AUTOMAATNE TULEKAHJUSIGNALISATSIOONISÜSTEEM. OSA 13: SÜSTEEMI KOMPONENTIDE ÜHILDUVUSE HINDAMINE

Fire detection and fire alarm systems - Part 13: Compatibility assessment of system components



## **EESTI STANDARDI EESSÕNA**

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# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 54-13

May 2005

ICS 13.220.20

#### **English version**

# Fire detection and fire alarm systems - Part 13: Compatibility assessment of system components

Systèmes de détection et d'alarme incendie - Partie 13 : Évaluation de la compatibilité des composants d'un système Brandmeldeanlagen - Teil 13: Bewertung der Kompatibilität von Systembestandteilen

This European Standard was approved by CEN on 28 February 2005.

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.

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 Central Secretariat has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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#### Foreword

This document (EN 54-13:2005) 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of an identical text or by endorsement, at the latest by November 2005, and conflicting national standards shall be withdrawn at the latest by May 2007.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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

EN 54 is published in a series of parts. Information on the relationship between this document and on nex A other standards of the EN 54 series is given in Annex A of EN 54-1:1996.

EN 54-1 provides additional information about the components performing those functions that are listed in Annex A of this document.

#### Introduction

The fire detection function is to detect a fire at the earliest practicable moment, and to give signals and indications so that appropriate action can be taken.

The fire alarm function is to give, at least, audible and/or visible signals to the occupants of a building who may be at risk from fire.

A fire detection and fire alarm system may combine the functions of detection and alarm in a single system, and typically consists of a number of inter-linked components including automatic fire detectors, manual call points and alarm sounders. These components are connected to control and indicating equipment by means of one or more transmission paths. All system components, including the control and indicating equipment, are also directly or indirectly connected to a power supply.

A fire detection and fire alarm system may also be linked to remote fault and fire alarm monitoring stations, and to fire protection and/or building management systems. However these systems are not considered as part of the fire detection and fire alarm system.

It is necessary that all the components constituting the fire detection and fire alarm system are compatible or connectable, and that requirements relating to the performance of the overall system are fulfilled.

Differentiation is made between components classified as components type 1 and other components classified as components type 2.

System requirements are also included for those fire detection and fire alarm systems that are linked to fire protection and/or other systems (e.g. building management systems).

#### 1 Scope

This document specifies the requirements for compatibility and connectability assessment of system components that either comply with the requirements of EN 54 or with a manufacturer's specification where there is no EN 54 standard. This document only includes system requirements when these are necessary for compatibility assessment.

This document also specifies requirements for the integrity of the fire detection and fire alarm system when connected to other systems.

This document does not specify the manner in which the system is designed, installed and used in any particular application.

This document recognizes that it is not practical to assess the compatibility or connectability of components in all possible configurations. Methods of assessment are specified to reach an acceptable degree of confidence within pre-determined operational and environmental conditions.

This document specifies requirements related to compatibility and connectability assessment methods and tests for the system components.

This document is applicable to systems where the components are connected to control and indicating equipment and where the components are interconnected by electrical wires.

For fire detection and fire alarm systems that use other means of interconnection (for example optical fibre or radio frequency links), this document may be used as guidance.

NOTE Other European Standards are expected to cover the requirements of the other systems to which the fire detection and fire alarm system may be connected.

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. 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 50130-4, Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems

EN 60068-1, Environmental testing — Part 1: General and guidance (IEC 60068-1:1988 + Corrigendum 1998 + A1:1992)

#### 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

#### compatibility

ability of a component type 1 to operate with control and indicating equipment: