
Fire detection and alarm systems —
Part 31:
Resettable line-type heat detectors

Systèmes de détection et d'alarme incendie —

Partie 31: Détecteurs de chaleur en ligne resetable



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Foreword

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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*.

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

Resettable line-type heat detectors (RLTHD) have been incorporated into fire alarm systems for a considerable number of years. These detectors are typically used in areas where point-type heat detectors are presented with challenging environmental characteristics and also where access to the detectors can significantly influence the fire alarm system design.

This document gives common requirements for the construction and robustness of line-type heat detectors, as well as for their performance under climatic, mechanical and electrical interference conditions which are likely to occur in the service environment

This document defines the minimum system functionality for RLTHD products. RLTHD are based upon many unique operating principles. It is the intention of this document to define common operating characteristics for each type of RLTHD in conjunction with existing ISO 7240 detector International Standards, so that resettable line-type heat detectors have a response behaviour comparable to that of point-type heat detectors.

Generally, there are three functional principles employed by RLTHD: non-integrating systems, integrating systems and ror-only detectors; separate subclasses have been created for each of these systems.

Fire detection and alarm systems —

Part 31:

Resettable line-type heat detectors

1 Scope

This document applies to resettable line-type heat detectors consisting of a sensing element distributed either continuously or discretely at close intervals along its length and connected to a sensor control unit, either directly or through an interface module, intended for use in fire detection and fire alarm systems installed in and around buildings and other civil engineering works. Examples of such technology are an optical fibre, a pneumatic tube, or an electrical sensor cable

This document specifies the requirements and performance criteria, the corresponding test methods, and provides for the assessment.

This document also covers resettable line-type heat detectors intended for use in the local protection of plants and equipment.

This document does not cover non-resettable line-type heat detectors that can only respond once and are based on fixed temperature electrical cables.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 7240-1, *Fire detection and alarm systems — Part 1: General and definitions*

IEC 60068-2-1, *Environmental testing — Part 2-1: Tests — Test A: Cold*

IEC 60068-2-2, *Environmental testing — Part 2-2: Tests — Test B: Dry heat*

IEC 60068-2-6, *Environmental testing — Part 2-6: Tests — Test Fc: Vibration (sinusoidal)*

IEC 60068-2-27, *Environmental testing — Part 2-27: Tests — Test Ea and guidance: Shock*

IEC 60068-2-42, *Environmental testing — Part 2-42: Tests — Test Kc: Sulphur dioxide test for contacts and connections*

IEC 60068-2-75, *Environmental testing — Part 2-75: Tests — Test Eh: Hammer tests*

IEC 60068-2-78, *Environmental testing — Part 2-78: Tests — Test Cab: Damp heat, steady state*

IEC 62599-2, *Alarm systems — Part 2: Electromagnetic compatibility — Immunity requirements for components of fire and security alarm systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7240-1 and the following apply.