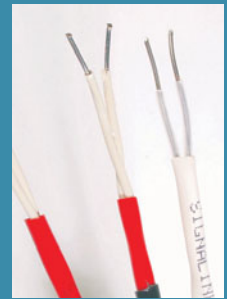




## Signaline Linear Heat Detection



Linear Heat Detection

Fire Alarm

Intrinsically Safe

Analogue

Fixed Temperature

Heat Sensing Cable

Rate of Rise

EN 54

UL/FM/VdS

# Signaline Linear Heat Detection

Linear heat detection provides early detection of fire conditions or overheating of equipment, plant or the surrounding area. Signaline linear heat detection cables are conventional heat detectors in a linear form. They sense heat anywhere along their length and are designed to be used in commercial and industrial applications.

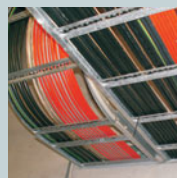
Heat sensing cables can be used with or in place of conventional heat detectors or where conventional heat detection is expensive or difficult to install and maintain.

- Highly cost effective
- Easily installed
- Maintenance free
- Can be used in intrinsically safe areas and dusty or harsh environments down to -40 °C

Two types of Signaline linear heat detection cable are available; Fixed Temperature - **Signaline FT** and Analogue - **Signaline HD**.

## Applications

- Cable Trays
- Plant Rooms
- Vehicles
- Multi Storey Car Parks
- Thatched Roofs
- Industrial Kitchens
- Warehouses
- Waste Recycling Facilities
- Process Plants
- Hazardous Areas
- Power Stations
  - Coal conveyors
  - Cable Tunnels
  - Access Tunnels
  - Plant Rooms
- Shipping and Marine
  - Engine Room
  - Cable Ducts
  - Ceiling Voids
  - Kitchens

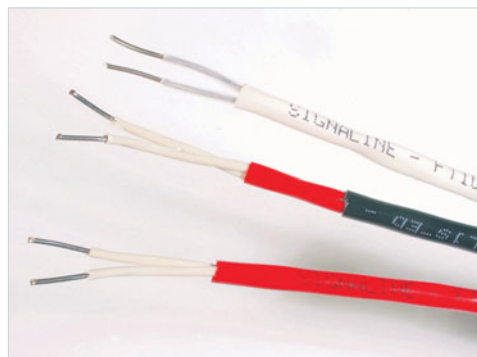


## Signaline FT

### Fixed Temperature Heat Sensing Cables

Available in three different alarm temperatures 68 °C, 88 °C or 105 °C which are UL Listed and FM Approved and two cover options for the 68 °C 105 °C cables. A high temperature cable of 185 °C is also available to provide a full range of fixed temperature heat sensing cables.

Signaline FT heat sensing cables can be used as a standalone system or connected to any conventional control panel and can cover up to 3 km in a single zone.



### Cable Specification

Conductor Resistance	0.100 $\Omega$ /m at 20 °C
Max Voltage	42 V dc / 30 V ac
Dielectric Withstand (UL)	500 V dc
Tensile Strength	1700 N/mm <sup>2</sup>
Minimum Bend Radius	75 mm
Weight	12 kg per 500 m

Part Ref.	Alarm Temp. (°C)	Max. Ambient Temp. (°C)	Outer Sheath Material	Colour	Overall Dia. (mm)	Approval
FT68	68	45	PVC	Red	3.5	FM/UL
FT68R	68	45	Chemical Resistant Nylon	Black	4.5	UL
FT88	88	70	PVC	White	3.5	FM/UL
FT105	105	85	PVC	White	3.5	FM/UL
FT105R	105	85	Chemical Resistant Nylon	Black	4.5	UL
FT185R	185	125	Chemical Resistant Nylon	Red	3.6	UL

### Certification

The Signaline FT range of linear heat detection cable is UL Listed and FM approved.



## Alarm Point Distance Locator (APDL)

The APDL is an optional Alarm Point Distance Locating device exclusively for use with Signaline FT heat sensing cables.

The APDL is designed to interface between an approved control panel or addressable module and a single length of Signaline FT heat sensing cable. The operation of the cable with the control panel or addressable module is unaffected if the APDL becomes faulty or loses power. APDL complies with the relevant FM standard and is enclosed in an IP65 rated enclosure.

### Features

- Alternating metres/feet display of alarm point
- Cable selection
- Leader cable calibration
- Detection of alarm point from 100 m to 3000 m
- Installation settings saved in event of power loss
- IP65 rated enclosure for indoor/outdoor use with smooth sides or 4 sizes of M knock-outs (Note: FM Approved for indoor use only)
- Simple installation and operation
- Backlit 16x2 character LCD display
- Continued correct operation of control panel or addressable module regardless of faults which may occur in the unit
- To maintain system certification any fire alarm control unit connected to the APDL is to be FM approved and any power supply used to power the APDL is to be ANSI/UL 1481 certified



## Signaline HD

### Analogue Heat Sensing Cables

Signaline HD is an analogue heat sensing cable that monitors significant increases in temperature and provides an early warning of fire. The cable is fully resettable, EN 54 compliant and VdS approved.

Signaline HD heat sensing cable requires a controller to interface with conventional or addressable systems – see back page for further details.



### Cable Specification

Part Ref.	Signaline HD	Signaline-HD-R	Signaline-HD-S
Outer cover	Red PVC	Black PVC + Chemical Resistant	Red PVC + Stainless Steel Braid
Minimum bend radius	5 mm	18 mm	20 mm
Weight Per 100 metres	1.6 kg	2.2 kg	3.0 kg
Construction	Co-axial	Inner Core - Copper coated steel Insulation - Heat sensitive polymer Braid - Tinned copper wire Standard outer sheath - Red PVC	
Tensile strength	Greater than 200 N		
Conductor resistance	2 ohms screen and core per 100 m		
Diameter	2.8 mm nominal		
Operating temperature	-40 °C to + 70 °C ambient		
Alarm temperature range (typical)	1 m alarm range 70 °C to 125 °C 10 m alarm range 45 °C to 100 °C		
Approvals	VdS approved Certificate No.s G202077 and G203076		

### Certification

The Signaline HD cable is VdS approved to EN 54-5:2001 and EN 54-17:2001.



## Signaline HD Controller

Signaline HD analogue heat sensing cable must be used with a Signaline HD controller and End of Line Unit. These enable the Signaline HD heat sensing cable to be fully monitored for open and short circuit. The controllers are equipped with volt free fire and fault relays that are connected to the fire control panel via an Interposing Line Unit. Alternatively the Controller can be used as a stand alone device using the relay contacts to activate subsidiary equipment.

There are three Signaline controller models to choose from:

- Signaline-HD-SKM-03 for conventional systems
- Signaline-HD-SKM-03UK for conventional systems and designed to raise an alarm when 1 m of Signaline HD cable is heated to 60 °C
- Signaline-HD-SKM-95 a loop powered addressable controller for use on Apollo XP95 protocol systems

## Features

- Easy and economical to install
- Very simple to set up and operate
- Controller will monitor up to 500 m of sensor cable (dependent on ambient temperature)
- The sensor cable is resistant to corrosion and moisture and can be reset after use
- Signaline-HD-SKM-03 and Signaline-HD-SKM-95 are VdS approved EN 54 part 5 & 17



## Common Accessories

### Universal Connector Box

The Signaline Universal Connector Box can be used as an end of line unit, junction box or an interposing line unit. It is supplied with appropriately sized cable glands, terminal block and 470 Ω and 680 Ω resistors. These resistors allow Signaline FT cable to be connected directly to the zone terminals of most conventional fire control panels.

The IP66 rated enclosure provides a quick and efficient method to interconnect, terminate and join lengths of any Signaline heat sensing cable.

It can also be used for connecting the incoming leader cable to the start of a length of heat sensing cable.



Note: Cannot be used with the 185 °C cable.

### Cable Fixing Clips

A range of clips is available to suit all applications.



**Edge Clip** - Knock on edge clip designed for steel work of differing thickness



**J Clip** - Knock on clip for outer edge of conventional cable trays



**A Clip** - Nylon clip with cable tie for where heat transfer from the fixing point to the heat sensing cable must be minimised



**T Clip** - A plastic moulding with a slot into which the heat sensing cable is located



**P Clip** - Zinc plated steel clip with santoprene cushion insulator



**K Clip** - 6 mm dia. knock in spigot, simply drill and fix (HD cable only)

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