



Approvals and the prEN54 Standard

Signaline and the Status of prEN54 parts 22 and 28

Our linear heat detection cables are approved by recognised testing authorities: Signaline HD analogue heat sensing cables are approved to EN54 part 5 and Signaline FT fixed temperature cables to UL and FM standards.

Recently, there has been some interest in prEN54 parts 22 and 28 as they apply to linear heat detection cable. These European standards remain in draft form and currently no heat sensing cable, including Signaline, can be approved to prEN54 parts 22 and 28.

This document explains why this is the case and the current status of prEN54 parts 22 and 28.

We will continue to monitor the progress of these draft standards, but in the meantime our customers can be assured that Signaline has the most comprehensive and up to date set of third party approvals from internationally recognised bodies of any linear heat detection cable on the market.

Background

Almost all fire detection and alarm equipment currently in production for use in Europe is required to conform to a relevant harmonised European standard (EN standard).

Conformity to a particular standard is evidenced by 3rd party certification from a recognised authority such as BRE in the UK, VdS in Germany, KEMA in the Netherlands and similar bodies.

When a given product is certified as conforming to a particular EN standard, the certificate is valid across the whole of the European Union. Indeed many countries outside of the EU recognise EN standards and certification schemes as the benchmark standard.

Linear heat sensing cables have been used as a primary fire detection device for many years, mainly in heavy industrial applications. But the latest generation of detection cables significantly widens the scope for linear heat detection, particularly with the introduction of loop powered controllers such as the Signaline SKM-95. The market for linear detection is expanding and its popularity increasing.

Despite its growing acceptance in the market place, there are currently no EN standards specific to linear heat detection cable.

The current position: prEN54 part 22 and 28

There are two basic types of linear heat detection:

- 1) **Fixed Temperature** cables which cannot be reset after the alarm temperature has been reached.
- 2) **Analogue** cables that can be reset once activated. Analogue cables are particularly useful where routine testing of the fire alarm system is required.

**LGM PRODUCTS LTD
UNIT 15 RIVERSIDE INDUSTRIAL PARK
FARNHAM
SURREY GU9 7UG
UNITED KINGDOM**

**TEL +44 (0) 1252 725257
FAX +44 (0) 1252 727627
E-mail sales@lgmproducts.com
www.signaline.com**



Approvals and the prEN54 Standard

Two draft EN standards have been written: prEN54 part 22 for resettable cables and prEN54 part 28 for non-resettable cables. The prefix 'pr' indicates they are provisional standards.

At some point in the future they will become mandatory standards to which all linear heat detection cable must conform and the 'pr' prefix will disappear.

But currently the draft standards cannot be used as a benchmark for performance or quality, nor quoted in the specification for the design of a fire alarm system. It is also not possible to have cables tested for compliance with the draft standards. In other words, the draft standards have no standing whatsoever.

The draft standards were published in the spring of 2011 for comment by heat sensing cable manufacturers and other interested parties. The opportunity for comment closed in the summer of 2011.

The technical committee responsible for drafting the standards then retired to consider the comments, amend the draft as necessary, and send the final documents to the European Commission for formal publication as two new EN standards.

As of September 2013, no date has been set for formal publication of either standard. In addition, manufacturers and public alike do not have access to the final draft of the standards.

Manufacturers cannot design new cables or upgrade existing cable products to meet the new standards as they may well have changed radically from the draft in the light of comments received.

When the two new standards are eventually published, there will be a significant delay in getting approved products to market. Not only will it take time to develop new or upgrade existing cables, but more importantly the cable will have to be tested by a recognised authority.

Due to the revision of standards in other areas of the fire alarm business, certifying authorities are at present extremely busy. The current waiting time to have a new product certified at one authority is 12 months.

EN54 part 5 Approval for Signaline HD Analogue Cables

Analogue cables such as the Signaline HD series lend themselves to being certified to EN54 part 5. This is exactly the same standard to which conventional heat detectors, such as Apollo Orbis heat detectors, are approved.

This means that heat sensing cables certified to EN54 part 5 can be installed using exactly the same design criteria as their conventional counterparts. Simply put, analogue heat sensing cable can follow exactly the same installation routing as conventional heat detectors.

Signaline HD and HD-R cables used with Signaline SKM-03 or SKM-95 controllers are fully certified to EN54 part 5 by VdS Germany.

**LGM PRODUCTS LTD
UNIT 15 RIVERSIDE INDUSTRIAL PARK
FARNHAM
SURREY GU9 7UG
UNITED KINGDOM**

**TEL +44 (0) 1252 725257
FAX +44 (0) 1252 727627
E-mail sales@lgmproducts.com
www.signaline.com**



Approvals and the prEN54 Standard

FM and UL Approvals for Signaline FT Fixed Temperature Cables

Fixed temperature cables do not meet the requirements of EN54 part 5 and therefore cannot be tested and approved to this standard.

But fixed temperature cables are often the only form of detection available for some applications such as areas with high ambient temperatures which require a very high alarm temperature (e.g. 185°C) or environments that are hard to protect where hot corrosive gases or liquids are present.

Although there is no current EN standard for fixed temperature cables, there is no excuse for installing untested unapproved cable of dubious quality available in some European countries.

Well-known North American organisations, Underwriters Laboratory (UL) and Factory Mutual (FM), both publish standards to which fixed temperature linear heat sensing cables can be tested.

The standards are technically demanding and hard to meet. Fixed temperature cables certified by UL and FM are the best in their class. Specifiers can be assured that a fixed temperature cable tested to these standards can be trusted to perform in arduous environments.

Both UL and FM publish guidelines relating to the spacing and height at which fixed temperature cables may be installed. They are very similar to the spacing requirements for EN54 part 5 approved cable, which again makes it easy to design an alarm system using fixed temperature cables.

Signaline FT cables are approved by both UL and FM. Signaline FT-R cables are approved by UL.

**LGM PRODUCTS LTD
UNIT 15 RIVERSIDE INDUSTRIAL PARK
FARNHAM
SURREY GU9 7UG
UNITED KINGDOM**

**TEL +44 (0) 1252 725257
FAX +44 (0) 1252 727627
E-mail sales@lgmproducts.com
www.signaline.com**