

**SLOVENSKI STANDARD**  
**SIST EN 54-3:2014/kFprA1:2018**  
**01-september-2018**

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**Sistemi za odkrivanje in javljanje požara ter alarmiranje - 3. del: Naprave za alarmiranje - Zvočne naprave - Dopolnilo A1**

Fire detection and fire alarm systems - Part 3: Fire alarm devices - Sounders

Brandmeldeanlagen - Teil 3: Feualarmeinrichtungen Akustische Signalgeber

Systèmes de détection et d'alarme incendie - Partie 3: Dispositifs sonores d'alarme feu  
(standards.iteh.ai)

**Ta slovenski standard je istoveten z: EN 54-3:2014/FprA1**

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**ICS:**

13.220.20	Požarna zaščita	Fire protection
13.320	Alarmni in opozorilni sistemi	Alarm and warning systems

**SIST EN 54-3:2014/kFprA1:2018**                      **en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**FINAL DRAFT**  
**EN 54-3:2014**

**FprA1**

June 2018

ICS 13.220.20

English Version

## Fire detection and fire alarm systems - Part 3: Fire alarm devices - Sounders

Systèmes de détection et d'alarme incendie - Partie 3 :  
Dispositifs sonores d'alarme feu

Brandmeldeanlagen - Teil 3: Feueralarmeinrichtungen  
Akustische Signalgeber

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

This draft amendment A1, if approved, will modify the European Standard EN 54-3:2014. 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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**EN 54-3:2014/FprA1:2018 (E)****European foreword**

This document (EN 54-3:2014/FprA1:2018) 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 Unique Acceptance Procedure.

This document has been prepared under a standardization request given to CEN-CENELEC by the European Commission and the European Free Trade Association, and supports basic work requirements of Regulation (EU) 305/2011.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

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## 1 Modification to the Foreword

*Insert the following text before the list of standards:*

"Amendment 1 to EN 54-3:2014 corrects some of the errors and clarifies some of the points."

## 2 Modification to Clause 2, Normative references

*Add the following amendment to reference EN 60529:1991:*

"EN 60529:1991/A2:2013, *Degrees of protection provided by enclosures (IP Code) (IEC 60529/A2:2013)*".

*Replace reference to EN 60695-11-20:1999 including its amendment with:*

"EN 60695-11-20:2015, *Fire hazard testing — Part 11-20: Test flames — 500 W flame test method (IEC 60695-11-20:2015)*".

*Add the following reference:*

"EN 54-25, *Fire detection and fire alarm systems — Part 25: Components using radio links*".

## 3 Modifications to cross references to EN 60529:1991

*In 4.2.4, a) and b) (twice); 5.2.4.2.1, 1<sup>st</sup> paragraph; 5.2.4.2.2, last paragraph; 5.2.4.2.3, 1<sup>st</sup> paragraph; 5.2.4.3 a) (update of 5.2.4.3 b) is covered by modification 15); Annex C, e); replace "as amended by EN 60529:1991/A1:2000" with "as amended by EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013".*

## 4 Modification to 3.1.1, A-weighted sound pressure level

*Replace the definition with:*

"sound pressure level expressed in dB(A), which is 20 times the logarithm to base ten of the ratio of the A-weighted sound pressure to the reference pressure of 20 µPa at 1 kHz".

## 5 Modification to 4.2.1, Duration of operation

*Replace the second paragraph with:*

"This requirement does not apply to the capacity of batteries that may be used within sounders as a means of local storage of operating power. The capacity and charging requirements of such batteries need to meet the requirement of the system."

## 6 Modification to 4.2.3, Flammability of materials

*In b), replace "EN 60695-11-20:1999 and EN 60695-11-20:1999/A1:2003 Class 5VB" with "EN 60695-11-20:2015 Class 5VB".*

## 7 Modification to 4.2.7, On-site adjustment of the operation mode

*Replace b) 1) with the following text:*

"for volume controls, the limits of the compliant range of sound pressure levels shall be clearly shown in the associated data,".

*Replace b) 2) with the following text:*

"for sound pattern(s), the compliant setting(s) shall be clearly marked in the associated data."

**EN 54-3:2014/FprA1:2018 (E)****8 Modification to 4.2.8.4, The storage of program and data**

*In the first line of the first paragraph, replace the word “programme” with “program”.*

*In the first line of the second paragraph, replace the word “which” with “that”.*

**9 Modification to 4.3.1, Sound pressure level**

*Replace third paragraph with the following text:*

"When tested in accordance with 5.3.1 the sounder shall produce A-weighted sound pressure levels of at least 65 dB(A) in one direction and the sound pressure level measured at each of the specified angles shall not be less than that declared by the manufacturer."

**10 Modification to 4.3.2, Frequencies and sound pattern**

*In the first line of the first paragraph, replace the word “which” with “that”.*

**11 Modification to 4.3.5, Voice sounders sequence timing**

*Replace Table 1 and the paragraph beneath it with the following:*

**"Table 1 — Voice sounders broadcast sequence and timings**

Sequence steps	Duration
a) attention-drawing signal	2 s to 10 s
b) silence	0,25 s to 2 s
c) voice message	≤ 30 s
d) silence	0,25 s to 2 s

The time between the start of each cycle shall not exceed 30 s. The periods of silence may need to be longer than indicated in certain circumstances, for example in spaces with long reverberation times, but shall not be such that the time between the start of each cycle exceeds 30 s."

**12 Modification to 5.1.2, Operating conditions for tests**

*Delete the fourth paragraph, which reads:*

"When testing radio-linked sounders, an external power supply set to either the lowest or highest working voltage of the internal batteries may be in place of the normal internal batteries on radio devices. This external power supply should be such that the maximum current is taken by the alarm device during the test."

**13 Modification to 5.1.6, Test schedule**

*In the first line of the fourth paragraph, replace the word “test” with the word “tests”.*

*Replace Table 2 with the following table:*

"Table 2 — Schedule of tests

Test	Subclause	Specimen No(s)	
		Type A	Type B
Reproducibility	5.1.7	all	all
Duration of operation	5.2.1	2	2
Enclosure protection	5.2.4	1, 2	1, 2
Sound pressure level	5.3.1 <sup>a</sup>	1	1
Synchronisation (where applicable)	5.3.3	1, 2	1, 2
Performance of voice sounders	5.3.4	1	1
Voice sounder sequence timing	5.3.5	1	1
Dry heat (operational)	5.4.1.1	3	3
Dry heat (endurance)	5.4.1.2	-	9
Cold (operational)	5.4.1.3	3	3
Damp heat, cyclic (operational)	5.4.2.1	3	3
Damp heat, steady-state (endurance)	5.4.2.2	3	3
Damp heat, cyclic (endurance)	5.4.2.3	-	10
Shock (operational)	5.4.3.1	4	4
Impact (operational)	5.4.3.2	5	5
Vibration, sinusoidal (operational)	5.4.3.3	6	6
Vibration, sinusoidal (endurance)	5.4.3.4	6	6
Corrosion resistance, SO <sub>2</sub> corrosion (endurance)	5.4.4	7	7
EMC, immunity (operational)	5.4.5.1 <sup>b</sup>	8	8
Electrostatic discharge (operational)	5.4.5.1.2.1 a)	8	8
Radiated electromagnetic fields (operational)	5.4.5.1.2.1 b)	8	8
Conducted disturbances induced by electromagnetic fields (operational)	5.4.5.1.2.1 c) c	8	8
Voltage transients, fast transient bursts (operational)	5.4.5.1.2.1 d) c	8	8
Voltage transients, slow high energy voltage surge (operational)	5.4.5.1.2.1 e) c	8	8
<sup>a</sup> For voice sounders, only the attention-drawing signal shall be measured. <sup>b</sup> The EMC tests specified in 5.4.5.1 are not required for sounders which do not rely on active electronic components for their operation, e.g. mechanical bells. <sup>c</sup> These conducted EMC tests are not required for sounders that do not provide for the connection of external conductors.			

"

**EN 54-3:2014/FprA1:2018 (E)****14 Modification to 5.2.4.2.2, State of the specimen during conditioning**

*Replace b) with the following text:*

"b) powered and sounding during the test for protection against water;"

**15 Modification to 5.2.4.3, Test requirements**

*Replace b) with the following text:*

"b) the specimen tested complies with the acceptance conditions for the test for protection against access to hazardous parts of EN 60529:1991 as amended by EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013, 15.3,"

**16 Modification to 5.3.1.2, Test procedure**

*Insert the following as a new final paragraph:*

"When testing radio-linked sounders, an external power supply shall be used in place of the internal batteries. Manufacturers shall specify the maximum and minimum voltage and the associated current for each voltage."

**17 Modification to 5.3.1.3, Test requirements**

*Replace existing text with the following:*

"The sounder shall be deemed to comply with the requirements of this clause if, for each mode of operation:

- a) the A-weighted sound pressure level is greater than 65 dB(A) in at least one direction, and;
- b) the sound pressure level measured at each of the specified angles is not less than that declared by the manufacturer, and;
- c) the difference between the A-weighted sound pressure levels measured at the maximum and minimum supply parameters is not more than 6 dB, for each direction measured."

**18 Modification to 5.3.2, Frequencies and sound patterns**

*Replace the first paragraph with the following text:*

A check of the evidence provided by the manufacturer shall be conducted to verify that frequencies and sound patterns are provided as specified in 4.3.2.

**19 Modification to 5.3.3.1, Object of the test**

*Replace the existing text with the following:*

"To show the ability of sounders that provide a synchronisation function to remain synchronised over time."

**20 Modification to 5.3.4.2, Test procedure**

*Replace the first paragraph with the following:*

Measure the sound pressure level of the voice message and that of the attention-drawing signal as specified in Annex A, except that measurement at only 15° from the axis of the specimen is required. (These are angles 75° or 105° in one plane as shown in Figure A.2 and 15° as shown in Figure A.3).

## 21 Modification to 5.4.1.1.2.3, Conditioning

*In the second line of the first paragraph, replace the text "1°K/min" with "1 K/min".*

## 22 Modification to 5.4.1.1.3, Test requirements

*Replace item b) with the following text:*

"b)  $\Delta(L_{pA})$  between measurements during the conditioning period (see 5.4.1.1.2.4 b)) and after the recovery period (see 5.4.1.1.2.5) and the measurement during the reproducibility test (see 5.1.7) for that specimen is less than or equal to 6 dB."

## 23 Modification to 5.4.1.2.2.3, Conditioning

*Delete the first sentence of the first paragraph, which reads:*

"The air temperature in the reverberation test chamber shall be increased to the test temperature at a rate not exceeding 1°K/min."

## 24 Modification to 5.4.1.3.2.3, Conditioning

*In the second line of the first paragraph, replace the text "1°K/min" with "1 K/min".*

## 25 Modification to 5.4.2.1.2.1, Reference

*Replace the existing text with the following:*

"The test apparatus and procedure shall be as described in EN 60068-2-30:2005, using the Variant 1 test cycle and controlled recovery conditions and in 5.4.2.1.2.2 to 5.4.2.1.2.5."

## 26 Modification to 5.4.2.1.2.2, State of the specimen during conditioning

*Replace the text with the following:*

The specimen shall be maintained in the quiescent state during the conditioning period except during the last half-hour of the high temperature phase of the last cycle when it shall be sounding (see 5.1.2).

## 27 Modification to 5.4.2.1.2.3, Conditioning

*Replace 80 with 95 and  $93 \pm 5$  with  $93 \pm 3$  in Table 6.*

## 28 Modification to 5.4.2.1.2.4, Measurements during conditioning

*Delete the first line, which reads:*

"During conditioning:"

## 29 Modification to 5.4.3.1.1, Object of the test

*Delete the word "anticipated" from the second line.*