

Nederlandse norm

NEN-EN 54-3

(en)

Automatische brandmeldinstallaties - Deel 3:
Brandalarmeringsapparatuur - Akoestische
signaalgevers

Fire detection and fire alarm systems - Part 3:
Fire alarm devices - Sounders

Vervangt NEN-EN 54-3:2001;
NEN-EN 54-3:2001/A1:2002;
NEN-EN 54-3:2001/A2:2006;
NEN-EN 54-3:2013 Ontw.

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- EN 54-3:2014, IDT

Normcommissie 351086 "Brandmeldsystemen"



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Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
EN 54-1:2011	NEN-EN 54-1:2011	Automatische brandmeldinstallaties - Deel 1: Inleiding
EN 50130-4:2011	NEN-EN 50130-4:2011	Alarmsystemen - Deel 4: Elektromagnetische compatibiliteit - Productgroepnorm - Immunititeitseisen voor onderdelen van brand-, inbraak-, overval-, CCTV, toegangscontrole en sociale alarmsystemen
EN 60068-1:1994	NEN 10068-1:1995	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 1: Algemene gegevens en leidraad
EN 60068-2-1:2007	NEN-EN-IEC 60068-2-1:2007	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2-1: Beproevingen - Proef A: Koude
EN 60068-2-2:2007	NEN-EN-IEC 60068-2-2:2007	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2-2: Beproevingen - Beproeving B: Droge warmte
EN 60068-2-6:2008	NEN-EN-IEC 60068-2-6:2008	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2-6: Beproevingen - Proef Fc: Trilling (sinusvormig)
EN 60068-2-27:2009	NEN-EN-IEC 60068-2-27:2009	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2-27: Beproevingen - Proef Ea met leidraad: Schokken
EN 60068-2-42:2003	NEN-EN-IEC 60068-2-42:2003	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2-42: Beproeven - Proef Kc: Sulfur dioxide beproeving voor contacten en connecties
EN 60068-2-75:1997	NEN-EN-IEC 60068-2-75:1997	Klimatologische en mechanische beproevingsmethoden voor elektrotechnische producten - Deel 2: Beproevingen - Sectie 75: Proef Eh: Hamerproeven
EN 60068-2-78:2013	NEN-EN-IEC 60068-2-78:2013	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state
EN 60529:1991	NEN 10529:1992	Beschermingsgraden van omhulsels van elektrisch materieel (IP-codering)
EN 60529:1991/A1:2000	NEN-EN-IEC 60529:1992/A1:2000	Beschermingsgraden van omhulsels (IP-codering)
EN 60695-11-10:2013	NEN-EN-IEC 60695-11-10:2013	Brandbaarheid van elektrotechnische producten - Deel 11-10: Beproevingsvlammen - Beproevingsmethoden voor horizontale en verticale 50 W-vlammen
EN 60695-11-20:1999	NEN-EN-IEC 60695-11-20:1999	Brandbaarheid van elektrotechnische producten - Deel 11-20: Beproevingsvlammen - Beproevingsmethoden voor 500 W-vlammen
EN 60695-11-20:1999/A1:2003	NEN-EN-IEC 60695-11-20:1999/A1:2003	Brandbaarheid van elektrotechnische producten - Deel 11-20: Beproevingsvlammen - Beproevingsmethoden voor 500 W-vlammen
EN 61672-1:2003	NEN-EN-IEC 61672-1:2003	Elektro-akoestiek - Geluidniveaumeters - Deel 1: Specificaties

Voorbeeld
Preview

EUROPEAN STANDARD

EN 54-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2014

ICS 13.220.20

Supersedes EN 54-3:2001

English Version

Fire detection and fire alarm systems - Part 3: Fire alarm devices - Sounders

Systèmes de détection et d'alarme incendie - Partie 3:
Dispositifs sonores d'alarme feu

Brandmeldeanlagen - Teil 3: Feueralarmeinrichtungen
Akustische Signalgeber

This European Standard was approved by CEN on 8 May 2014.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN 54-3:2014) 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 January 2015, and conflicting national standards shall be withdrawn at the latest by April 2016.

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 supersedes EN 54-3:2001.

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 EU Directive(s).

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

EN 54-3 has been revised so as to align with the second answer of CEN/TC 72 to Mandate M/109. EN 54-3 includes new clauses and annexes as follows:

- Requirements for software controlled devices (5.2.8);
- Clause 6 Assessment and verification of constancy of performance (AVCP);
- Clause 7 Classification and designation;
- Clause 8 Marking, labelling and packaging;
- Annex C Data supplied with sounders;
- Annex D (informative) Sound patterns used in some European countries;
- Annex E (informative) Comparison of flammability test requirements in various standards.

The previous Annex C dealt with the requirements and test methods for voice sounders. The content of this annex has been integrated in the main body of the standard, specifically under 4.3.3, 4.3.4, 4.3.5, 5.3.3, 5.3.4 and 5.3.5. In addition, Annex ZA has been revised to align with the Construction Products Regulation (CPR).

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 detector – Point detectors*

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- *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: 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*
- *Part 27: Duct smoke detectors*
- *Part 28: Non-resettable (digital) 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 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.

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

The purpose of a fire alarm sounder is to warn person(s) within, or in the vicinity of, a building of the occurrence of a fire emergency situation in order to enable such a person(s) to take appropriate measures.

This European Standard recognizes that the exact nature of the sound requirements, i.e. its frequency range, temporal pattern and output level will vary according to the nature of the installation, the type of risk present and appropriate measures to be taken, the type of signals used by other non-emergency alarms (see, for example, EN ISO 7731) and national differences in custom and practice. The resulting standard specifies, therefore, a common method for the testing of the operational performance of sounders against the specification declared by the manufacturer rather than imposing common requirements.

In some European countries, specific frequencies of sound and sound patterns are used. These may be given in national codes or standards (see Annex D). Attention is drawn to national safety regulations which may specify maximum safe sound pressure level received by occupants of a building.

Attention is also drawn to ISO 8201:1987, *Acoustics – Audible emergency evacuation signal*, the international standard which specifies the temporal pattern and the required sound pressure level of an audible emergency evacuation signal.

This European Standard gives common requirements for sounders as well as for their performance under climatic, mechanical and electrical interference conditions which are likely to occur in the service environment. This European Standard covers sounders for either an indoor or an outdoor application environment category.

In fire detection and fire alarm systems, voice sounders are used as alarm devices for warning the occupants of a building of the occurrence of a fire risk, using a combination of an attention-drawing signal and dedicated voice message(s). The requirements, test methods and performance criteria specified in this standard for sounders are also applicable to voice sounders. Additional requirements, test methods and performance criteria specific to voice sounders are also incorporated.

PREVIEW

EN 54-3:2014 (E)**1 Scope**

This European Standard specifies the requirements, test methods and performance criteria for fire alarm sounders, including voice sounders, in a fixed installation intended to signal an audible warning between the fire detection and fire alarm systems and the occupants of a building (see EN 54-1:2011).

This European Standard provides for the assessment and verification of constancy of performance (AVCP) of fire alarm sounders to this EN.

This European Standard is not intended to cover:

- a) loudspeaker type devices primarily intended for emitting emergency voice messages that are generated from an external audio source;
- b) supervisory sounders, for example, within the control and indicating equipment.

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 60068-1:1994, *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 60068-2-6:2008, *Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)(IEC 60068-2-6:2007)*

EN 60068-2-27:2009, *Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock (IEC 60068-2-27:2008)*

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 60068-2-75:1997, *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)*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code)(IEC 60529:1989)*

EN 60529:1991/A1:2000, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989/A1:1999)*

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