

**Automaatne
tulekahjusignalisatsioonisüsteem. Osa
7: Suitsudetektorid. Hajutatud valgust,
valgusedastust või ionisatsiooni
kasutavad punktdetektorid**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 54-7:2001 sisaldab Euroopa standardi EN 54-7:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.05.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 54-7:2001 consists of the English text of the European standard EN 54-7:2000.</p> <p>This document is endorsed on 18.05.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies requirements, test methods and performance criteria for point smoke detectors that operate using scattered light, transmitted light or ionization, for use in fire detection and fire alarm systems for buildings (see EN 54-1:1996).</p> <p>For other types of smoke detector, or smoke detectors working on different principles, this standard should only be used for guidance. Smoke detectors with special characteristics and developed for specific risks are not covered by this standard.</p>	<p>Scope:</p> <p>This standard specifies requirements, test methods and performance criteria for point smoke detectors that operate using scattered light, transmitted light or ionization, for use in fire detection and fire alarm systems for buildings (see EN 54-1:1996).</p> <p>For other types of smoke detector, or smoke detectors working on different principles, this standard should only be used for guidance. Smoke detectors with special characteristics and developed for specific risks are not covered by this standard.</p>
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ICS 13.220.20

Võtmesõnad: detectors, fire, fire equipment, fire fighting, hazards, marking, punctual, scattered light, shock, smoke, smoke detectors, specification (approval), specifications, testing, transmitted lights, warning devices, warning systems, vibration

English version

Fire detection and fire alarm systems

**Part 7: Smoke detectors – Point detectors using scattered light,
transmitted light or ionization**

Systèmes de détection et d'alarme
incendie – Partie 7: Détecteurs de
fumée – Détecteurs ponctuels
fonctionnant suivant le principe de la
diffusion de la lumière, de la transmis-
sion de la lumière ou de l'ionisation

Brandmeldeanlagen – Teil 7:
Rauchmelder – Punktförmige Melder
nach dem Streulicht-, Durchlicht-
oder Ionisationsprinzip

This European Standard was approved by CEN on 2000-06-02.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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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 54-7:1982, EN 54-7:1982/A1:1988, EN 54-9:1982.

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 54-7:1982+A1:1988 include:

- changes in the title of the EN 54 series and in the title of this Part;
- the incorporation of the full descriptions of the test fires for fire sensitivity into the standard;

NOTE These descriptions were previously given in Part 9 of the standard.
- the introduction of requirements for the limitation of the effects of *drift compensation* on the response to slowly developing fires;
- the introduction of requirements for protection against ingress of foreign bodies;
- 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 54-9:1982 and its 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.

1 Scope

This European Standard specifies requirements, test methods and performance criteria for point smoke detectors that operate using scattered light, transmitted light or ionization, for use in fire detection and fire alarm systems for buildings (see EN 54-1:1996).

For other types of smoke detector, or smoke detectors working on different principles, this standard should only be used for guidance. Smoke detectors with special characteristics and developed for specific risks are not covered by this standard.

NOTE Certain types of detector contain radioactive materials. The national requirements for radiation protection differ from country to country and they are not specified in 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.

<u>ISO/IEC Publication</u>	<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 60068-2-3	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
IEC 60068-2-42	1982	Basic environmental testing procedures - Part 2: Tests - Test Kc: Sulphur dioxide test for contacts and connections.	-	-
IEC 60068-2-56	1988	Environmental testing - Part 2: Tests - Test Cb: Damp heat steady state, primarily for equipment.	HD 323.2.56 S1	1990
ISO 209-1	1989	Wrought aluminium and aluminium alloys - Chemical composition and forms of products — Part 1: Chemical composition.	-	-

3 Terms and definitions

For the purposes of this standard, the following term and definition and those given in EN 54-1:1996 apply:

3.1 response threshold value

the aerosol density in the proximity of the specimen at the moment that it generates an alarm signal, when tested as described in 5.1.5

NOTE The response threshold value may depend on signal processing in the detector and in the control and indicating equipment.

4 Requirements

4.1 Compliance

In order to comply with this standard the detector shall meet the requirements of this clause, which shall be verified by visual inspection or engineering assessment, shall be tested as described in clause 5 and shall meet the requirements of the tests.

4.2 Individual alarm indication

Each detector shall be provided with an integral red visual indicator, by which the individual detector, which released an alarm, can be identified, until the alarm condition is reset. Where other conditions of the detector can be visually indicated, they shall be clearly distinguishable from the alarm indication, except when the detector is switched into a service mode. For detachable detectors the indicator may be integral with the base or the detector head. The visual indicator shall be visible from a distance of 6 m directly below the detector, in an ambient light intensity up to 500 lux.