Irish Standard
I.S. EN 50849:2017

Sound systems for emergency purposes

I.S. EN 50849:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 50849:2017 is the adopted Irish version of the European Document EN 50849:2017, Sound systems for emergency purposes

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50849

March 2017

ICS 13.320

Supersedes EN 60849:1998

English Version

Sound systems for emergency purposes

Systèmes électroacoustiques pour situations d'urgence

Elektroakustische Notfallwarnsysteme

This European Standard was approved by CENELEC on 2016-11-07. CENELEC 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 CENELEC 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 CENELEC 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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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50849:2017) has been prepared by CLC/BTTF 133-1 “Sound systems for emergency purposes which are not part of fire detection and alarm systems”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) [2018-03-03]
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) [2020-03-03]

This document supersedes EN 60849:1998.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50849:2017 includes the following significant technical changes with respect to EN 60849:1998:

— Annex A, Measurement of speech intelligibility, has been brought up to date in line with EN 60268-16;

— emergency sound systems for use in case of a fire emergency are excluded from the scope of this standard.

Emergency sound systems for use in case of fire emergency are covered by CEN/TS 54-32 [1], EN 54-16 and by national, regional or local regulations [2].

Components that have been certified to EN 54-16 [2] and EN 54-24 [3] can be expected to be suitable for use in a sound system for emergency purposes that complies with this standard.

CEN/TS 54-32 provides guidance for sound systems for emergency purposes which are to be used for evacuation in case of a fire emergency.

Introduction

This European Standard introduces a new approach to the assessment of system intelligibility compared with EN 60849, the standard on which it is based.

Over recent years, the Speech Transmission Index STI has been the most commonly used method for determining intelligibility of emergency sound systems. Other methods have rarely been applied. For this reason, it was decided to express the required intelligibility score by using the STI scale. The intelligibility requirements in 5.1 and Annex A have been changed in line with this.

Furthermore, the RASTI measurement method has been removed from this standard because it does not give accurate results.

This residual standard based on EN 60849 is intended to remove any requirements that conflict with the EN 54 series of fire detection and fire alarm standards, including EN 54-16 for voice alarm systems control and indicating equipment and EN 54-24 for voice alarm systems loudspeakers.

1 Scope

This European Standard specifies the performance requirements for sound systems which are primarily intended to broadcast information for the protection of lives within one or more specified areas in an emergency. It also gives the characteristics and the methods of test necessary for the specification of the system.

This European Standard applies to sound reinforcement and distribution systems to be used to effect a rapid and orderly mobilization of occupants in an indoor or outdoor area in an emergency, including systems using loudspeakers to broadcast voice announcements for emergency purposes and attention-drawing or alarm tone signals.

This European Standard does not apply to emergency sound systems used for evacuation in case of fire emergency, whether connected to a fire detection and fire alarm system or not.

NOTE 1 The use of the system for normal sound reinforcement and distribution systems purposes under non-hazardous circumstances is not excluded.

It is recommended that the system, when used for emergency purposes, should form part of a complete facility (equipment, operating procedures and training programmes) for the control of emergencies.

NOTE 2 Sound systems for emergency purposes may be the subject of approval by relevant authorities.

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 60065, *Audio, video and similar electronic apparatus — Safety requirements (IEC 60065)*

EN 60068-1, *Environmental testing - Part 1: General and guidance*

EN 60079 (all parts), *Explosive atmospheres (IEC 60079 series)*

EN 60268-16, *Sound system equipment - Part 16: Objective rating of speech intelligibility by speech transmission index*

IEC 60364 (all parts), *Low-voltage electrical installations*

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1
alarm
signal, or condition, warning of an emergency

3.2
area of coverage
area, inside and/or outside a building, where the system meets the requirements laid down in this standard

Note 1 to entry: Certain parts of an area of coverage may be excluded, see 5.1.