



**NSAI**  
Standards

Irish Standard  
I.S. EN 54-28:2016

## Fire detection and fire alarm system - Part 28: Non-resettable line-type heat detectors

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**I.S. EN 54-28:2016**

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## National Foreword

I.S. EN 54-28:2016 is the adopted Irish version of the European Document EN 54-28:2016, Fire detection and fire alarm system - Part 28: Non-resettable line-type heat detectors

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**EUROPEAN STANDARD**

**EN 54-28**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

February 2016

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English Version

## **Fire detection and fire alarm system - Part 28: Non-resettable line-type heat detectors**

Systèmes de détection et d'alarme incendie - Partie 28 :  
DéTECTEURS de chaleur de type linéaire non  
réenclenchables

Brandmeldeanlagen - Teil 28: Nicht-rücksetzbare  
linienförmige Wärmemelder

This European Standard was approved by CEN on 13 December 2015.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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## EN 54-28:2016 (E)

## European foreword

This document (EN 54-28:2016) has been prepared by Technical Committee CEN/TC 72 “Fire detection and fire alarm systems”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2016, and conflicting national standards shall be withdrawn at the latest by February 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the basic requirements of Regulation (EU) 305/2011.

For relationship with EU Regulations, see informative Annex ZA which is an integral part of this document.

EN 54, *Fire detection and fire alarm systems* consists of the following parts:

- *Part 1: Introduction*
- *Part 2: Control and indicating equipment*
- *Part 3: Fire alarm devices – Sounders*
- *Part 4: Power supply equipment*
- *Part 5: Heat detectors – Point detectors*
- *Part 7: Smoke detectors – Point detectors using scattered light, transmitted light or ionization*
- *Part 10: Flame detectors – Point detectors*
- *Part 11: Manual call points*
- *Part 12: Smoke detectors – Line detectors using an optical beam*
- *Part 13: Compatibility assessment of system components*
- *Part 14: Guidelines for planning, design, installation, commissioning, use and maintenance*
- *Part 15: Point detectors using a combination of detected phenomena*
- *Part 16: Voice alarm control and indicating equipment*
- *Part 17: Short-circuit isolators*
- *Part 18: Input/output devices*
- *Part 20: Aspirating smoke detectors*



- *Part 21: Alarm transmission and fault warning routing equipment*
- *Part 22: Resettable line-type heat detectors*
- *Part 23: Fire alarm devices – Visual alarm devices*
- *Part 24: Components of voice alarm systems – Loudspeakers*
- *Part 25: Components using radio links*
- *Part 26: Carbon monoxide detectors – Point detectors*
- *Part 27: Duct smoke detectors*
- *Part 28: Non-resettable line-type heat detectors*
- *Part 29: Multi-sensor fire detectors - Point detectors using a combination of smoke and heat sensors*
- *Part 30: Multi-sensor fire detectors - Point detectors using a combination of carbon monoxide and heat sensors*
- *Part 31: Multi-sensor fire detectors – Point detectors using a combination of smoke, carbon monoxide and optionally heat sensors*
- *Part 32: Guidelines for the planning, design, installation, commissioning, use and maintenance of voice alarm systems*

NOTE This list includes standards that are in preparation and other standards may be added. For current status of published standards refer to [www.cen.eu](http://www.cen.eu).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Introduction**

Non-resettable line-type heat detectors (NLTHD) have been used for a considerable number of years and are incorporated into fire detection systems and in some countries even into fire alarm systems if accepted by the relevant authorities. These detectors are typically used in areas where point type heat detectors are presented with challenging environmental characteristics and also, where access to the detectors, may significantly influence the fire alarm system design.

This standard defines the minimum system functionality for NLTHD products.

Due to the various applications for NLTHD, it is necessary to devise separate environmental classification tests for the sensing element and the sensor control units of these systems. It is not the purpose of this standard to define applications or how NLTHD should be used in applications.

Generally NLTHD operate on using the same basic principle. However, they can have different performance with respect to the temperature response. Therefore they have been differentiated by a type code which reflects the nominal alarm temperature, the tolerance range and the maximum ambient temperature at which they could be used.

## 1 Scope

This European Standard applies to non-resettable line-type heat detectors consisting of a sensing element using an electrical sensor cable which can be connected to a sensor control unit or either directly or through an interface module to a control and indicating equipment intended for use in fire detection and fire alarm systems installed in and around buildings and civil engineering works (see EN 54-1:2011).

The non-resettable sensing element has a fixed temperature alarm threshold and does not distinguish between short circuit and alarm condition.

This European Standard specifies the requirements and performance criteria, the corresponding test methods and provides for the Assessment and Verification of Constancy of Performance (AVCP) of non-resettable line-type heat detectors to this European Standard.

This European Standard also covers non-resettable line-type heat detectors intended for use in the local protection of plant and equipment.

Non-resettable line-type heat detectors with special characteristics and developed for specific risks are not covered by this standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 54-1:2011, *Fire detection and fire alarm systems - Part 1: Introduction*

EN 50130-4:2011, *Alarm systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder, hold up, CCTV, access control and social alarm systems*

EN 60068-1:2014, *Environmental testing - Part 1: General and guidance (IEC 60068-1:2013)*

EN 60068-2-1:2007, *Environmental testing - Part 2-1: Tests - Test A: Cold (IEC 60068-2-1:2007)*

EN 60068-2-2:2007, *Environmental testing - Part 2-2: Tests - Test B: Dry heat (IEC 60068-2-2:2007)*

EN 60068-2-27:2009, *Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock (IEC 60068-2-27:2009)*

EN 60068-2-30:2005, *Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) (IEC 60068-2-30:2005)*

EN 60068-2-42:2003, *Environmental testing - Part 2-42: Tests - Test Kc: Sulphur dioxide test for contacts and connections (IEC 60068-2-42:2003)*

EN 60068-2-6:2008, *Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:2008)*

EN 60068-2-75:1997, *Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests (IEC 60068-2-75:1997)*

EN 60068-2-78:2013, *Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state (IEC 60068-2-78:2012)*

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