



## Installing Signaline FT Cables

Signaline Fixed Temperature Heat Sensing Cable (Signaline FT) can be used in a wide variety of applications. These notes are designed to give the installer general guidelines on the installation of Signaline FT. For specific applications we have a series of application notes covering the use of Signaline FT in various situations.

### Fixing the cable

- There are a wide range of fixing clips to cover most applications, please contact your local distributor or visit [www.signaline.com](http://www.signaline.com).
- Signaline FT must NEVER be crushed or squashed. Nail type cable fixings should never be used.
- The cable should not be installed close to sharp objects that may damage the outer sheath. Cable ties should not be used directly on the cable. Place a neoprene sleeve between the cable and cable tie.
- The distance between fixing clips should be between 0.6 and 1.2 metres dependent on fixing positions available. Where there is a change in direction, increase the number of fixing points.
- The minimum bend radius of the cable is 75mm.
- When the cable is fixed to metal work, always use a neoprene insulator between the heat sensing cable and the fixing clip. This is particularly important when the metal work is exposed to the sun. Solar heating of the metal work can cause the heat to travel through the fixing clip to the cable. This results in a series of hot spots along the cable which results in false alarms.
- The cable must not be in contact with any material that will act as a heat sink or delay the sensing of the temperature increase from the area being monitored.
- Signaline End of Line Unit, Junction box, and Interposing Line Units, available from LGM Products, should be used. They have suitable temperature ratings and are supplied with the correct size and type of cable glands for our heat sensing cables and are rated IP66 suitable for outdoor use.

### Warning

- Never connect Signaline FT to the mains electrical supply.
- Never connect two lengths of Signaline FT which have different alarm temperatures.
- Never connect lengths of Signaline FT in spur offs or T connections.
- Never install Signaline FT in designated hazardous areas unless the circuit is made intrinsically safe. Please refer to *Intrinsically Safe Circuits* and *Hazardous Areas*.
- Never install Signaline FT close to any local sources of high temperature e.g. light fittings, steam pipes etc.

### Storing Signaline Fixed Temperature Heat Sensing Cables

- Signaline FT is sensitive to heat and must be stored in areas where the temperature will not exceed the maximum ambient temperature rating of the cable. This is typically 20°C below the alarm temperature of the cable.
- Signaline FT cables must not be stored with, or close to, any heat-producing equipment, hot pipes and similar heat sources.
- Store the cables out of direct sunlight and away from any chemicals and liquids of any kind.

It is good practice to inspect the cable to verify the type and alarm temperature is as required, and then test it for short circuits before installation commences.



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### Compliance with UL requirements:

All Signaline FT cables are listed with both UL & ULC for indoor and outdoor use. The UL & ULC listing states that the cables must be spaced as follows:

- Cable types FT-68, FT-88 and FT-105: Distance between lines of heat detecting cable on smooth ceilings with large bays shall not be more than 35 ft (10m). Distance between heat detecting cable from any wall or partition shall not be more than 17.5 ft (5m) .
- Cable types FT-68-R, FT-88-R, FT-105-R and FT-185-R: Distance between lines of heat detecting cable on smooth ceilings with large bays shall not be more than 15 ft (4.5m). Distance between heat detecting cable from any wall or partition shall not be more than 7.5 ft (2m).

### Compliance with FM requirements:

Signaline FT cable types FT-68, FT-88 and FT-105 are FM approved. The FM approval states the maximum rated voltage for the cables is 30 V ac, 42 V dc.

The FM approval states that the cables must be spaced as follows:

- Parallel cable runs should not be more than 30 ft (9 m) apart for cable types FT-68, FT-88, and 25 ft (7.6 m) apart for cable type FT-105.

If used in outdoor locations, electrical connections must be made in IP66 rated enclosures. (please note that Signaline enclosures meet this requirement).

### Testing Signaline Fixed Temperature Heat Sensing Cables

Simple electrical tests such as continuity, open and short circuit fault tests can be made without harming the cable.

It is not possible to perform heat and fire tests without damage to the cable. However the following approach may be adopted:

To heat test the cable install a metre or two extra cable at one end of the cable, the end farthest away from the controller. Heat this extra length of cable until the fire control panel goes into alarm. Ensure that the source of the heat is significantly hotter than the alarm temperature of the cable. After the cable has gone into alarm, disconnect the cable from the controller. Cut off the tested piece of cable and reconnect the end of line unit to the remainder of the cable. Reset the fire control panel.

### WARNING:

- **Conduct live heat tests only when it is safe to do so. Approval of the Safety Officer responsible for the site MUST be obtained BEFORE starting heat tests.**
- **Live heat tests MUST NOT be conducted in a designated hazardous area or on Signaline FT cables which form part of an intrinsically safe circuit.**