LHS™ Linear Heat Sensor Cable

Kidde Fire Systems

FEATURES

- *Fixed Temperature Digital Heat Detector*
- *Alarm Temperatures Available: 155°F, 190°F, 220°F, 356°F*
- *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 any Kidde intelligent control unit*
- *UL Listed, cUL Listed and FM Approved*
- *CSFM Approved*
- *Distance Marking on cable every meter*
- *Low resistance maximizes sensor length on detection loop*
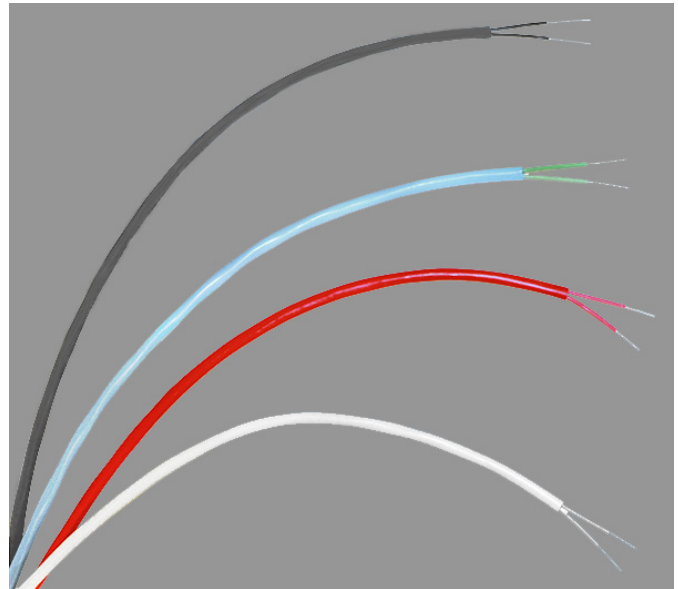
DESCRIPTION

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 copper coated steel conductors covered by a temperature sensitive insulation.

The LHS Linear Heat Sensor cable is Underwriters Laboratories Listed, Factory Mutual Approved and California State Fire Marshal Approved. The cable is designed for open area as well as proximity detection. A wide range of 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.

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 see "LHS Installation Instructions".

Conductor
Tinned copper-covered steel

Insulation
Temperature-sensitive thermoplastic or fluoropolymer

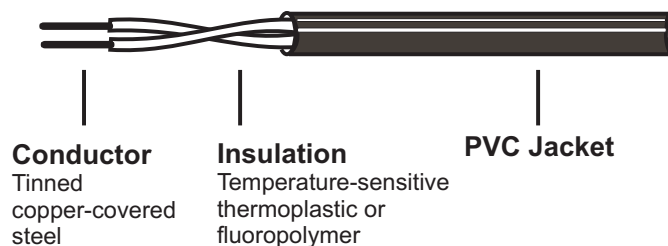**PVC Jacket**

APPLICATIONS

- Open Area Protection
- Belt Conveyers
- Tunnels
- Aircraft Hangars
- Cable Trays
- Floating Roof Tanks
- Classified Hazardous Areas (when used with intrinsic safety 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 intelligent fire control panel.

Addressable LHS cable zones are created by attaching each LHS cable zone to a Kidde Fire Systems SmartOne Addressable Input 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.
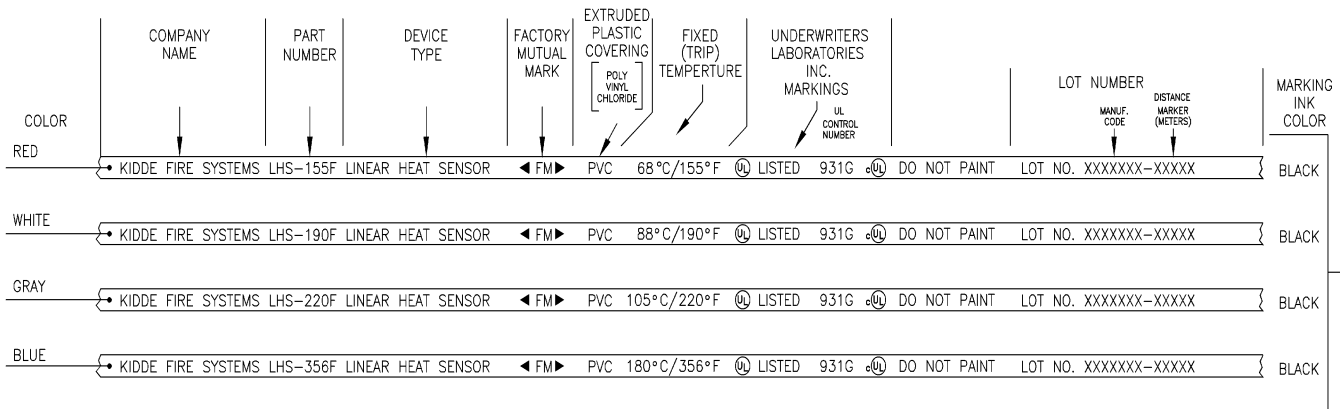
GENERAL LHS CABLE SPECIFICATIONS

- **Rated Activation Temperature Tolerance:** ± 5%
- **Min. Installation operating temperature:** -4 °F
- **Application:** Indoor/Outdoor
- **Outer Jacket Material:** PVC
- **Conductor Material:** Tinned copper clad steel
- **External Diameter Typical:**
  0.15" nominal (3.8 mm nominal)
- **Conductor Diameter:** 0.035" nominal (8.9 mm nominal)

- **Outer sheath Thickness:**
  0.020" nominal (0.5 mm nominal)
- **Tensile Strength:** 245K PSI/Conductor
- **Bend Radius (Minimum):** 2.5 inches (63.5 mm)
- **Weight nominal per length:** 0.016 lbs/ft (24 grams/m)
- **Conductor Resistance at 20 °C (max):**
  0.058 ohms/ft 2 conductor

Table 1: Individual LHS Sensor Cable Specification

	LHS-155F	LHS-190F	LHS-220F	LHS-356F
656 ft (200 M) length roll P/N	73-515502-001	73-519002-001	73-522002-001	73-535602-001
3,280 ft (1000 M) length roll P/N	73-515510-001	73-519010-001	73-522010-001	73-535610-001
Rated Activation Temperature	155 °F (68 °C)	190 °F (88 °C)	220 °F (105 °C)	356 °F (180 °C)
Max Recommended Ambient Temperature	115 °F	150 °F	175 °F	221 °F
Outer Jacket Color	Red	White	Grey	Blue
Listings	FM, UL, cUL	FM, UL, cUL	FM, UL, cUL	FM, UL, cUL
Approved Max Spacing				
UL	50 ft/15.2m	50 ft/15.2m	50 ft/15.2m	50 ft/15.2m
FM	30 ft/9.1m	25 ft/ 7.6m	25 ft/ 7.6m	proximity only

Figure 1. LHS Cable Markings, Marking Repeated Every Meter

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