



SLOVENSKI STANDARD

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Nadomešča:

SIST-TS CLC/TS 50131-2-6:2005

Alarmni sistemi - Sistemi za javljanje vloma in ropa - 2-6. del: Zahteve za kontaktne javljalnike (magnetne)

Alarm systems - Intrusion and hold-up systems -- Part 2-6: Opening contacts (magnetic)

Alarmanlagen - Einbruch- und Überfallmeldeanlagen -- Teil 2-6: Anforderungen an Öffnungsmelder (Magnetkontakte)

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up -- Partie 2-6: Détecteurs d'ouverture à contacts (magnétiques)

Ta slovenski standard je istoveten z: EN 50131-2-6:2008

ICS:

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

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EUROPEAN STANDARD
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EN 50131-2-6

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ICS 13.320

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English version

**Alarm systems -
Intrusion and hold-up systems -
Part 2-6: Opening contacts (magnetic)**

Systèmes d'alarme -
Systèmes d'alarme contre l'intrusion
et les hold-up -
Partie 2-6: Détecteurs d'ouverture
à contacts (magnétiques)

Alarmanlagen -
Einbruch- und Überfallmeldeanlagen -
Teil 2-6: Anforderungen
an Öffnungsmelder
(Magnetkontakte)

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This European Standard was approved by CENELEC on 2008-05-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 79, Alarm systems.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50131-2-6 on 2008-05-01.

This European Standard supersedes CLC/TS 50131-2-6:2004.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-05-01

EN 50131 will consist of the following parts, under the general title *Alarm systems – Intrusion and hold-up systems*:

- | | |
|------------|--|
| Part 1 | System requirements |
| Part 2-2 | Intrusion detectors – Passive infrared detectors |
| Part 2-3 | Requirements for microwave detectors |
| Part 2-4 | Requirements for combined passive infrared and microwave detectors |
| Part 2-5 | Requirements for combined passive infrared and ultrasonic detectors |
| Part 2-6 | Intrusion detectors – Opening contacts (magnetic) |
| Part 2-7-1 | Intrusion detectors – Glass break detectors – Acoustic |
| Part 2-7-2 | Intrusion detectors – Glass break detectors – Passive |
| Part 2-7-3 | Intrusion detectors – Glass break detectors – Active |
| Part 3 | Control and indicating equipment |
| Part 4 | Warning devices |
| Part 5-3 | Requirements for interconnections equipment using radio frequency techniques |
| Part 6 | Power supplies |
| Part 7 | Application guidelines |
| Part 8 | Security fog devices |

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Introduction

This European Standard is for opening contacts (magnetic) used as part of intrusion and hold-up alarm systems (I&HAS) installed in buildings. It includes four security grades and four environmental classes.

The purpose of an opening contact (magnetic) is to detect a displacement of a door or window from the defined closed position. The opening contact comprises two separate parts, the active connection between which is at least one magnetic field. Separating the two parts disturbs the connection and produces an intruder signal or message.

The number and scope of these signals or messages will be more comprehensive for systems that are specified at the higher grades.

This European Standard is only concerned with the requirements and tests for opening contacts (magnetic). Other types of detectors are covered by other documents identified in the EN 50131 series and in the EN 50131-2 series.

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1 Scope

This European Standard provides for security grades 1 to 4, (see EN 50131-1) specific or non-specific wired or wire-free opening contacts (magnetic), and includes the requirements for four environmental classes covering applications in internal and outdoor locations as specified in EN 50130-5.

A detector shall fulfil all the requirements of the specified grade.

Functions additional to the mandatory functions specified in this European Standard may be included in the detector, providing they do not influence the correct operation of the mandatory functions.

The two separate parts of the opening contact (magnetic) shall be referred to in the body of this European Standard as the detector.

This European Standard does not apply to system interconnections.

2 Normative references

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.

| | |
|---------------|---|
| EN 10130 | Cold rolled low carbon steel flat products for cold forming – Technical delivery conditions |
| EN 50130-4 | Alarm systems – Part 4: Electromagnetic compatibility – Product family standard: Immunity requirements for components of fire, intruder 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 60068-1 | Environmental testing – Part 1: General and guidance (IEC 60068-1) |
| EN 60068-2-52 | Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52) |
| EN 61000-6-3 | Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3) |

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this document, the following terms and definitions apply in addition to those given in EN 50131-1.

3.1.1

prohibited area

mounting arrangement, as stated by the manufacturer, of the two components of the detector in which the detector no longer meets the requirements of this European Standard

3.1.2

incorrect operation

physical condition that causes an inappropriate signal or message from a detector

3.1.3

wire free detector

detector connected to the control & indicating equipment by non-physical means such as radio frequency signals

3.1.4

approach distance/make distance

separation distance between the two components of a detector that are being brought together at which an intrusion signal or message is reversed

3.1.5

removal distance/break distance

separation distance between the two components of a detector that are being moved apart at which an intrusion signal or message is generated

3.1.6

opening contact (magnetic)

detector in usually two separate parts The active connection between the two parts is at least one magnetic field. Separating the two parts disturbs the connection and produces an intrusion signal or message

3.1.7

corresponding magnet

activating part of the detector, comprising of one or more components, to generate at least one magnetic field

3.1.8

switch component

reacting part of the detector, comprising one or more components to detect the magnetic field(s) of the corresponding magnet and generate an appropriate signal or message

3.1.9

surface mount contact

opening contact (magnetic), where both parts (switch component and corresponding magnet) are mounted on the surface of two parts of the monitored object (fixed and moving part)

3.1.10

flush mount contact

opening contact (magnetic), where both parts (switch component and corresponding magnet) are mounted within two parts of the monitored object (fixed and moving part)

3.1.11**sealed contact**

type of detector construction, whereby there is no direct access to the internal components or connections e.g. a “potted” unit usually supplied with integral connecting cable

3.1.12**reverse signal**

signal or message generated by a detector to indicate that there is no longer an intrusion event e.g. change of state or cancellation of an intrusion signal or message

3.1.13**intrusion event**

abnormal condition indicating the presence of a hazard

3.1.14**low supply voltage**

supply voltage level below which the operation of the detector can no longer be guaranteed

3.1.15**interference test magnets**

magnets used for verifying the behaviour of the detector in the presence of an external magnetic field at least one of which is identical to the corresponding magnet supplied with the detector

3.1.16**external magnetic field**

deliberately induced magnetic field generated by a source other than the corresponding magnet e.g. sabotage magnet

3.1.17**immunity**

characteristic of a detector such that only a limited reduction in its detection performance is permitted in the presence of one of the interference test magnets

3.2 Abbreviations

For the purposes of this document, the following abbreviations apply in addition to those given in EN 50131-1.

EMC ElectroMagnetic Compatibility

BTD Basic Test of Detection capability

4 Functional requirements**4.1 Events**

The detector shall respond to events in accordance with Table 1 and as defined in this Clause 4.

Table 1 – Events to be processed by grade

| Event | Grade | | | |
|--|-----------------|----------------|----------------|----------------|
| | 1 | 2 | 3 | 4 |
| Break distance exceeded | M | M | M | M |
| Inside make distance | M | M | M | M |
| Remote enable of detection indication ^a | Op | Op | M | M |
| Magnetic interference | Op | Op | M | M |
| Resistance to access to the inside of the detector | Op | M | M | M |
| Detection of access to the inside of the detector | Op ^b | M ^c | M ^c | M ^c |
| Interconnection Integrity | M | M | M | M |
| Removal from the mounting surface ^d | Op | M | M | M |
| Low supply voltage ^e | Op | Op | M | M |
| Total loss of external power ^f | M | M | M | M |
| Matched coded pairs ^g | Op | Op | Op | M |
| Key M = Mandatory Op = Optional | | | | |
| ^a Only required if detection indicator present. ^b Generation of a tamper signal for opening by normal means is not required. ^c Not required for sealed contacts. ^d Mandatory for wire-free at grades 2, 3 and 4; mandatory for all surface mounted grade 4 types, optional for surface mounted grades 1, 2 and 3. ^e See 4.6.7. ^f See 4.6.6. ^g The code shall have a minimum of 8 differs. | | | | |

4.2 Signals or messages

The response to the signals or messages generated by the detector is determined by the I&HAS. The detector shall generate signals or messages in accordance with Table 2, based on the events listed in Table 1. Signals or messages shall be generated within 10 s of the event occurring. The response of a detector to events defined as optional in Table 1 shall be in accordance with Table 2.

Table 2 – Generation of signals or messages

| Event | Signals or messages | | |
|--|---------------------|--------|-------|
| | Intrusion | Tamper | Fault |
| Break distance exceeded | M | NP | NP |
| Inside make distance | NP | NP | NP |
| Magnetic interference grade 3 ^a | Op | Op | Op |
| Magnetic interference grade 4 ^b | M | Op | M |
| Detection of access to the inside of the detector | NP | M | NP |
| Removal from the mounting surface | NP | M | NP |
| Low power supply voltage ^c | Op | Op | M |
| Total loss of external power ^d | M | Op | Op |
| Key M = Mandatory NP = Not Permitted Op = Optional | | | |
| ^a Required only if the approach and removal distances are greater than twice the distances specified by the manufacturer (see 6.6.4); at least one of these signals or messages (Intrusion or/and Tamper or/and Fault) shall be generated or an independent signal or message shall be generated. ^b Required only if the approach and removal distances are greater than twice the distances specified by the manufacturer (See 6.6.4); either intrusion AND fault signals or messages, OR an independent signal or message shall be generated. ^c See 4.6.7. ^d See 4.6.6. | | | |

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4.3 Detection <https://standards.iteh.ai/catalog/standards/sist/e212c558-bc81-4b3b-becb-64efb660a192/sist-en-50131-2-6-2009>

4.3.1 Detection performance

4.3.1.1 Generalities

The operating parameters of the detector shall be verified as specified by the manufacturer for the axes of movement shown in Annex D.

The manufacturer shall clearly state in the product documentation any special limitation concerning installation e.g. a prohibited area between a surface on the detector and the minimum make distance.

4.3.1.2 Removal/break distance

The detector shall generate an intrusion signal or message at the removal distance specified by the manufacturer. This distance shall be specified for all normal operating axes. If the detector is designed for installation on ferromagnetic surfaces or in ferromagnetic material, the removal/break distance shall also be specified for all normal operating axes when the detector is mounted using the material as specified in Annex E.

4.3.1.3 Approach/make distance

The detector shall generate a reverse signal or message at the minimum separation distance(s) specified by the manufacturer. This distance shall be specified for all normal operating axes. If the detector is designed for installation on ferromagnetic surfaces or in ferromagnetic material, the approach/make distance shall be specified for all normal operating axes when the detector is mounted using the material as specified in Annex E.