

**AUTOMAATNE
TULEKAHJUSIGNALISATSIOONISÜSTEEM. OSA 16:
HELIALARMI KESKSEADE**

**Fire detection and fire alarm systems - Part 16: Voice
alarm control and indicating equipment**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 54-16:2008 sisaldab Euroopa standardi EN 54-16:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 54-16:2008 consists of the English text of the European standard EN 54-16:2008.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.03.2008.	Date of Availability of the European standard is 05.03.2008.
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ICS 13.220.20

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ICS 13.220.20

English Version

**Fire detection and fire alarm systems - Part 16: Voice alarm
control and indicating equipment**

Systèmes de détection et d'alarme incendie - Partie 16:
Élément central du système d'alarme incendie vocale

Brandmeldeanlagen - Teil 16: Sprachalarmzentralen

This European Standard was approved by CEN on 20 January 2008.

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Foreword

This document (EN 54-16:2008) 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of an identical text or by endorsement, at the latest by September 2008, and conflicting national standards shall be withdrawn at the latest by March 2011.

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 essential requirements of EU Directive(s).

For relationship with EU Directive, 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 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*
- *Part 26: Point fire detectors using carbon monoxide sensors¹⁾*
- *Part 27: Duct smoke detectors¹⁾*

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1) Under preparation.

Introduction

A voice alarm system used in a fire detection and fire alarm system provides, manually and/or automatically, an audible fire alarm signal within the building.

Such a fire alarm voice alarm system will require voice alarm control and indicating equipment (VACIE) (see 3.1.1) to control the alarm signal(s) and the fire alarm voice message(s). The voice alarm control and indicating equipment may be a separate unit or may be physically combined with the fire detection and fire alarm control and indicating equipment (CIE as referenced in EN 54-2).

This part of EN 54 follows closely the format and requirements of EN 54-2 and is drafted on the basis of mandatory functions which are to be provided on all voice alarm control and indicating equipment, and optional functions (with requirements) which may be provided. It is intended that the options be used for specific applications, as recommended in application guidelines.

This European Standard does not specify requirements for components of the VACIE as separate parts; they are tested as part of the voice alarm control and indicating equipment as a whole.

Each optional function is included as a separate entity, with its own set of associated requirements, in order to permit voice alarm control and indicating equipment with many different combinations of functions to comply with this European Standard. Other functions associated with fire detection and fire alarm may also be provided, even if not specified in this European Standard.

Although this European Standard does not cover emergency alarm systems for non-fire applications, it may be used as a basis for the assessment of the control and indication equipment for such systems.

1 Scope

This European Standard specifies requirements, methods of test and performance criteria for voice alarm control and indicating equipment for use in fire detection and fire alarm systems installed in buildings, where the alarm signal is in the form of tone(s) or voice message(s), or both.

It also provides for the evaluation of conformity of the equipment to the requirements of this European Standard.

NOTE The overall requirements of a voice alarm system, especially concerning audibility and intelligibility, are not covered in this part of EN 54. The manufacturer should consider requirements of an overall system that may affect the equipment design. Such system requirements may be specified in another part of EN 54, in national legislation, codes and standards or in contractual documents.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 54-1:1996, *Fire detection and fire alarm systems — Part 1: Introduction*

EN 54-2:1997, *Fire detection and fire alarm systems — Part 2: Control and indicating equipment*

EN 54-2:1997/A1:2006, *Fire detection and fire alarm systems — Part 2: Control and indicating equipment*

EN 54-4:1997, *Fire detection and fire alarm systems — Part 4: Power supply equipment*

EN 54-4:1997/A1:2002, *Fire detection and fire alarm systems — Part 4: Power supply equipment*

EN 54-4:1997/A2:2006, *Fire detection and fire alarm systems — Part 4: Power supply equipment*

EN 50130-4:1995, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems*

EN 50130-4:1995/A1:1998, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: immunity requirements for components of fire, intruder and social alarm systems*

EN 50130-4:1995/A2:2003, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: immunity requirements for components of fire, intruder 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 60068-2-6:1995, *Environmental testing — Part 2-6: Tests — Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + Corrigendum 1995)*

EN 60068-2-47:2005, *Environmental testing — Part 2-47: Tests — Mounting of specimens for vibration, impact and similar dynamic tests (IEC 60068-2-47:2005)*

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

EN 60068-2-78:2001, *Environmental testing — Part 2-78: Tests — Test Cab: Damp heat, steady state (IEC 60068-2-78:2001)*

EN 60268-4:2004, *Sound system equipment — Part 4: Microphones (IEC 60268-4:2004)*

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) – Amendment A1 (IEC 60529:1989/A1:1999)*

EN 60721-3-3:1995, *Classification of environmental conditions — Part 3: Classification of groups of environmental parameters and their severities — Section 3: Stationary use at wheatherprotected locations (IEC 60721-3-3:1994)*

EN 60721-3-3:1995/A2:1997, *Classification of environmental conditions — Part 3: Classification of groups of environmental parameters and their severities — Section 3: Stationary use at wheatherprotected locations – Amendment A2 (IEC 60721-3-3:1994/A2:1996)*

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

IEC 60268-1, *Sound system equipment — Part 1: General*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 54-1:1996 and the following apply.

3.1.1

access level

one of several states of a VACIE in which selected:

- controls can be operated,
- manual operations can be carried out,
- indications are visible and/or
- information can be obtained

NOTE Further information on access level is given in Annex A.

3.1.2

alphanumeric display

indicator that is capable of giving information by displaying messages consisting of text and/or numeric characters

3.1.3

cabinet

housing which affords the degree of protection and robustness required by this standard to its constituent parts and sub-assemblies (see 13.3)

3.1.4

earth fault

unwanted connection between earth potential and any part of the VACIE, transmission paths to the VACIE, or transmission paths between parts of the VACIE

3.1.5

emergency microphone

microphone for use by the fire service or other responsible persons as part of a voice alarm system

3.1.6

emergency microphone control

manual control which activates an emergency microphone