Second edition
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Fire detection and alarm systems —

Part 13: Compatibility assessment of system components

Systèmes de détection et d'alarme d'incendie —

Partie 13: Estimation de la compatibilité des composants d'un système

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 3, *Fire detection and alarm systems*.

This second edition cancels and replaces the first edition (ISO 7240-13:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

— This edition takes into account new techniques in communication and the availability of new technologies and concepts.

— This edition is applicable to electrical wires, optical fibre or radio frequency connections. The previous edition was only applicable to electrical wires.

— Clarification introduced that it is possible to use this document to establish compatibility with fire protection equipment such as sprinkler flow switches and electrically activated sprinkler heads.

— Levels (field, control and management) and a network transmission path for the basis of system configuration introduced.

— References to EN standards have been replaced with the appropriate IEC standard references.

— Introduction of Annex A, Example of levels used in FDAS.

— Introduction of Annex B, Classification of functions of the FDAS.

— Introduction of Annex C, Example methodology for theoretical analysis.

— Introduction of Annex D, Software design documentation.

— Introduction of Annex E, Flowchart for assessment of compatibility/connectability.

— Introduction of Annex F, previously Annex A, upgraded to the latest fire detection and alarm system functions diagram from ISO 7240-1.

A list of all parts in the ISO 7240 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

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

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

A fire detection and alarm system including voice alarm systems combines 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 devices. 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 separate voice alarm system can be assessed for compatibility and connectability independently of the fire detection and alarm system.

ISO 7240-1 provides additional information about the components performing these functions, listed in Annex F of this document.

A fire protection system and/or building management system, or remote fault and fire alarm monitoring stations that are linked to a fire detection and alarm system, are not considered part of the fire detection and alarm system.

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

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

As the possible configurations of fire detection and alarm systems are unlimited, the assessment is only carried out on the configuration(s) declared by the applicant.

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.

National application guidelines (also known as codes of practice) also contain system requirements.

System requirements are also included for fire detection and alarm systems which are linked to fire protection systems and/or other systems (for example: fire suppression and building management systems).

The intended use of this document is to demonstrate the compatibility and connectability of components, even if they are not defined by an ISO standard.