

# SLOVENSKI PREDSTANDARD

**SIST EN 54-2:1997/OprA1:2004**

september 2004

---

---

**Sistemi za odkrivanje in javljanje požara ter alarmiranje - 2. del: Požarna centrala**

Fire detection and fire alarm systems - Part 2: Control and indicating equipment

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

SIST EN 54-2:1997/A1:2007

<https://standards.iteh.ai/catalog/standards/sist/d3896f82-4b4f-4804-bb45-509693b15cbc/sist-en-54-2-1997-a1-2007>

---

---

ICS 13.220.20

Referenčna številka  
SIST EN 54-2:1997/OprA1:2004(en)



ICS

English version

## Fire detection and fire alarm systems - Part 2: Control and indicating equipment

Systèmes de détection et d'alarme incendie - Partie 2:  
Équipement de contrôle et de signalisation

Brandmeldeanlagen - Teil 2: Brandmelderzentralen

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 72.

This draft amendment A1, if approved, will modify the European Standard EN 54-2:1997. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

[SIST EN 54-2:1997/A1:2007](https://standards.iteh.ai/catalog/standards/sist/d3896f82-4b4f-4804-bb45-509693b15cbc/sist-en-54-2-1997-a1-2007)

<https://standards.iteh.ai/catalog/standards/sist/d3896f82-4b4f-4804-bb45-509693b15cbc/sist-en-54-2-1997-a1-2007>



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

## Contents

Page

Foreword .....	3
2 Normative references.....	4
7.8 Output to fire alarm devices (option with requirements -see also 8.2.5.a) and 9.4.2.a)).....	6
7.9.1 Output to fire alarm routing equipment (option with requirements – see also 8.2.5 b and 9.4.2 b).....	7
7.9.2 Input from fire alarm routing equipment (option with requirements).....	7
7.10.1 Output type A (option with requirement - see also 8.2.4.f and 9.4.1.b) .....	7
7.10.2 Output type B (option with requirement - see also 8.2.4.f and 9.4.1.b) .....	7
7.10.3 Output type C (option with requirement - see also 8.2.4.f and 9.4.1.b) .....	7
7.10.4 Fault monitoring of fire protection equipment (option with requirement - see also 8.2.4.f).....	7
7.12.1 Type A dependency (option with requirement).....	8
7.12.2 Type B dependency (option with requirement).....	9
Delete 7.13 a) and substitute.....	9
a) re-initialisation of the counter shall be possible at access level 4. In the event of a loss of the main and the stand-by power sources, the data shall be retained for at least 14 days. ....	9
Delete 8.1.2 and substitute.....	9
Delete 9.3.1 and substitute.....	12
Delete 13.3 c) and substitute.....	14
13.5 The storage of programs and data (see also annex I).....	15
Delete in 13.7 b) the last bullet point and substitute.....	15
Clause 14.....	16
15.1.5 Provision for tests.....	16
15.3.2 Tests for one specimen.....	17
15.3.3 Tests for more than one specimen.....	17
Delete in 15.3.5 the second paragraph (the note) and substitute.....	17
15.8 Electromagnetic Compatibility (EMC), Immunity tests (operational) .....	18
Delete 15.13.2.4 and substitute.....	18
Delete 15.14.2.1 and substitute.....	19
E.1 General.....	20
E.2 Dependency on more than one alarm signal (option with requirement) .....	20
Annex ZA (normative) Clauses addressing the provisions of the EU Construction Products Directive (89/106/EEC).....	24

## Foreword

This document (EN 54-2:1997/prA1) has been prepared by Technical Committee CEN/TC 72 “Fire detection and fire alarm systems”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) 89/106 and 96/98.

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

Amendment 1 to this standard improves the additional requirements for software controlled equipment and makes a number of miscellaneous changes, to correct errors and better reflect the current state of the art. It also replaces the descriptions of the individual electromagnetic compatibility immunity tests with a reference to the EMC Product Family Standard EN 50130-4, makes editorial and technical changes to generally improve clarity, and updates the normative references.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN 54-2:1997/A1:2007](https://standards.iteh.ai/catalog/standards/sist/d3896f82-4b4f-4804-bb45-509693b15cbc/sist-en-54-2-1997-a1-2007)

<https://standards.iteh.ai/catalog/standards/sist/d3896f82-4b4f-4804-bb45-509693b15cbc/sist-en-54-2-1997-a1-2007>

## 2 Normative references

### **Clause 2 : Delete the existing text and substitute**

The following referenced documents are indispensable for the application 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.

EN54-1: 1996, *Fire detection and fire alarm systems — Part 1: Introduction*

EN54-4: 1997, *Fire detection and fire alarm systems — Part 4: Power supply equipment*

EN54-7: 1982, *Components of automatic fire detection systems — Part 7: Point type smoke detectors; Detectors using scattered light, transmitted light or ionisation*

EN 9001: 2000, *Quality management systems — Requirements (ISO 9001: 2000)*

EN 50130-4: 1995, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems*

EN 60068-1: 1994, *Environmental testing — Part 1: General and guidance (IEC 60068-1: 1988)*

EN 60068-2-1: 1993, *Environmental testing — Part 2: Tests : Tests A : Cold (IEC 60068-2-1: 1993)*

EN 60068-2-6: 1995, *Environmental testing — Part 2: Tests, Test Fc: Vibration (sinusoidal) (IEC 60068-2-6 : 1995)*

EN 60068-2-47: 1993, *Basic environmental testing procedures — Part 2: Tests, Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ga) and guidance (IEC 60068-2-47 : 1982)*

EN 60068-2-75: 1997, *Environmental testing — Part 2: Tests — Test Eh: Hammer tests (IEC 60068-2-75: 1997)*

EN 60529: 1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529: 1989)*

EN 60721-3-3: 1995, *Classification of environmental conditions Part 3: Classification of groups of environmental parameters and their severities — Section 3: Stationary use at weather protected locations (IEC 60721-3-3 : 1994)*

HD 323.2.56 S1: 1990 *Environmental testing — Part 2: Tests, Test Cb: Damp heat steady state, primarily for equipment (IEC 60068-2-56 : 1988)*

### **Clause 3:**

#### **Delete 3.1.17 and substitute**

##### **3.1.17 silencing**

manual operation to switch off the audible signal of a sounding device which is capable of being automatically re-sounded by a new event

#### **Add 3.1.23**

##### **3.1.23 module**

independent part of the program which fulfils specified functions

**Add 3.1.24**

**3.1.24**

**first alarm signal**

signal from a fire detector or manual call point which is interpreted as a fire alarm, but following which the CIE enters a first alarm state

**Add 3.1.25**

**3.1.25**

**first alarm state**

state of the CIE following the receipt of a first alarm signal during which mandatory functions of the CIE may be inhibited

**Add 3.1.26**

**3.1.26**

**confirmation alarm signal**

signal from a fire detector or manual call point which terminates a first alarm state

**Add 3.1.27**

**3.1.27**

**integrated PSE**

PSE is considered to be integrated within a CIE if it is not possible for the manufacturer to specify the output voltage range(s) of the PSE and the input voltage range(s) of the CIE, and if, in the event that the PSE is defective, its replacement involves replacement of part or all of the CIE.

**In 3.2 add in the end**

PSE : power supply equipment.

**Clause 5:**

**Delete the last bullet point in 5.1.1 and substitute**

— test condition (if provided).

**Delete the last bullet point in 5.1.2 and substitute**

— test condition (if provided).

**Clause 7:**

**Delete 7.1.5 and substitute**

**7.1.5** The mandatory indications and outputs shall not be falsified by multiple fire signals received from the same or different detection circuits, resulting from the simultaneous operation of two points and/or the operation of further points.

**Delete 7.4.3 and substitute**

**7.4.3** The audible indication shall re-sound for each new zone in alarm.

**Delete 7.3.2 c) and substitute**

c) the total number of zones in alarm shall be displayed;

**Delete 7.3.2 d) and substitute**

d) zones in alarm, but not currently indicated, shall be capable of being displayed at access level 1. A single manual action shall be required for the display of each additional zone in alarm. Either individual fields, or the whole fire alarm window may be temporarily suppressed to permit the

display of additional zones in alarm. However, the display shall meet the requirements of 7.3.2a), 7.3.2b) and 7.3.2c) within 30 s following the last interrogation.

**Add in 7.4.1 after the last sentence**

The silencing of the audible indication may be accompanied by changes in the visible indications of fire or fault, provided that the conditions are still indicated as required in this standard (e.g. the indication of light emitting indicators may change from flashing to steady, or the information given on an alphanumeric display may be updated)

**Clause 7.5 Delete the existing text and substitute**

**7.5.1** If faults, disablements or tests are indicated by means of separate light emitting indicators, and such indications are suppressed in the fire alarm condition, it shall be possible to reveal these by means of a manual operation at access level 1 or 2.

**7.5.2** If the fire alarm indications are on an alphanumeric display, the following shall apply to the display of other information:

- a) information not related to the fire alarm condition shall be suppressed, unless the display has more than one window, one of which is exclusively reserved for fire alarm indications.
- b) suppressed indications of faults, disablements and tests shall be capable of being displayed, at any time, by manual operations at access level 1 or 2, which are different from, or additional to that specified in 7.3.2 d) to display zones in alarm, and which are capable of displaying at least faults and disablements independently.
- c) either individual fields, or the whole fire alarm window may be temporarily suppressed to permit the display of faults, disablements and tests. However, the display shall meet the requirements of 7.3.2a), 7.3.2b) and 7.3.2c) within 30 s following the last interrogation.

**Delete 7.6.1 and substitute**

**7.6.1** The CIE shall be capable of being reset from the fire alarm condition. This shall only be possible by means of a separate manual control, at access level 2. This control shall be used only for reset and may be the same as that used for reset from the fault warning condition.

**Delete 7.7.2 and substitute**

**7.7.2** Unless 7.11 and/or 7.12 apply, the CIE shall activate all mandatory outputs within 3 s of the indication of a fire alarm condition.

**Delete 7.7.3 and substitute**

**7.7.3** Unless 7.11 applies, the CIE shall activate all mandatory outputs within 10 s of the activation of any manual call point.

**Delete 7.8 and substitute**

**7.8 Output to fire alarm devices (option with requirements -see also 8.2.5.a) and 9.4.2.a))**

The CIE may have provision for the automatic transmission of fire alarm signals to fire alarm devices (item C of figure 1 of EN 54-1)<sup>1)</sup>. In this case the following shall apply:

- a) It shall be possible to silence the fire alarm devices at access level 2;
- b) Following silencing, it shall be possible to re-sound the fire alarm devices at access level 2;
- c) The fire alarm devices shall not be silenced automatically;



- d) Following silencing, it shall be possible to automatically re-sound the fire alarm devices by an alarm in another zone.

<sup>1)</sup> The outputs to the fire alarm devices may be programmable to allow the operation of the devices in accordance with a pre-determined alarm/evacuation plan (e.g. two stage alarms, phased evacuation etc.)

**Delete 7.9 and substitute**

**7.9 Control of fire alarm routing equipment (options with requirements)**

**7.9.1 Output to fire alarm routing equipment (option with requirements – see also 8.2.5 b and 9.4.2 b)**

The CIE may have provision for the automatic transmission of fire alarm signals to fire alarm routing equipment (item E of figure 1 of EN 54-1). In this case the transmission of the signal shall be indicated by means of a separate light emitting indicator and/or an alphanumeric display. The indication shall remain until the fire alarm condition is reset.

**7.9.2 Input from fire alarm routing equipment (option with requirements)**

If 7.9.1 is provided the CIE may have an input which is capable of receiving signals from fire alarm routing equipment (item E of figure 1 of EN 54-1). In this case the reception of the signals shall be indicated by means of a separate light emitting indicator and/or an alphanumeric display. The light emitting indicator may replace the indicator of 7.9.1. The indication shall remain until the fire alarm condition is reset.

**Delete 7.10 and substitute**

**7.10 Output to fire protection equipment (options with requirements)**

**7.10.1 Output type A (option with requirement - see also 8.2.4.f and 9.4.1.b)**

The CIE may have provision for the transmission of fire alarm signals to controls for automatic fire protection equipment (item G of figure 1 of EN 54-1).

**7.10.2 Output type B (option with requirement - see also 8.2.4.f and 9.4.1.b)**

The CIE may have provision for the transmission of fire alarm signals to controls for automatic fire protection equipment (item G of figure 1 of EN 54-1). In this case the transmission of the signal shall be indicated by means of a separate light emitting indicator and/or an alphanumeric display. The indication shall be at least common to all G, and shall not be suppressed during the fire alarm condition.

**7.10.3 Output type C (option with requirement - see also 8.2.4.f and 9.4.1.b)**

The CIE may have provision for the transmission of fire alarm signals to controls for automatic fire protection equipment (item G of figure 1 of EN 54-1). In this case the reception of a confirmatory signal from G shall be indicated by means of a separate light emitting indicator and/or an alphanumeric display. The indication shall be at least common to all G, and shall not be suppressed during the fire alarm condition.

**7.10.4 Fault monitoring of fire protection equipment (option with requirement - see also 8.2.4.f)**

The CIE may have provision to receive fault warning signals from controls for automatic fire protection equipment (item G of figure 1 of EN 54-1). These faults shall be indicated by means of a separate light emitting indicator and/or an alphanumeric display. The indication shall be at least common to all G, and shall not be suppressed during the fire alarm condition. The indicator may be the same as that of 8.2.4.f.

**Delete 7.11 and substitute**

**7.11 Delays to outputs (option with requirements; see also annex E)**

**7.11.1** The CIE may have provision to delay the activation of outputs to fire alarm devices (item C of figure 1 of EN 54-1) and/or to fire alarm routing equipment (item E of figure 1 of EN 54-1) and/or to controls for automatic fire protection equipment (item G of figure 1 of EN54-1). In these cases at least the following shall apply:

- a) the operation of delays to outputs to C and G shall be configurable at access level 3 to apply to
  - fire detectors, and/or;
  - manual call points, and/or;
  - signals from specific zones;
- b) the operation of delays to outputs to E shall be configurable at access level 3, to apply to
  - fire detectors, and/or;
  - signals from specific zones;
- c) the delay times shall be configurable at access level 3, in increments not exceeding 1 minute, up to a maximum of 10 minutes;
- d) it shall be possible to override the delays and immediately activate delayed outputs by means of a manual operation at access level 1 and/or by means of a signal from a manual call point;
- e) the delay to one output signal shall not affect the activation of other outputs.

**7.11.2** If 7.11.1 applies, the CIE may have provision to switch on and switch off the delayed operation of outputs. In this case the following shall apply:

- a) It shall be possible to switch on and switch off delays, by means of a manual operation at access level 2.
- b) There may be provision to automatically switch on and/or switch off delays by means of a programmable timer, which shall be configurable at access level 3.
- c) The mode of operation when delays are switched on shall be visibly indicated by means of a separate light emitting indicator and/or an alphanumeric display. The indication shall not be suppressed during the fire alarm condition

**Delete 7.12 and substitute**

**7.12 Dependency on more than one alarm signal (option with requirement)**

**7.12.1 Type A dependency (option with requirement)**

Following the receipt of a first alarm signal, the entry to the fire alarm condition may be inhibited until the receipt of a confirmation alarm signal from the same fire detector, or from a fire detector in the same zone. In this case, the first alarm state need not be indicated, and the following shall apply:

- a) The mode of operation shall be configurable at access level 3.
- b) It shall be possible to receive a confirmation alarm signal at least from the same fire detector within 60 s. of the receipt of the first alarm signal.
- c) The first alarm state shall be automatically cancelled within 30 minutes of the receipt of the first alarm signal.

**7.12.2 Type B dependency (option with requirement)**

Following the receipt of a first alarm signal, the entry to the fire alarm condition may be inhibited until the receipt of a confirmation alarm signal from another fire detector, which may be in the same or a different zone. In this case the following shall apply:

- a) The mode of operation shall be configurable at access level 3.
- b) The first alarm state shall be indicated by means of:
  - an audible indication which may be the same as that in the fire alarm condition or fault warning condition.
  - a visible indication of the affected zone, which may be the same as that for indication of zone in alarm as in 7.3. The General Fire Alarm Indicator shall not be illuminated.
- c) It shall be possible to manually cancel the first alarm state. This may be done with the same control as is used for reset from the fire alarm condition or fault warning condition.
- d) The CIE may have provision to automatically cancel the first alarm state after a time interval which shall not be less than 5 minutes.

**7.12.3 Type C dependency (option with requirement)**

Following the receipt of a first alarm signal from a fire detector or a manual call point, and until a confirmatory signal is received from another fire detector or manual call point, which may be in the same or another zone, the CIE shall enter the fire alarm condition but may have provision to inhibit the operation of outputs. In this case it shall be possible to configure the mode of operation at access level 3 to apply individually to each of the following (where provided):

- output to fire alarm devices (item C of figure 1 of EN54-1), as in 7.8;
- output to fire alarm routing equipment (item E of figure 1 of EN54-1), as in 7.9;
- output to fire protection equipment (item G of figure 1 of EN54-1), as in 7.10;

**Delete 7.13 a) and substitute**

- a) re-initialisation of the counter shall be possible at access level 4. In the event of a loss of the main and the stand-by power sources, the data shall be retained for at least 14 days.

**Clause 8****Delete 8.1.2 and substitute**

**8.1.2** The CIE shall be capable of simultaneously recognising all of the faults specified in 8.2 and 8.3, with the exception that the recognition of a fault in a given zone or function may be prevented by one or more of the following:

- a) the presence of fire alarm signals from the same zone;
- b) the disablement of the corresponding zone or function;
- c) the testing of the corresponding zone or function;
- d) the activation of the output to a transmission path which is exclusively used to transmit signals to
  - fire alarm devices (item C of figure 1 of EN54-1), or;