C), 356°F (180°C)**
- **Compatible with Fire Alarm Control Units (FACUs) That Are Capable of Accepting Contact Closure Initiating Devices**
- **Connects Directly to Initiating Circuit**
- **Can Also Attach to a SmartOne® Addressable Input Module on a Kidde Fire Systems intelligent control unit**
- **Ideal for Many Different Applications Across Numerous Industries**
- **Cost-Effective Solution for Hazardous Locations**
- **Suitable for Use with Intrinsic Safety Barriers**
- **Ideal for Use in Applications Where Spot-Type Heat Detectors are Unsuitable**
- **Distance Marking on cable every meter**
- **Low resistance maximizes sensor length on detection loop**
- **UL Listed, cUL Listed and FM Approved**
- **CSFM Approved**

### DESCRIPTION

LHS Linear Heat Sensor cable is a flexible, durable and cost-effective fixed-temperature heat detector, suitable for protecting a wide range of commercial and industrial fire applications. LHS is a small diameter cable available in a wide range of operating temperatures for your system design, including confined areas or harsh environments which prohibit the use of other forms of detection.

The sensor cable is comprised of two bi-metallic conductors individually insulated with a heat sensitive polymer. The insulated conductors are twisted together to impose a spring pressure between them, then wrapped with a protective tape and finished with an outer jacket suitable for the environment in which the detector will be installed. LHS is available with an "EPC" polyvinyl chloride jacket for multi-purpose/commercial and industrial applications or with an "XCR" fluoropolymer jacket (resistant to abrasion and chemicals) for high performance/industrial applications.

LHS is a fixed temperature digital sensor and is therefore capable of initiating an alarm once its rated activation temperature is reached. At the rated temperature, the heat sensitive polymer insulation yields to the pressure upon it, permitting the inner conductors to move into contact with each other thereby initiating an alarm signal. This action takes place at the first heated point anywhere along the detector's length. It does not require a specific length to be heated in order to initiate an alarm, nor system calibration to compensate for changes in the installed ambient temperature.

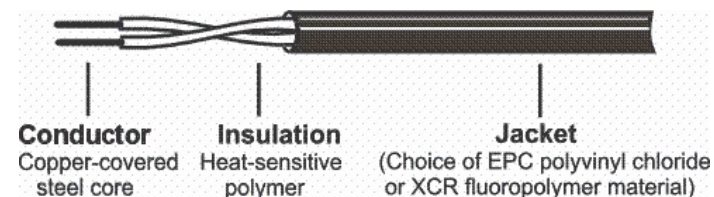


LHS cable is Underwriters Laboratories Listed (including Canadian UL), Factory Mutual Approved and California State Fire Marshal Approved. The cable is designed for open area as well as proximity detection, with the only exception being 356°F use with FM applications (which is intended for proximity use).

When used as a stand-alone contact device, LHS is compatible with any fire alarm control unit that is capable of accepting contact closure type initiating devices. The LHS normal operating state is an open circuit. Alternatively, addressable LHS cable zones may be created by attaching each LHS cable zone to a Kidde Fire Systems SmartOne® Addressable Input module connected to a Kidde Fire Systems intelligent control unit (such as ARIES®-SLX or ARIES®-MLX).

### 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 FACU. For installation details, refer to Installation Instructions, P/N 06-237418-001, included with the LHS packaging and also available on the Kidde Fire Systems Distributor Extranet site.



#### WARNING:

**It is the responsibility of the installer to confirm prior to installation, and during subsequent inspections, that the LHS cable selected is appropriate for use in the particular application and environment for both Alarm Temperature and Max. Ambient Temperature ratings.**

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## APPLICATIONS

LHS Linear Heat Sensor cable has many useful applications across multiple industries, based on the selection of either XCR or EPC outer jackets.

### POWER GENERATION:

- **Cable Tray (XCR jacket type)**
- **Cooling Towers (XCR jacket type)**
- **Solar Panels (XCR jacket type)**
- **Switch Gear and Electrical (XCR jacket type)**

### WAREHOUSING & COLD STORAGE:

- **Self Storage Units (EPC jacket type)**
- **Cold Storage (EPC jacket type)**

### TRANSPORTATION:

- **Airports (XCR jacket type)**
- **Metro Stations (XCR jacket type)**
- **Subways (XCR jacket type)**
- **Railway Bridges (XCR jacket type)**
- **Vehicle Systems (XCR jacket type)**
- **Escalators (XCR jacket type)**
- **Rolling Stock (XCR jacket type)**
- **Elevators (XCR jacket type)**
- **Marine Vessels (XCR jacket type)**
- **Roadway Tunnels (XCR jacket type)**
- **Car Parks and Parking (EPC jacket type)**

### OIL/GAS:

- **Offshore Platforms (XCR jacket type)**
- **Pipelines (XCR jacket type)**
- **Refineries (XCR jacket type)**
- **Storage Tanks (XCR jacket type)**

### MINING & MATERIAL PROCESSING:

- **Conveyors (XCR jacket type)**
- **Heavy Equipment (XCR jacket type)**
- **Waste Management (XCR jacket type)**

### NEW CONSTRUCTION: (EPC jacket type)

### RENOVATION: (EPC jacket type)

### UNIQUE APPLICATIONS:

- **Animal Housing (EPC jacket type)**
- **Covered Bridges (EPC jacket type)**
- **Distilleries (EPC jacket type)**
- **Glove Boxes (XCR jacket type)**

## INTRINSIC SAFETY BARRIERS

The application of LHS in areas with potentially explosive vapors, dust or fibers, requires the use of Intrinsic Safety Barriers which limit the total energy entering the classified hazardous area. Intrinsic safety barriers achieve this by limiting the transfer of energy in one direction to a level that cannot cause ignition of explosive atmospheres. To determine if the need for an intrinsically safe circuit exists on a specific application, consult the National Electric Code and the local Authority Having Jurisdiction (AHJ).

Kidde Fire Systems offers 1-channel shunt-diode Safety Barriers and multi-barrier enclosures suitable for 5 or 13 barriers:

Part Number	Description
73-117068-302	Intrinsic Safety Barrier for Intelligent LHS (need one per circuit).
73-117068-132	Intrinsic Safety Barrier Weather-tight Enclosure. Holds up to 5 barriers.
73-117068-133	Intrinsic Safety Barrier Weather-tight Enclosure. Holds up to 13 barriers.

## 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 Kidde Fire Systems intelligent fire alarm control unit.

Addressable LHS cable zones are created by attaching each LHS cable zone to a Kidde Fire Systems SmartOne® Addressable Input (AI) module. Each discrete LHS cable zone location can be displayed on the panel 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 Signaling Line Circuit (SLC) loop.

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

## SPECIFICATIONS & ORDERING INFORMATION

Model Names	Description	656 ft (200 meter) Length Part Number	3280 ft (1000 meter) Length Part Number
LHS-155-EPC	<b>Regular</b> 155° F (68°C) Fixed Temperature Heat Sensitive Cable with flexible Polyvinyl Chloride outer jacket, red Maximum recommended ambient temperature: 115°F (46°C)	73-515502-001	73-515510-001
LHS-190-EPC	<b>Intermediate</b> 190°F (88°C) Fixed Temperature Heat Sensitive Cable with flexible Polyvinyl Chloride outer jacket, white Maximum recommended ambient temperature: 150°F (65°C)	73-519002-001	73-519010-001
LHS-220-EPC	<b>Intermediate</b> 220°F (105°C) Fixed Temperature Heat Sensitive Cable with flexible Polyvinyl Chloride outer jacket, gray Maximum recommended ambient temperature: 175°F (79°C)	73-522002-001	73-522010-001
LHS-356-EPC	<b>Extra High</b> 356°F (180°C) Fixed Temperature Heat Sensitive Cable with flexible Polyvinyl Chloride outer jacket, blue Maximum recommended ambient temperature: 221°F (105°C)	73-535602-001	73-535610-001
LHS-155-XCR	<b>Regular</b> 155° F (68°C) Fixed Temperature Heat Sensitive Cable with Fluoropolymer outer jacket, red Maximum recommended ambient temperature: 115°F (46°C)	73-615502-001	73-615510-001
LHS-190-XCR	<b>Intermediate</b> 190°F (88°C) Fixed Temperature Heat Sensitive Cable with Fluoropolymer outer jacket, white Maximum recommended ambient temperature: 150°F (65°C)	73-619002-001	73-619010-001
LHS-220-XCR	<b>Intermediate</b> 220°F (105°C) Fixed Temperature Heat Sensitive Cable with Fluoropolymer outer jacket, gray Maximum recommended ambient temperature: 175°F (79°C)	73-622002-001	73-622010-001
LHS-356-XCR	<b>Extra High</b> 356°F (180°C) Fixed Temperature Heat Sensitive Cable with Fluoropolymer outer jacket, blue Maximum recommended ambient temperature: 221°F (105°C)	73-635602-001	73-635610-001

## ADDITIONAL INFORMATION

<b>Listings</b>	UL, FM, ULC, CSFM	
<b>Electrical</b>	Rated for 30 VAC, 42 VDC	
<b>Maximum Spacing:</b>		
Regular 155°F	FM: 30 x 30 ft (9.1 x 9.1 m)	UL, ULC: 50 x 50 ft (15.2 x 15.2 m)
Intermediate 190°F:	FM: 30 x 30 ft (9.1 x 9.1 m)	UL, ULC: 50 x 50 ft (15.2 x 15.2 m)
Intermediate 220°F:	FM: 25 x 25 ft (7.6 x 7.6 m)	UL, ULC: 50 x 50 ft (15.2 x 15.2 m)
Extra High 356°F:	FM: Proximity Only (Not intended for open area use)	UL, ULC: 50 x 50 ft (15.2 x 15.2 m)

## CABLE MARKINGS

COLOR	COMPANY NAME	PART NUMBER	DEVICE TYPE	FACTORY MUTUAL MARK	FIXED (TRIP) TEMPERATURE	UNDERWRITERS LABORATORIES INC. MARKINGS	UL CONTROL NUMBER	DO NOT PAINT	LOT NUMBER	DISTANCE MARKER (METERS)	MARKING INK COLOR
RED	KIDDE FIRE SYSTEMS	LHS-155-XXX	LINEAR HEAT SENSOR	◀ FM ▶	68°C/155°F	c(UL)us LISTED	931G	DO NOT PAINT	LOT NO. XXXXXXX-XXXXX		BLACK
WHITE	KIDDE FIRE SYSTEMS	LHS-190-XXX	LINEAR HEAT SENSOR	◀ FM ▶	88°C/190°F	c(UL)us LISTED	931G	DO NOT PAINT	LOT NO. XXXXXXX-XXXXX		BLACK
GRAY	KIDDE FIRE SYSTEMS	LHS-220-XXX	LINEAR HEAT SENSOR	◀ FM ▶	105°C/220°F	c(UL)us LISTED	931G	DO NOT PAINT	LOT NO. XXXXXXX-XXXXX		BLACK
BLUE	KIDDE FIRE SYSTEMS	LHS-356-XXX	LINEAR HEAT SENSOR	◀ FM ▶	180°C/356°F	c(UL)us LISTED	931G	DO NOT PAINT	LOT NO. XXXXXXX-XXXXX		BLACK

LETTERING SIZE 0.062" HIGH MIN.

MARKING TO REPEAT EVERY 1.0 METER.

XXX – REPLACED WITH EPC WHEN PVC OUTER JACKET APPLIED

XXX – REPLACED WITH XCR WHEN FLUOROPOLYMER OUTER JACKET APPLIED

## INSTALLATION GUIDELINES

LHS may be installed in a wide range of industrial and commercial fire detection applications. Please refer to the National Fire Alarm and Signaling Code, NFPA 72 in the United States for installation and spacing requirements. In Canada, the heat detectors are to be installed in accordance with the Standard of Installation of Fire Alarm Systems, CAN/ULC-S524; National Building Code of Canada; and National Fire Code of Canada.

For special applications where the detector is installed close to the hazard, the manufacturer's recommendations and/or installation instructions should be followed. Whenever there is a choice between two or more possible installation procedures, the one that results in increased protection should be utilized.

**LHS is sensitive to heat and must be stored in areas where the temperature will NOT exceed 115 degrees F (46 degrees C).** LHS must not be installed in contact with, or in proximity to, any heat-producing equipment or environment that exceeds its maximum ambient installation temperature.

Exposure to direct sunlight may expose the detector to temperatures in excess of the rated maximum ambient or cause false actuation of the device. **Outdoor use of 155° F (68° C) rated detectors is not recommended.**

Each length of LHS is individually tested for operational integrity prior to shipment from the factory. Because LHS is a heat-activated device, it is possible that if proper precautions are not taken to avoid high ambient temperatures during shipment or storage, the wire could be activated (shorted) before it is installed. It is recommended that every coil or spool of wire be inspected by the customer to verify the type and temperature is as ordered, and then tested for shorts prior to installation.

LHS is not fragile, however, pinching or crushing will damage it. Physical damage to the detector may or may not be apparent during the installation process. Damage to the outer jacket or unnecessary mechanical stress applied to the detector during installation will likely result in "false" alarms.

- DO NOT leave LHS sensor wire on the floor. Take care not to walk on it or set ladders on it during installation.
- DO NOT install LHS with commercial fasteners unless specially approved.
- DO NOT place it where it will be subject to mechanical damage by equipment processes.
- DO NOT over-tighten the fasteners, as this may breach the outer jacket or crush the inner insulation causing "false alarms." All fasteners must allow the wire to expand and contract with temperature changes.
- DO NOT overstretch the wire runs; some wire "sag" between fasteners is normal.
- DO NOT MAKE NINETY DEGREE (90°) BENDS. All bends should be made using the fingers without holding the wire with pliers and consist of rounded turns with a minimum 2.5 inch (6.4 cm) radius.
- DO NOT USE WIRE NUTS. All connections must be made via terminals and/or approved splicing devices.
- DO NOT PAINT per UL and FM requirements.

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