

## საქართველოს სტანდარტი

---

სსკ: 13.220.20

ხანძრის აღმოჩენისა და გამაფრთხილებელი სისტემები - ნაწილი 14:  
ხანძარსაწინააღმდეგო და გამაფრთხილებელი სისტემების დიზაინი, მონტაჟი  
და მომსახურება

საინფორმაციო მონაცემები

1 მიღებულია და დაშვებულია სამოქმედოდ: სსიპ-საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს გენერალური დირექტორის 30/12/2020 წლის № 125 განკარგულებით

2 მიღებულია „თავფურცლის“ თარგმნის მეთოდით: სტანდარტიზაციის საერთაშორისო ორგანიზაციის (ისო) სტანდარტი ისო 7240-14:2013 „ხანძრის აღმოჩენისა და გამაფრთხილებელი სისტემები - ნაწილი 14: ხანძარსაწინააღმდეგო და გამაფრთხილებელი სისტემების დიზაინი, მონტაჟი და მომსახურება“

3 პირველად

4 რეგისტრირებულია: სსიპ-საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში 30/12/2020 წლის №268-1.3-019549

წინამდებარე სტანდარტის ნებისმიერი ფორმით გავრცელება სააგენტოს ნებართვის გარეშე აკრძალულია

---

---

**Fire detection and alarm systems —**  
**Part 14:**  
**Design, installation, commissioning**  
**and service of fire detection and fire**  
**alarm systems in and around buildings**

*Systèmes de détection et d'alarme d'incendie —*

*Partie 14: Conception, installation, prise en charge et entretien des*  
*systèmes de détection d'incendie et d'alarme d'incendie à l'intérieur et*  
*autour des bâtiments*





**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions, and abbreviated terms</b> .....	<b>1</b>
3.1 Terms and definitions.....	1
3.2 Abbreviated terms.....	3
<b>4 Equipment and material</b> .....	<b>3</b>
4.1 Quality of components.....	3
4.2 Standards.....	3
4.3 Environmental requirements.....	3
4.4 Additional equipment.....	4
4.5 Installation materials.....	4
<b>5 Compatibility</b> .....	<b>4</b>
5.1 Responsibility.....	4
5.2 Documentation.....	4
5.3 Certification.....	4
<b>6 Design</b> .....	<b>4</b>
6.1 Responsibilities.....	4
6.2 Qualifications.....	5
6.3 Documentation required for the design.....	5
6.4 Fire detection and alarm system design.....	5
6.5 Detection zones.....	6
6.6 Fire detector selection, sensitivity, and response.....	9
6.7 Fire detector location.....	10
6.8 Fire detector spacing.....	15
6.9 Manual alarm condition initiation.....	27
6.10 Fire alarm devices.....	28
6.11 Fire detection control and indicating equipment.....	29
6.12 Power supply.....	31
6.13 Fire suppression systems.....	31
6.14 Smoke and heat control.....	32
6.15 Remote monitoring.....	32
6.16 Ancillary services.....	32
6.17 Delays to outputs.....	33
6.18 Transmission paths.....	33
6.19 Documentation.....	35
<b>7 Installation</b> .....	<b>36</b>
7.1 Responsibility.....	36
7.2 Qualifications.....	37
7.3 Certification.....	37
<b>8 Commissioning</b> .....	<b>37</b>
8.1 Responsibility.....	37
8.2 Qualifications.....	37
8.3 Procedure.....	37
8.4 Report.....	38
8.5 Certification.....	38
<b>9 Approvals</b> .....	<b>38</b>
<b>10 Normal use</b> .....	<b>38</b>
10.1 Access to system.....	38

10.2 Other responsibilities..... 39

10.3 Routine tests and regular controls..... 39

10.4 Records..... 39

10.5 Operating instructions..... 39

**11 Service..... 39**

11.1 Responsibility..... 39

11.2 Qualifications..... 39

11.3 Service plan..... 39

11.4 Documentation..... 41

**12 Abnormal situations..... 43**

**13 Special systems..... 43**

13.1 Fire and intrusion systems..... 43

13.2 Fire and building automation systems..... 43

13.3 Connection to computer not being a required part..... 43

13.4 National requirements..... 43

13.5 Electrical safety..... 43

13.6 Radiation hazards..... 43

**14 Alterations to existing installations..... 44**

**Annex A (informative) Power source calculations..... 45**

**Bibliography..... 47**

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. [www.iso.org/directives](http://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. [www.iso.org/patents](http://www.iso.org/patents)

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 3, *Fire detection and alarm systems*.

This first edition cancels and replaces ISO/TR 7240-14:2003.

ISO 7240 consists of the following parts, under the general title *Fire detection and alarm systems*:

- *Part 1: General and definitions*
- *Part 2: Control and indicating equipment*
- *Part 3: Audible alarm devices*
- *Part 4: Power supply equipment*
- *Part 5: Point-type heat detectors*
- *Part 6: Carbon monoxide fire detectors using electro-chemical cells*
- *Part 7: Point-type smoke detectors using scattered light, transmitted light or ionization*
- *Part 8: Carbon monoxide fire detectors using an electro-chemical cell in combination with a heat sensor*
- *Part 9: Test fires for fire detectors [Technical Specification]*
- *Part 10: Point-type flame detectors*
- *Part 11: Manual call points*
- *Part 12: Line type smoke detectors using a transmitted light beam*
- *Part 13: Compatibility assessment of system components*
- *Part 14: Design, installation, commissioning and service of fire detection and fire alarm systems in and around buildings*
- *Part 15: Point type fire detectors using scattered light, transmitted light or ionization sensors in combination with a heat sensor*
- *Part 16: Sound system control and indicating equipment*

## ISO 7240-14:2013(E)

- *Part 17: Short-circuit isolators*
- *Part 18: Input/output devices*
- *Part 19: Design, installation, commissioning and service of sound systems for emergency purposes*
- *Part 20: Aspirating smoke detectors*
- *Part 21: Routing equipment*
- *Part 22: Smoke-detection equipment for ducts*
- *Part 23: Visual alarm devices*
- *Part 24: Sound-system loudspeakers*
- *Part 25: Components using radio transmission paths*
- *Part 27: Point-type fire detectors using a scattered-light, transmitted-light or optical or ionization smoke sensors, an electrochemical-cell carbon-monoxide sensor and a heat sensor*
- *Part 28: Fire protection control equipment*

The following part is under preparation:

- *Part 29: Video fire detectors*

## Introduction

The installation of a fire detection and alarm system can only be successfully accomplished if the following conditions are fulfilled:

- materials are of a suitable quality;
- special knowledge in the field of fire detection and fire alarm;
- skilled personnel to carry out the work.

Although the quality of the material can be ensured by proper standards and quality audits, the overall effectiveness of an installation depends widely on the quality of work, the experience of the designer and installer, and regular service.

This part of ISO 7240 has been prepared by ISO/TC 21/SC 3. A number of existing national codes and standards were reviewed during the preparation of this edition of this part of ISO 7240. Although there are minor differences in, for example, detector spacing requirements, each code or standard has the same objective of early fire detection. This part of ISO 7240 specifies the minimum requirements for fire detection and alarm systems using equipment complying with ISO 7240.