Automaatne tulekahjusignalisatsioonisüsteem. Osa 1: Sissejuhatus

Fire detection and fire alarm systems - Part 1: Introduction

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 54-1:2011 sisaldab Euroopa standardi EN 54-1:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 54-1:2011 consists of the English text of the European standard EN 54-1:2011.
Standard on kinnitatud Eesti Standardikeskuse 30.04.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 30.03.2011.	Date of Availability of the European standard text 30.03.2011.
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English Version

Fire detection and fire alarm systems - Part 1: Introduction

Systèmes de détection et d'alarme incendie - Partie 1: Introduction

Brandmeldeanlagen - Teil 1: Einleitung

This European Standard was approved by CEN on 19 February 2011.

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.

CEN members are the national standards bodies of 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 54-1:2011) 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 2011, and conflicting national standards shall be withdrawn at the latest by September 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 supersedes EN 54-1:1996.

This edition incorporates the following main changes made with respect to the previous edition of EN 54-1:1996 as follows:

a) extension to cover new parts of the EN 54 series,

b) revised approach of Figure 1: introduction of functionalities.

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* (CEN/TS 54-14)

— *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 alarm devices*

— *Part 24: Components of voice alarm systems — Loudspeakers*

— *Part 25: Components using radio links*

— *Part 26: Point fire detectors using carbon monoxide sensors*

— *Part 27: Duct smoke detectors*

— *Part 28: Non-resettable 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 fire detectors — 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, 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.

Introduction

This European Standard gives the necessary information for the intended use of the series of EN 54 standards. The EN 54 series applies to fire detection and fire alarm systems in and around buildings composed of several components that communicate for the purpose of detecting fire at the earliest practicable moment, and to provide:

— local and/or remote fire alarms to organizations having authority to take care of buildings and their environment;

— signals to initiate, in the event of a fire, the operation of other fire protection and equipment/systems.

The EN 54 series may be used for other applications e.g. mines and ships, but one should consider the specific nature of each application before use. Additional performance and environmental tests may be necessary. This does not preclude the manufacture or use of systems having special characteristics suitable for the protection of specific risks against specific hazards.

As this revision of the standard includes terms and definitions collated from specific parts of EN 54, there may now be some duplication of terms and definitions in other parts. This situation will be corrected in future revisions of the different parts of EN 54 so that definitions are defined only once and are applied consistently throughout the series.

1 Scope

This part of EN 54 defines the terms and definitions that are used throughout EN 54. It gives the principles on which each part of the standard has been based and describes the functions carried out by the components of a fire detection and fire alarm system.

This European Standard applies to fire detection and fire alarm systems in and around buildings.

This European Standard does not apply to smoke alarm devices which are covered by EN 14604.

2 General

2.1 Standardization series

EN 54 specifies:

— requirements, test methods and performance criteria against which the effectiveness and reliability of the component parts of fire detection and fire alarm systems can be assessed;

— requirements and test methods against which the ability of components to be combined into an effective system can be assessed;

— guidelines for the incorporation and use of fire detection and fire alarm systems into buildings or other construction works.

2.2 General principles

The function of a fire detection and fire alarm system is:

— to detect fire at the earliest practicable moment, and to give signals and indications so that appropriate action can be taken;

— to give audible and/or visible signals to the occupants of the building who may be at risk from a fire.

The functions of a fire detection and fire alarm system may be grouped to form subsystems such as a fire detection subsystem and a voice alarm subsystem.

As the system is required to function satisfactorily, not only under fire conditions, but also when exposed to conditions likely to be met in practice, the tests specified in the EN 54 series are intended to assess the performance of the components and the system under such conditions.

The performance of components is assessed from the results obtained in the specified tests and from their ability to perform the required functions. This standard is not intended to place restrictions on the design or construction of components other than those necessary for the performance of desired functions.

The compliance of a component with the relevant part of EN 54 does not ensure that this component will necessarily function correctly when connected with another component also conforming to the relevant part of EN 54 (e.g. control and indicating equipment with a fire detector), unless both components have been assessed together as conforming to the requirements for a system.