



**NSAI**  
Standards

Irish Standard  
I.S. EN 54-22:2015+A1:2020

# Fire detection and fire alarm systems - Part 22: Resettable line-type heat detectors

**I.S. EN 54-22:2015+A1:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 54-22:2015+A1:2020 is the adopted Irish version of the European Document EN 54-22:2015+A1:2020, Fire detection and fire alarm systems - Part 22: Resettable line-type heat detectors

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EUROPEAN STANDARD

**EN 54-22:2015+A1**

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## Fire detection and fire alarm systems - Part 22: Resettable line-type heat detectors

Systèmes de détection et d'alarme incendie - Partie 22 :  
Détecteurs de chaleur de type linéaire réenclenchables

Brandmeldeanlagen - Teil 22: Rücksetzbare  
linienförmige Wärmemelder

This European Standard was approved by CEN on 19 March 2015 and includes Amendment 1 approved by CEN on 16 October 2019.

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## EN 54-22:2015+A1:2020 (E)

### European foreword

This document (EN 54-22:2015+A1:2020) 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of an identical text or by endorsement, at the latest by August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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

This document supersedes A1 EN 54-22:2015 A1.

This document includes Amendment 1, approved by CEN on 2019-10-16.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

A1 *deleted text* A1

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 detector using an optical light 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 routine equipment

Part 22: Resettable line-type heat detectors

Part 23: Fire alarm devices – Visual alarms

Part 24: Components of voice alarm systems – Loudspeakers

Part 25: Components using radio links and system requirements

Part 26: Carbon monoxide detectors – Point detectors (in preparation)

Part 27: Duct smoke detectors (in preparation)

Part 28: Non-resettable line-type heat detectors (in preparation)

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 detector – 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 organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **EN 54-22:2015+A1:2020 (E)**

### **Introduction**

Resettable line-type heat detectors (RLTHD) have been incorporated into fire alarm systems for a considerable number of years. 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 RLTHD products. RLTHD are based upon many unique operating principles. It is the intention of this standard to define common operating characteristics for each type of RLTHD in conjunction with existing EN 54 detector standards, so that resettable line-type heat detectors have a response behaviour comparable to that of point type heat detectors.

Due to the various applications for RLTHD, 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 RLTHD should be used in applications. However, the standard indicates two general fields of application, room protection and secondly local protection. The standard defines separate response test classifications for these two fields.

Generally there are two functional principles employed by RLTHD: non-integrating and integrating systems. Therefore separated subclasses have been created for non integrating systems and for integrating systems.

## 1 Scope

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

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 resettable line-type heat detectors to this EN.

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

Resettable line-type heat detectors with special characteristics and developed for specific risks are not covered by this EN.

This European Standard does not cover line-type heat detectors that are based on non-resettable, fixed temperature electrical cables (so called “digital” systems).

## 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 54-7:2000, *Fire detection and fire alarm systems — Part 7: Smoke detectors — Point detectors using scattered light, transmitted light or ionization*

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 60068-1:1994, *Environmental testing — Part 1: General and guidance (IEC 60068-1:1988 + Corrigendum 1988 +A1:1992)*

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)*

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