

## LINEAR HEAT DETECTION CABLE

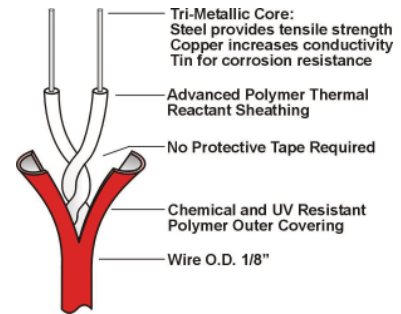
### DESCRIPTION

Linear heat detection (LHD) cable is a combination of advanced polymer and digital technologies that can detect heat anywhere along its entire length.

At the core of LHD is a twisted pair of extremely low resistance (.05 ohm/ft [.164 ohms/m] per twisted pair) tri-metallic conductors, sheathed in new advanced thermal polymers. These polymers are chemically engineered to break down at specific fixed temperatures allowing the twisted conductors to make contact and initiate an alarm at the control panel without any calibration for changes in the ambient temperature. The distance locating option allows the ability to identify and display the exact location, in feet or meters from the control panel, where the heat source interacted with the detection cable.

The polymer used for the protective outer coating of LHD is chemically inert and UV protected. This allows for cable to be used in a wide variety of installations and types of hazards.

LHD cable is compatible with control panels by utilizing either addressable monitor modules on an intelligent system or connected directly into the detection circuit of a conventional panel which initiates a fire or fault condition to the control panel.



### SPECIFICATIONS

Diameter:	1/8" (3 mm)
Weight:	Nominal 15 lbs./1000 ft. (6.8 kg/305m)
Bend Radius:	3" (76 mm)
Max. Voltage Rating:	30 VAC, 42 VDC
Resistance:	.05 ohms/ft (.164 ohms/m)
Temperature Ratings:	155°F, 172°F, 190°F, 220°F (68°C, 78°C, 88°C, 105°C)
Min. Temperature Rating:	-40°F (-40°C)
Sheathing:	PVC - Corrosive and UV resistant lead and cadmium free Nylon - Abrasion resistant Rilsan® Nylon Polypropylene - Chemical resistant Stainless Steel Braid - Annealed 316 GuildWire - Stainless Steel 316, 20AWG

### APPROVALS

- UL
- C-UL-US
- FM
- CSFM
- MEA

### FEATURES

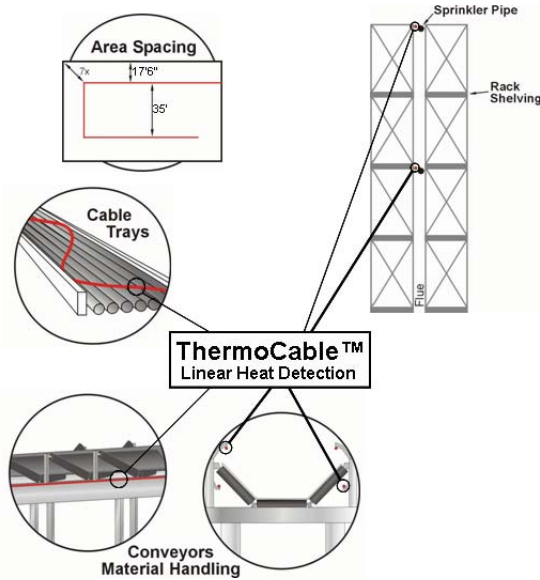
- As a contact closure initiating device, Fike approves up to 2,000 ft (609 m) of LHD cable per each Cheetah Xi, CyberCat intelligent input device, or SHP PRO initiating circuit
- Approved for up to 35 ft (10.7 m) spacing
- .05 ohms/ft (.164 ohms/m) resistance per twisted pair wire, lower than any other type of linear heat detection wire
- Lower Cost than other types of heat detection
- Compatible with all Fike fire alarm and releasing panels
- Multiple Alarm temperatures: 155°F, 172°F, 190°F, 220°F (68°C, 78°C, 88°C, 105°C)
- Distance locating option available
- Multiple alarm temperatures can be mixed on the same zone
- Total zone length replacement unnecessary after alarm condition
- Longer standard spool lengths available: 500 ft, 1500 ft, 3000 ft (152 m, 457 m, 914 m)
- Nylon coated - for outdoor and harsh environments
- Polypropylene coated - for chemically harsh environments
- Guidewire for spans up to 250 ft (76 m) with supports at 15 ft (4.6 m) intervals

Form No. P.1.87.01-2

## APPLICATIONS

Use LHD where other types of detection are not practical or where exact location of the overheating condition must be known. LHD is ideal for the following applications:

- Switchgear
- In-Rack Freezer and cooler storage
- Archive and warehouse storage
- Elevator shafts
- Cooling towers
- Conveyors
- Cable Trays
- Cable spreading rooms
- Terminal Rooms
- Generators
- Tunnels
- Bridges
- Parking decks
- Engine Bays
- In Cabinet
- Motors/pumps/machinery
- Paint booths
- Mini storage facilities



## INSTALLATION

Linear Heat Detection (LHD) cable is approved as a heat actuated device for use on Fike fire alarm or releasing panels and is available in multiple temperature sensitivities. Please refer to our maximum ambient temperature for assistance in choosing the best wire for your environment. LHD cable must be installed in continuous runs (no T-Taps or branch lines). All systems must be installed per NFPA 70, NFPA 72, Fire Alarm Code Handbook, National Electrical Code, Factory Mutual and the Authority Having Jurisdiction. LHD cable can be installed for both area protection and local applications for faster response times.

Note: Refer to LHD cable installation and operation manual for complete installation instructions.

## OPTIONAL DISTANCE LOCATING

The distance locating option (P/N 63-1105) available for Fike's LHD cable system allows for identifying exactly where the overheating condition occurred anywhere on the total length of cable in a zone. Unit displays the distance from the module to the overheating condition both feet and meters. For additional details, refer to distance locating module data sheet.

Maximum Listed Spacing				
Fike P/N	Mfg. P/N	Temp. Rating	UL/C-UL-US	FM
63-1067	TC155	155°F (68°C)	35 ft. (10.7 m)	30 ft. (9 m)
63-1068	TC172	172°F (78°C)	35 ft. (10.7 m)	30 ft. (9 m)
63-1065	TC190	190°F (88°C)	35 ft. (10.7 m)	30 ft. (9 m)
63-1066	TC220	220°F (105°C)	35 ft. (10.7 m)	25ft (7.6 m)

Maximum Ambient Temperature			
Fike P/N	Mfg P/N	Maximum Ambient Install Temperature	Alarm Temperature
63-1067	TC155	Up to 113° F (45°C)	155°F (68°C)
63-1068	TC172	Up to 122°F (50°C)	172°F (78°C)
63-1065	TC190	Up to 158°F (70°C)	190°F (88°C)
63-1066	TC220	Up to 158°F (70°C)	220°F (104°C)

## LHD CABLE INSTALLATION ACCESSORIES

A wide range of mounting and installation accessories are available to ensure the ease of installation of Fike's LHD cable. Some of the items are cable ties, clamps, brackets, mounting clips, and junction boxes. The accessories ensure proper installation and reliability of the system. Only installation materials supplied or approved by Fike corporation should be used.

Linear Heat Detection (LHD) cable is also available with messenger wire when extra support is needed in certain applications. LHD is available in standard coating as well as nylon coating for outdoor applications and polypropylene coating for harsh chemical environments.



Double Loop Cable Tie



Splicing Block



Beam Clamp, Spring Steel  
(Clip Sold Separately)



L-Bracket



Cable Strain Relief Connector



Splicing Tape

## ORDERING INFORMATION

Fike P/N	Mfg. P/N	Description
<b>Accessories</b>		
63-1106	TC1050	Training CD (required with initial order only)
63-1069	TC1027C	Double Loop Cable Tie, Weather Resistant, for 3/4" to 2" Sprinkler Pipe (100 per pk)
63-1070	TC1028M	Double Loop Cable Tie, Weather Resistant, for 2 1/2" to 3 1/2" Sprinkler Pipe (1000 per pk)
63-1071	TC1029L	Loop Cable Tie, Weather Resistant, for 4" to 6" Sprinkler Pipe (50 per pk)
63-1072	TC1017C	Cable Tie Mount (for use with Single Loop Cable Tie TC1018) (100 per pk)
63-1073	TC1018M	Single Loop Cable Tie (for use with Cable Tie mount TC1017) (1000 per pk)
63-1074	TC1019	Cable Tie Mount Adhesive (for use with Cable Tie Mount TC1017)
63-1075	TC1012C	Cable Clip, Black nylon 6.6, 3/16" mounting hole (100 per pk)
63-1076	TC1034Q	Push Pin, Black nylon 6.6, (25 per pk)
63-1077	TC1013C	Cable Clip, Zinc Plated, 1/4" Mounting Hole (50 per pk)
63-1078	TC1014C	Beam Clamp, Spring Steel (100 per pk) (for use with 63-1075 & 63-1076 sold separately)
63-1079	TC1015L	Beam Clamp, Zinc Plated Steel (50 per pk)
63-1080	TC1016	L-Bracket
63-1081	TC1020C	Cable Tray Mounting Clip for thicknesses of 1/16-1/4" (100 per pk)
63-1082	TC1021C	Cable Tray Mounting Clip Assembly for thicknesses of 1/16-5/32" (100 per pk)
63-1083	TC1022C	Cable Tray Mounting Clip Assembly for thicknesses of 5/32-1/4" (100 per pk)
63-1084	TC1023C	1/8" Universal Mounting Clip Assembly (fits 1/8-1/4") (100 per pk)

ORDERING INFORMATION (CONTINUED)

Fike P/N	Mfg. P/N	Description
<b>Accessories (continued)</b>		
63-1085	TC1024C	1/16" Universal Mounting Clip Assembly (fits 5/16-1/2") (100 per pk)
13-0089	TC1030ZX	Zinc Threaded Eybolt (10 per pk)
13-0090	TC1031ZC	Zinc Plated Nut (100 per pk)
13-0092	TC1032C	Grommet (100 per pk)
63-1087	TC1011	Reel, Cable Dispensing
63-1088	TC1000	J-Box
63-1090	TC1002	HDJ-Box
63-1092	TC100	Cable Strain Relief Connector
63-1099	TC1005X	Splicing Block, 2 Point (10 per pack)
63-1100	TC1006	Sealant Tape (for weatherproof splices)
63-1101	TC1007	Splicing Tape, White
63-1102	TC1008	Splicing Tape, Red
63-1103	TC1009	Splicing Tape, Blue
63-1104	TC1010	Low Temp, Splicing Tape, Black
63-1105	APDL-Z1	Distance Locating Option
02-12343	TC4406	Intrinsic Safety Barrier (1 per zone)
13-0091	TC1033Z	Zinc Turnbuckle
<b>Cable Spools</b>		
63-1067	TC155	155° LHD Cable 500 ft spool
63-1107	TC155	155° LHD Cable 1500 ft spool
63-1108	TC155	155° LHD Cable 3000 ft spool
63-1118	TC155-500-N	155° LHD Cable w/Nylon Coating 500 ft. spool
63-1119	TC155-1500-N	155° LHD Cable w/Nylon Coating 1500 ft spool
63-1120	TC155-3000-N	155° LHD Cable w/Nylon Coating 3000 ft spool
63-1121	TC155-500-P	155° LHD Cable w/Polypropylene Coating 500 ft spool
63-1122	TC155-1500-P	155° LHD Cable w/Polypropylene Coating 1500 ft spool
63-1123	TC155-3000-P	155° LHD Cable w/Polypropylene Coating 3000 ft spool
63-1124	TC155-500-G	155° LHD Cable w/Guidewire 500 ft spool
63-1125	TC155-1500-G	155° LHD Cable w/Guidewire 1500 ft spool
63-1126	TC155-3000-G	155° LHD Cable w/Guidewire 3000 ft spool
63-1068	TC172	172° LHD Cable 500 ft spool
63-1109	TC172	172° LHD Cable 1500 ft spool
63-1110	TC172	172° LHD Cable 3000 ft spool
63-1127	TC172-500-N	172° LHD Cable w/Nylon Coating 500 ft spool
63-1128	TC172-1500-N	172° LHD Cable w/Nylon Coating 1500 ft spool
63-1129	TC172-3000-N	172° LHD Cable w/Nylon Coating 3000 ft spool
63-1130	TC172-500-P	172° LHD Cable w/Polypropylene Coating 500 ft spool
63-1131	TC172-1500-P	172° LHD Cable w/Polypropylene Coating 1500 ft spool
63-1132	TC172-3000-P	172° LHD Cable w/Polypropylene Coating 3000 ft spool

ORDERING INFORMATION (CONTINUED)

Fike P/N	Mfg. P/N	Description
<b>Cable Spools (continued)</b>		
63-1133	TC172-500-G	172° LHD Cable w/Guidewire 500 ft spool
63-1134	TC172-1500-G	172° LHD Cable w/Guidewire 1500 ft spool
63-1135	TC172-3000-G	172° LHD Cable w/Guidewire 3000 ft spool
63-1065	TC190	190° LHD Cable 500 ft spool
63-1111	TC190	190° LHD Cable 1500 ft spool
63-1112	TC190	190° LHD Cable 3000 ft spool
63-1136	TC190-500-N	190° LHD Cable w/Nylon Coating 500 ft spool
63-1137	TC190-1500-N	190° LHD Cable w/Nylon Coating 1500 ft spool
63-1138	TC190-3000-N	190° LHD Cable w/Nylon Coating 3000 ft spool
63-1139	TC190-500-P	190° LHD Cable w/Polypropylene Coating 500 ft spool
63-1140	TC190-1500-P	190° LHD Cable w/Polypropylene Coating 1500 ft spool
63-1141	TC190-3000-P	190° LHD Cable w/Polypropylene Coating 3000 ft spool
63-1142	TC190-500-G	190° LHD Cable w/Guidewire 500 ft spool
63-1143	TC190-1500-G	190° LHD Cable w/Guidewire 1500 ft spool
63-1144	TC190-3000-G	190° LHD Cable w/Guidewire 3000 ft spool
63-1066	TC220	220° LHD Cable 500 ft spool
63-1113	TC220	220° LHD Cable 1500 ft spool
63-1114	TC220	220° LHD Cable 3000 ft spool
63-1145	TC220-500-N	220° LHD Cable w/Nylon Coating 500 ft spool
63-1146	TC220-1500-N	220° LHD Cable w/Nylon Coating 1500 ft spool
63-1147	TC220-3000-N	220° LHD Cable w/Nylon Coating 3000 ft spool
63-1148	TC220-500-P	220° LHD Cable w/Polypropylene Coating 500 ft spool
63-1149	TC220-1500-P	220° LHD Cable w/Polypropylene Coating 1500 ft spool
63-1150	TC220-3000-P	220° LHD Cable w/Polypropylene Coating 3000 ft spool
63-1151	TC220-500-G	220° LHD Cable w/Guidewire 500 ft spool
63-1152	TC220-1500-G	220° LHD Cable w/Guidewire 1500 ft spool
63-1153	TC220-3000-G	220° LHD Cable w/Guidewire 3000 ft spool

