This is a free page sample. Access the full version online.



Irish Standard I.S. EN 54-5:2000

# Fire detection and fire alarm systems -Part 5: Heat detectors - Point detectors

© CEN 2001

No copying without NSAI permission except as permitted by copyright law.

*Incorporating amendments/corrigenda issued since publication:* EN 54-5:2000/A1:2002

# The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.* 

*This document is based on:* EN 54-5:2000 EN 54-8:1982 *Published:* 27 April, 2001 22 November, 1984

This document was published under the authority of the NSAI and comes into effect on: 27 April, 2001

NSAI

Dublin 9

1 Swift Square,

Northwood, Santry

T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W **NSAI.ie**  Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie ICS number:

13.220.20

Údarás um Chaighdeáin Náisiúnta na hÉireann

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

# EN 54-5:2000/A1

June 2002

ICS 13.220.20

English version

#### Fire detection and fire alarm systems - Part 5: Heat detectors -Point detectors

Systèmes de détection et d'alarme incendie - Partie 5: Détecteurs de chaleur - Détecteurs ponctuels Brandmeldeanlagen - Teil 5: Warmemelder - Punktförmige Melder

This amendment A1 modifies the European Standard EN 54-5:2000; it was approved by CEN on 5 April 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This amendment 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPAISCHES KOMITEE FUR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

© 2002 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 54-5:2000/A1:2002 E

This is a free page sample. Access the full version online.

#### I.S. EN 54-5:2000

EN 54-5:2000/A1:2002 (E)

## Contents

pag	е
Foreword	.3
Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives.	.5
Bibliography	1

### Foreword

This document EN 54-5:2000/A1:2002 has been prepared by Technical Committee CEN/TC 72 "Fire detection and fire alarm systems", the secretariat of which is held by BSI.

This Amendment to the European Standard EN 54-5:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2002, and conflicting national standards shall be withdrawn at the latest by June 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the EU Construction Products Directive (89/106/EEC).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

#### EN 54-5:2000/A1:2002 (E)

#### **Contents**

At the end of the existing table of contents, insert the following new entries:

Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

Bibliography

#### New annex ZA and Bibliography

After the existing annex D, add annex ZA and Bibliography as follows

# EUROPEAN STANDARD NORME EUROPÉENNE

# EN 54-5

# EUROPÄISCHE NORM

December 2000

ICS 13.220.20

Supersedes EN 54-5:1976, EN 54-5:1976/A1:1988, EN 54-6:1982, EN 54-8:1982

English version

### Fire detection and fire alarm systems - Part 5: Heat detectors -Point detectors

Systèmes de détection et d'alarme incendie - Partie 5 Détecteurs de chaleur - Détecteurs ponctuels Brandmeldeanlagen - Teil 5: Wärmemelder - Punktformige Melder

This European Standard was approved by CEN on 2 June 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITE EUROPEEN DE NORMALISATION EUROPAISCHES KOMITEE FUR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

© 2000 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref No. EN 54-5:2000 E

Page 2 EN 54-5:2000

## Contents

Foreword						
1	Scope					
2	Normative references	4				
3	Terms and definitions	5				
4 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11	Requirements Compliance Classification Position of heat sensitive elements Individual alarm indication Connection of ancillary devices Monitoring of detachable detectors Manufacturer's adjustments On-site adjustment of response behaviour Marking Data Additional requirements for software controlled detectors	6 6 6 7 7 7 7 7 8 8 9				
5 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.17 5.18	Tests General Directional dependence Static response temperature Response times from typical application temperature Response times from typical application temperature Response times from high ambient temperature (Dry heat operational) Variation in supply parameters Reproducibility Cold (operational) Dry heat (endurance) Damp heat, cyclic (operational) Damp heat, steady state (endurance) Sulphur dioxide (SO <sub>2</sub> ) corrosion (endurance) Shock (operational) Impact (operational) Vibration, sinusoidal, (operational) Vibration, sinusoidal, (operational) Vibration, sinusoidal (endurance) Electromagnetic Compatibility (EMC), Immunity tests (operational)	10 10 15 15 16 17 17 18 18 18 18 19 21 22 23 24 25 26 27 28				
6 6.1 6.2	Additional tests for detectors with class suffixes Test for suffix S detectors Test for suffix R detectors	29 29 31				
Annex	A (normative) Heat tunnel for response time and response temperature measurements	32				
Annex	B (informative) Information concerning the construction of the heat tunnel	33				
Annex	C (informative) Derivation of upper and lower limits of response times	36				
Annex	D (informative) Apparatus for impact test	39				

• ,

.

### Foreword

This European Standard 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 replaces EN 54-5:1976, EN 54-5:1976/A1:1988, EN 54-6:1982, EN 54-8:1982.

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 June 2001, and conflicting national standards shall be withdrawn at the latest by June 2003. For products which have complied with the relevant national standard before the date of withdrawal (dow), as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until June 2006.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This standard has been prepared in cooperation with the CEA (Comité Européen des Assurances) and with EURALARM (Association of European Manufacturers of Fire and Intruder Alarm Systems).

The significant differences from EN 54-5:1976+A1:1988 include:

- changes in the title of the EN 54 series and in the title of this Part;
- the integration of the requirements for high temperature heat detectors, previously covered in EN 54-8:1982 and the partial integration of the requirements for rate of rise heat sensitive detectors without a static element, previously covered by EN 54-6:1982, into this Part;
- a new classification system, combining the systems of EN 54-5:1976 and EN 54-8:1982, together with the introduction of optional suffices giving additional information on response characteristics (N.B. this allows detectors with certain rate-of-rise characteristics to be identified, such detectors were previously covered by EN 54-6 :1982);
- changes to the lower limits of response times at high rates of rise of temperature;
- -- changes in the environmental test procedures to use IEC tests where possible, to harmonise with test procedures applied to other types of detectors and to include EMC immunity tests;
- the requirement for an integral alarm indication.

EN 54-5:1976, EN 54-6:1982, EN 54-8:1982 and their amendments will all be withdrawn on publication of this revision.

Information on the relationship between this European Standard and other standards of the EN 54 series is given in annex A of EN 54-1:1996.

Page 4 EN 54-5:2000

#### 1 Scope

This European Standard specifies the requirements, test methods and performance criteria for point heat detectors for use in fire detection and fire alarm systems for buildings (see EN 54-1:1996).

For other types of heat detector, or for detectors intended for use in other environments, this standard should only be used for guidance. Heat detectors with special characteristics and developed for specific risks are not covered by this standard.

#### 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO/IEC				
<b>Publication</b>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Fire detection and fire alarm systems - Part 1: Introduction.	EN 54-1	1996
-	-	Alarm Systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder and social alarm systems + A1:1998.	EN 50130-4	1995
IEC 60068-1	1988	Environmental testing - Part 1: General and guidance, + A1:1992.	EN 60068-1	1994
IEC 60068-2-1	1990	Environmental testing - Part 2: Tests - Tests A: Cold, + A1:1993, A2:1994.	EN 60068-2-1	1993
IEC 60068-2-2	1974	Basic Environmental testing procedures - Part 2: Tests - Tests B: Dry heat, + Supp. A:1976, A1:1993, A2:1994.	EN 60068-2-2	1993
IEC 60068-2-3	1969	Basic Environmental testing procedures - Part 2: Tests - Test Ca: Damp heat, steady state, + A1:1984.	HD 323.2.3 S2	1987
IEC 60068-2-6	1995	Environmental testing – Part 2: Tests - Test Fc: Vibration, sinusoidal, + Corr.:1995	EN 60068-2-6	1995
IEC 60068-2-27	1987	Basic Environmental testing procedures - Part 2: Tests - Test Ea & Guidance: Shock.	EN 60068-2-27	1993



This is a free preview. Purchase the entire publication at the link below:

**Product Page** 

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation