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

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

Alarm systems - Intrusion systems -- Part 2-6: Requirements for opening contacts (magnetic)

Alarmanlagen - Einbruchmeldeanlagen -- Teil 2-6: Anforderungen an Öffnungsmelder (Magnetkontakte)

Systèmes d'alarme - Systèmes d'alarme intrusion -- Partie 2-6: Exigences pour contacts magnétiques

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13.310	Varstvo pred kriminalom	Protection against crime
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TECHNICAL SPECIFICATION **CLC/TS 50131-2-6**

SPECIFICATION TECHNIQUE

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ICS 13.310

English version

Alarm systems - Intrusion systems
Part 2-6: Requirements for opening contacts (magnetic)

Systèmes d'alarme -
Systèmes de détection d'intrusion
Partie 2-6: Exigences pour contacts magnétiques

Alarmanlagen -
Einbruchmeldeanlagen
Teil 2-6: Anforderungen an Öffnungsmelder (Magnetkontakte)

This Technical Specification was approved by CENELEC on 2004-05-04.

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

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Foreword

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

The text of the draft was submitted to the vote at the meeting of TC 79 in Madrid and was approved by CENELEC as CLC/TS 50131-2-6 on 2004-05-04. Standstill is maintained.

The following date was fixed:

-	latest date by which the existence of the TS has to be announced at national level	(doa)	2004-11-04

NOTE Latest date by which the TS has to be voted as EN: 2 years maximum after dav of TS.

Contents

Introduction

This Technical Specification is a specification for opening contacts (magnetic) used as part of intrusion detection systems installed in buildings. It provides for four security grades and the first three environmental classes.

The purpose of an opening contact (magnetic) is to detect a displacement of a door or window from a closed position. A signal or message is generated when the detector registers a displacement of the door or window from the closed position. The detector shall provide the necessary range of signals or messages to be used by the rest of the intrusion detection system.

This specification is only concerned with the requirements and tests for opening contacts (magnetic). Other types of detector are covered by other documents identified as CLC/TS 50131-2-x.

1 Scope

This Technical Specification provides for security grades 1 to 4 (see EN 50131-1) specific or non-specific wired or wire-free opening contacts (magnetic), and is covered by environmental classes I to III (see EN 50130-5).

A function designated in the specification as not required for a particular grade may be provided by the manufacturer. If provided, it will be tested, and shall meet all relevant requirements of any higher grade. If it passes, the manufacturer may claim it as an extra feature, which does not alter the overall grading.

The opening contact (magnetic) shall be referred to in the body of this specification as the detector.

This specification 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 50130-4:1995	Alarm systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder and socialalarm systems
EN 50130-5:1998	Alarm systems - Part 5: Environmental test methods
EN 50131-1:1997	Alarm Systems – Intrusion systems - Part 1: General requirements
EN 50131-6:1997	Alarm systems - Intrusion systems - Part 6: Power supplies
EN 60529:1991	Degree of protection provided by enclosures (IP code)

3 Definitions and abbreviations

For the purpose of this specification. the following definitions and abbreviations apply in addition to those given in EN 50131-1:

3.1
alert/set mode
state of operation in which a detector is ready to generate an intrusion signal or message

3.2
approach distance/make distance
the separation distance between the two components of a detector, which are being brought together, at which an intruder signal or message is reset

3.3
incorrect operation
physical condition that causes an inappropriate signal from a detector

3.4
magnetic masking
interference with the capability of the detector to provide a signal or message by applying an additional magnetic field

3.5
opening contact (magnetic)
detector in two separate parts. The active connection between the two parts is a magnetic field. Separating the two parts disturbs the connection and produces an intruder signal or message

3.6
removal distance/break distance
the separation distance between the two components of a detector, which are being moved apart, at which an intruder signal or message starts to be generated

3.7
reset signal
signal or message generated by a detector to indicate that it has returned to the alert/set mode

3.8
standby/unset mode
state of operation in which a detector is not required to generate an intrusion signal or message

3.9
test mode
state of operation in which a detector will indicate locally or remotely when the door or window is opened

3.10
wire free detector
detector connected to the control & indicating equipment by non-physical means such as radio frequency signals

3.11 abbreviations

EMC	electromagnetic compatibility
BDT	basic detection target

4 Functional requirements

4.1 Indication signals or messages

All detectors shall have an alert/set mode. If a detector has only one mode of operation, then it shall always be in the alert/set mode. Tamper detection for grade 1 is not required, but if provided, shall be active in all modes. Sealed units do not require a tamper switch but shall have a tamper loop or equivalent connected to the detector. Each possible mode of operation is determined by the status of the intrusion detection system with which the detector communicates. The detector signals or messages shall function in accordance with Table 1.

Table 1 – Indication signals or messages

Event	Grades	Intrusion signal or message	Tamper signal or message	Fault signal or message
Break distance exceeded	All grades	Required *	Not permitted	Not permitted
Inside make distance	All grades	Not permitted	Not permitted	Not permitted
Magnetic interference	1,2	Not required	Not required	Not required
	3 & 4	Not required	Required	Not required
Tamper	2, 3 & 4	Not permitted	Required +	Not permitted
Low supply voltage (external) * **	1, 2 & 3	Not required	Not required	Not required
	4	Not required	Not required	Required
Total loss of external power supply * **	1, 2 & 3	Not required	Not required	Not required
	4	Required **	Not required	Not required

* Not required in unset/standby mode: required in test mode.

** Not required for bus systems.

*** Where external power is required.

\+ Not required for sealed contacts.

NOTE For internal power supplies, see EN 50131-6.

4.2 Detection

4.2.1 Detection performance

The operating parameters of the detector shall be verified as specified by the manufacturer.

4.2.1.1 Removal/break distance

The detector shall produce an Intruder signal or message at the separation distance specified by the manufacturer. The removal/break distance shall be verified.

4.2.1.2 Approach/make distance

The detector shall produce a reset signal or message at the separation distance specified by the manufacturer. The approach/make distance shall be verified.

4.2.2 Indication of detection

An indicator, if provided at the detector, shall indicate when detection causes an intrusion signal or message. This indicator shall be capable of being enabled/disabled. This operation shall only be performed locally after removal of the cover or remotely at the control and indicating equipment.

4.3 Operational requirements

4.3.1 Time interval between intrusion signals or messages

Wired detectors shall be able to provide an intrusion signal or message not more than 15 s after the end of the preceding intrusion signal or message. Wire free detectors shall perform the same function in a time as follows:

Grade 1: 300 s
Grade 2: 300 s
Grade 3: 15 s
Grade 4: 15 s

NOTE See EN 50131-1 for amendment.

4.3.2 Switch on delay

The detector shall meet all functional requirements within 180 s of the power supply reaching its nominal voltage.

4.3.3 Fault condition signals

When a detector has a fault, a fault signal or message shall be generated in accordance with the manufacturer's specification, and the provisions of Table 1.

4.3.4 Power supply faults.

Detectors of grade 4 shall signal complete power failure according to the provisions of Table 1. Additionally, detectors of grade 4 shall signal when the supply voltage moves below the manufacturer's specified range according to the provisions of Table 1.

4.4 Tamper security

Tamper security requirements for each grade of detector are shown in Table 2.

Table 2 - Tamper security requirements

Requirement	Grade 1	Grade 2	Grade 3	Grade 4
Resistance to access to the inside of the detector	Not required	Required	Required	Required
Removal from the mounting surface *	Not required	Required *	Required *	Required *
Sensitivity to magnetic field interference	Not required	Not required	Required	Required
Test magnet remanence, T			0,3	1,2
* Required for wire free detectors only.				

4.4.1 Prevention of unauthorized access to the inside of the detector through covers and existing holes

Access holes shall not allow interference with the operation of the detector by probing with commonly available tools. Damage must not be caused that would prevent normal operation.

If the detector can be opened, a tool shall be required to open the unit. All covers giving access to components which could affect adversely the operation of the detector shall be fitted with a tamper detection device in accordance with Table 2. A tamper signal or message shall be generated before access is gained with any tool.

4.4.2 Detection of removal from the mounting surface

A tamper detection device shall be fitted which generates a tamper signal or message if the detector is removed from the mounting surface in accordance with Table 2. Operation of the tamper device shall not be compromized by external means. This device shall activate before access can be gained to it.

4.4.3 Sensitivity to magnetic field interference

The application of an external additional magnetic field with a magnet of grade dependent remanence, according to Table 2 shall cause the detector to generate a tamper signal or message. The form of standard magnets is described in Annex A.