SLOVENSKI STANDARD
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SIST EN 50131-4:2009

Alarmni sistemi - Sistemi za javljanje vloma in ropa - 4. del: Opozorilne naprave

Alarm systems - Intrusion and hold-up systems - Part 4: Warning devices

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 4: Signalgeber

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 4: Dispositifs d'avertissement

Ta slovenski standard je istoveten z: **EN 50131-4:2019**

ICS:

13.310	Varstvo pred kriminalom	Protection against crime
13.320	Alarmni in opozorilni sistemi	Alarm and warning systems

SIST EN 50131-4:2019 **en,fr**

EUROPEAN STANDARD

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English Version

Alarm systems - Intrusion and hold-up systems - Part 4: Warning devices

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 4: Dispositifs d'avertissement

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 4: Signalgeber

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50131-4:2019) has been prepared by CLC/TC 79, “Alarm systems”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-12-31
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-12-31

This document supersedes EN 50131-4:2009.

This revision includes changes:

— to remove technology specific terminology from requirements;

— to clarify the scope and detail of requirements;

— to clarify the application and methodology of tests;

— to align requirements and testing for tamper security with other parts of the EN 50131-x suite of product standards;

— to align requirements for environmental testing with other parts of the EN 50131-x suite of product standards;

— to improve editorial presentation.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

1 Scope

This document includes requirements for warning devices used for notification in intrusion and hold up alarm systems installed in buildings. Four grades of warning device are described corresponding to each of the four security grades given in EN 50131-1. Requirements are also given for four environmental classes covering applications in indoor and outdoor locations as specified in EN 50130-5.

This document does not deal with requirements for compliance with EC regulatory Directives, such as the EMC Directive, Low Voltage Directive, etc. except that it specifies the equipment operating conditions for EMC susceptibility testing as required by EN 50130-4.

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.

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

EN 50130-5, *Alarm systems — Part 5: Environmental test methods*

EN 50131-1, *Alarm systems — Intrusion and hold-up systems — Part 1: System requirements*

EN 50131-6, *Alarm systems — Intrusion and hold-up systems — Part 6: Power supplies*

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

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

EN 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications (IEC 61672-1)*

EN 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IEC 62262)*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1.1
audible alarm
distinctive sound generated in response to an alarm condition

3.1.2
warning device
device that gives an audible alarm in response to a notification

Note 1 to entry: A warning device may also provide alert indications.

3.1.3
external warning device
warning device designed to be located outside the supervised premises which gives an external audible alarm in response to a notification

3.1.4
internal warning device
warning device designed to be located within the supervised premises which gives an internal audible alarm in response to a notification

3.1.5
enclosure
housing that contains the warning device components, normally comprises a backplate and a cover

3.1.6
external power source
energy supply external to the I&HAS which may be non-continuous, e.g. mains supply

3.1.7
reference point
centroid of the mounting face of the warning device enclosure projected onto the mounting surface

3.1.8
remote power source
electrical supply, which is not a part of the warning device, meeting the requirements of EN 50131-6

3.1.9
remotely powered warning device
warning device that does not incorporate its own power source

3.1.10
self-powered warning device
warning device that incorporates its own power source

3.1.11
standby condition
operational mode of a self-powered warning device during which it is powered from its internal storage device, whilst not notifying an alarm condition

3.1.12
storage device – failure
condition of the storage device where it is no longer able to power the warning device

3.1.13
storage device – low residual energy
condition specified by the warning device manufacturer which indicates that the storage device is nearly discharged

3.1.14
trigger command
notification signal or message passed to the warning device

3.1.15
visible damage
damage that would be visible to a person of normal eyesight viewing at a distance of 2 m under an illumination level of 2 000 lx

3.2 Abbreviations

For the purposes of this document, the following abbreviations are used:

CIE - Control and indicating Equipment

I&HAS - Intrusion and Hold-up Alarm System(s)

WD - Warning Device

4 General considerations

This European Standard considers two different categories of warning device, remotely powered and self-powered devices.

Self-powered warning devices are classified into one of four types, dependent upon the recharge characteristics of the storage device and the source of recharge power. These four types are defined in Table 9.

5 Requirements

5.1 Functional

5.1.1 Response

Depending upon the grade, warning devices shall have the functionality as defined in Table 1. Where a function is provided, the warning device shall operate in accordance with the requirements of Table 2.

NOTE Requirements for the interconnections are given in the specific interconnection standard(s).

Table 1 — Warning device functionality

Function	Self-powered				Remotely powered			
	Grade				Grade			
	1	2	3	4	1	2	3	4
Trigger command	M	M	M	M	M	M	M	M
Tamper signal or message output	M	M	M	M	M	M	M	M
Fault signal or message output	Op [b]	Op [b]	M	M	Op	Op	Op	Op
Monitor of remote power [a]	M	M	M	M	Op	Op	Op	Op
Monitor integrity of trigger command interconnection	Op	Op	M	M	Op	Op	Op	Op
Local self test	Op [b]	Op [b]	M	M	Op	Op	Op	Op
Remote test input	Op	Op	Op	M	Op	Op	Op	Op

Key
Op Optional
M Mandatory

[a] Remote power monitoring only applies to warning devices with a remote power source and an internal storage device, see types X and Z as defined in Table 9.

[b] Mandatory for type W devices as defined in Table 9.

Table 2 — Warning device responses

Event	Self-powered WD			Remote powered WD		
	Audible alarm	Tamper signal or message	Fault signal or message	Audible alarm	Tamper signal or message	Fault signal or message [a]
Trigger command	M	NP	NP	M	NP	NP
Tamper event at the WD	Op	M	NP	Op	M	NP
Loss of remote power source	Op [b]	Op [b]	Op [b]	N/A	Op	Op
Loss of trigger command interconnection integrity	Op [c]	Op [c]	Op [c]	Op	Op	Op
Local self test pass	NP	NP	NP	NP	NP	NP
Local self test fail	NP	NP	M [a]	NP	NP	M
Remote self test pass	NP	NP	M [d]	NP	NP	M [d]
Remote self test fail	NP	NP	M [d]	NP	NP	M [d]

Key
M Mandatory
Op Optional
NP Not Permitted
N/A Not applicable

[a] The provision of a fault signal or message is not mandatory for all grades, see Table 1.

[b] At least one of these actions shall occur at the warning device. For grade 3 and grade 4 warning devices, if the loss of remote power source can be shown to be caused by a fault then a fault signal shall be generated, otherwise a tamper signal shall be generated.

[c] At least one of these actions shall occur at the warning device. For grade 3 and grade 4 warning devices, if the loss of trigger command integrity can be shown to be caused by a fault then a fault signal shall be generated, otherwise a tamper signal shall be generated.

[d] The response to a remote test pass shall be different from the response to a remote test fail.

5.1.2 Acoustic

A warning device shall produce a varying sound output, which is distinctive and likely to attract attention, with a mean acoustic output of no less than that defined in Table 3 at 1 m from the mounting surface of the warning device throughout the manufacturer's specified operating voltage range. Acoustic output levels as measured in accordance with Annex A, taken at 30° intervals in the horizontal plane, shall not be below the minimum individual level defined in Table 3 at 1 m from the mounting surface. The mean acoustic output shall be calculated by the arithmetic sum of these values divided by the number of measurements. For surface mounted devices (e.g. wall mounted devices) this is required at angles between 15° and 165° to the surface, and for pole mounted devices it is for the full 360°.