PD CEN/TS 54-32:2015

BSI Standards Publication

Fire detection and fire alarm systems

Part 32: Planning, design, installation, commissioning, use and maintenance of voice alarm systems

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National foreword

This Published Document is the UK implementation of CEN/TS 54-32:2015.

Voice alarm systems are installed in many large buildings in Europe where large numbers of people who may not be trained to evacuate (normally members of the public) are present. These buildings include sports arenas, stadiums, galleries, theatres, cinemas and other places of entertainment. They also include transport hubs such as railway stations, airports and ports.

Most European countries do not have specific guidance on the planning, design, installation, commissioning, use and maintenance of voice alarm systems. CEN/TS 54-32 has been written to provide guidance for these countries whilst avoiding conflict with existing national installation guidance documents such as BS 5839-8:2013 and BS 7827:2011 in the UK.

CEN/TS 54-32 will be useful in the UK to give guidance on the variations from the recommendations of BS 5839-8:2013 (see Clause 7) and the recommendations of BS 7827:2011 (see Clause 18) are needed because it contains up-to-date information, especially on measuring intelligibility, on the use of auxiliary mains power supplies such as UPS and generators, and on transmission paths and networking.

The UK participation in its preparation was entrusted by Technical Committee FSH/12, Fire detection and alarm systems, to Subcommittee FSH/12/5, Alarm devices, voice alarm evacuation sub-systems and emergency voice communications.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Fire detection and fire alarm systems - Part 32: Planning, design, installation, commissioning, use and maintenance of voice alarm systems

Systèmes de détection et d'alarme incendie - Partie 32 : Planification, conception, installation, mise en service, utilisation et maintenance des systèmes d'alarme vocale

Brandemeldanlagen - Teil 32: Projektierung, Montage, Inbetriebnahme, Betrieb und Instandhaltung von Sprachalarmsystemen

This Technical Specification (CEN/TS) was approved by CEN on 14 March 2015 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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Foreword

This document (CEN/TS 54-32:2015) has been prepared by Technical Committee CEN/TC 72 “Fire detection and fire alarm systems”, the secretariat of which is held by BSI.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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

Guidelines covering sound systems for use during an emergency are published by different organizations within Europe. The intention of this Technical Specification is to draw together these documents and provide up-to-date guidelines for planning, design, installation, commissioning, use, maintenance and modification of emergency sound systems throughout Europe.

Sound systems for use in emergency, whether automatically triggered, manually triggered, or both, are commonly called voice alarm systems.

It is not intended that this Technical Specification should override existing local, regional or national regulations. It is expected for a considerable (and as yet unspecified) period that these guidelines will coexist with other codes. However, it is hoped that the availability of a common set of guidelines will assist with the harmonization of practice and standards for voice alarm systems throughout Europe.

This document gives recommendations. These recommendations can be made mandatory by being specified within other document(s). For example, an authority having jurisdiction empowered under local, regional or national legislation can require compliance with this document. Equally a contract between a purchaser and a supplier can specify compliance that may then become mandatory under contract law.

The purpose of a voice alarm system is to provide intelligible warning to person(s) within, or in the vicinity of, a building in which an emergency has occurred and to enable such person(s) to take appropriate measures according to an emergency management plan.

Voice alarm systems are often used instead of alarm sounders (see EN 54-3) because the meaning of an alarm signal may not be clear to untrained building occupants and so time may be spent deciding what it means and then further time may be spent deciding what to do.

This document contains specific recommendations for the design, installation, commissioning, use, and maintenance of voice alarm systems and is based on the format used in CEN/TS 54-14.

The main principles on which the guidelines are based are given in the body of this Technical Specification. Detailed recommendations by which these principles may be satisfied are given in annexes.

1 Scope

This Technical Specification provides guidelines for the planning, design, installation, commissioning, use, maintenance and modification of voice alarm systems in and around buildings that broadcast information for the protection of lives in a fire emergency. See EN 54-1:2011, Figure 1, item C and item M.

These guidelines cover voice alarm systems that are triggered automatically by a fire detection and fire alarm system or that are manually triggered, or both.

This Technical Specification does not apply to fire detection and fire alarm systems that only use loudspeakers, bells or sounders or a combination of these.

NOTE 1 CEN/TS 54-14 provides guidelines for these systems.

This Technical Specification does not exclude the use of voice alarm systems for emergency purposes other than fire emergency.

NOTE 2 When used for emergencies other than those due to fire, it might be appropriate to modify the guidance in this Technical Specification.

This Technical Specification does not exclude the use of voice alarm systems for non-emergency purposes.

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*

3 Terms and definitions, symbols and abbreviations

For the purposes of this document, the definitions, symbols and abbreviations given in EN 54-1:2011 and the following apply.

3.1 Terms and definitions

3.1.1
acceptance
decision that the installed system meets the requirements of a previously agreed specification

3.1.2
acoustically different area
ADA
subdivision of a voice alarm zone, which may be an enclosed or otherwise physically defined space, characterized by an individual reverberation time and/or ambient noise level

Note to entry: ADA is also known as an acoustically distinguishable area.

3.1.3
alarm signal
visual, audible or tactile indication of a fire or other emergency

EXAMPLES Fire, bomb alert, industrial accident, civil commotion, terrorist attack.