

STN	Poplachové systémy Elektrické zabezpečovacie a tiesňové systémy Časť 2-10: Detektory narušenia Kontakty stavu zopnutia (magnetické)	STN EN 50131-2-10 33 4591
------------	--	---

Alarm systems - Intrusion and hold-up systems - Part 2-10: Intrusion detectors - Lock state contacts (magnetic)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/19

Obsahuje: EN 50131-2-10:2018

Oznámením tejto normy sa od 28.09.2021 ruší
STN P CLC/TS 50131-2-10 (33 4591) z júna 2014

127774

EUROPEAN STANDARD

EN 50131-2-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2018

ICS 13.320

Supersedes CLC/TS 50131-2-10:2014

English Version

**Alarm systems - Intrusion and hold-up systems - Part 2-10:
Intrusion detectors - Lock state contacts (magnetic)**

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 2-10: Détecteurs d'intrusion - Contact d'état de verrouillage (magnétiques)

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 2-10: Einbruchmelder - Verschluss- und Öffnungsüberwachungskontakte (magnetisch)

This European Standard was approved by CENELEC on 2018-05-10. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

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

Contents	Page
European foreword.....	4
Introduction.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions and abbreviations.....	6
3.1 Terms and definitions.....	6
3.2 Abbreviations.....	8
4 Functional requirements.....	8
4.1 Events.....	8
4.2 Signals or messages.....	9
4.3 Detection.....	10
4.3.1 Detection performance.....	10
4.3.2 Indication of detection.....	11
4.4 Operational requirements.....	11
4.4.1 Time interval between intrusion signals or messages.....	11
4.4.2 Switch on delay.....	11
4.4.3 Fault condition signals.....	11
4.5 Tamper security.....	11
4.5.1 Tamper security requirements.....	11
4.5.2 Resistance to and detection of unauthorised access to the inside of the detector through covers and existing holes.....	12
4.5.3 Detection of removal from the mounting surface.....	12
4.5.4 Magnetic or electromagnetic field interference.....	12
4.5.5 Matched pairs, coding and encryption.....	12
4.6 Electrical requirements.....	13
4.6.1 Grade dependencies.....	13
4.6.2 Detector current consumption.....	13
4.6.3 Slow input voltage change and input voltage range limits.....	13
4.6.4 Input voltage ripple.....	13
4.6.5 Input voltage step change.....	13
4.6.6 Total loss of external power.....	13
4.6.7 Low supply voltage.....	14
4.6.8 Interconnection Integrity.....	14
4.7 Environmental classification and conditions.....	14
4.7.1 Environmental classification.....	14
4.7.2 Immunity to environmental conditions.....	14
5 Marking, identification and documentation.....	14
5.1 Marking and/or identification.....	14
5.2 Documentation.....	14
6 Testing.....	15
6.1 Generalities.....	15
6.2 General test conditions.....	15
6.2.1 Standard laboratory conditions for testing.....	15
6.2.2 General detection testing environment and procedures.....	15
6.2.3 Testing procedures.....	16
6.3 Basic test of detection capability.....	16
6.4 Verification of detection performance.....	16
6.4.1 Generalities.....	16

6.4.2	Measurement of make / break distances	16
6.5	Switch-on delay, time interval between signals, and indication of detection	16
6.6	Tamper security	16
6.6.1	Generalities	16
6.6.2	Resistance to and detection of unauthorized access to the inside of the detector through covers and existing holes	17
6.6.3	Detection of removal from the mounting surface	17
6.6.4	Resistance to magnetic field interference	17
6.6.5	Matched pairs, coding and encryption	18
6.7	Electrical tests	18
6.7.1	Generalities	18
6.7.2	Detector current consumption	18
6.7.3	Slow input voltage change and input voltage range limits	19
6.7.4	Input voltage ripple	19
6.7.5	Input voltage step change	19
6.7.6	Total loss of power supply	19
6.7.7	Low power supply voltage	20
6.7.8	Interconnection	20
6.8	Environmental classification and conditions	20
6.8.1	General	20
6.8.2	Special conditions	20
6.9	Marking, identification and documentation	21
6.9.1	Marking and/or identification	21
6.9.2	Documentation	21
Annex A (normative) Dimensions and requirements of standardized interference test magnets		22
A.1	Normative references	22
A.2	Requirements	22
Annex B (normative) General testing matrix		25
Annex C (informative) List of small tools suitable for testing immunity of casing to unauthorised access		27
Annex D (normative) Axes of movement		28
Annex E (normative) Test surfaces for ferromagnetic material		29
Annex F (normative) Test faces for interference test units		30
F.1	Surface mounted detector	30
F.2	Flush mounted detector	31
Bibliography		32

EN 50131-2-10:2018**European foreword**

This document (EN 50131-2-10:2018) has been prepared by CLC/TC 79 "Alarm systems".

The following dates are fixed:

- latest date by which this document has (dop) 2019-03-28 to be implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national (dow) 2021-09-28 standards conflicting with this document have to be withdrawn

This document supersedes CLC/TS 50131-2-10:2014.

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.

EN 50131-2 is currently composed of the following parts:

- EN 50131-2-2, *Alarm systems — Intrusion and hold-up systems — Part 2-2: Intrusion detectors — Passive infrared detectors*;
- EN 50131-2-3, *Alarm systems — Intrusion and hold-up systems — Part 2-3: Requirements for microwave detectors*;
- EN 50131-2-4, *Alarm systems — Intrusion and hold-up systems — Part 2-4: Requirements for combined passive infrared and microwave detectors*;
- EN 50131-2-5, *Alarm systems — Intrusion and hold-up systems — Part 2-5: Requirements for combined passive infrared and ultrasonic detectors*;
- EN 50131-2-6, *Alarm systems — Intrusion and hold-up systems — Part 2-6: Opening contacts (magnetic)*;
- CLC/TS 50131-2-8, *Alarm systems — Intrusion and hold-up systems — Part 2-8: Intrusion detectors — Shock detectors*;
- CLC/TS 50131-2-9, *Alarm systems — Intrusion and hold-up systems — Part 2-9: Intrusion detectors — Active infrared beam detectors*;
- EN 50131-2-10, *Alarm systems — Intrusion and hold-up systems — Part 2-10: Intrusion detectors — Lock state contacts (magnetic)* [the present document];
- EN 50131-2-7-1, *Alarm systems — Intrusion and hold-up systems — Part 2-7-1: Intrusion detectors — Glass break detectors (acoustic)*;
- EN 50131-2-7-2, *Alarm systems — Intrusion and hold-up systems — Part 2-7-2: Intrusion detectors — Glass break detectors (passive)*;
- EN 50131-2-7-3, *Alarm systems — Intrusion and hold-up systems — Part 2-7-3: Intrusion detectors — Glass break detectors (active)*.

Introduction

This European Standard applies to lock state 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 a lock state contact (magnetic) is to detect the lock/unlock state only or the lock/unlock state combined with the opening status/displacement from the defined closed position of a window or door simultaneously. The lock state contact comprises two separate contact-less units, the active connection between these units is at least one magnetic or electromagnetic based field. Separating the two units disturbs the connection and produces an intruder signal or message.

The scope for lock state contacts (magnetic) and the number and types of generated 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 lock state contacts (magnetic). Other types of detectors are covered by other documents identified as in the EN 50131-2 series.

EN 50131-2-10:2018

1 Scope

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

Lock state contacts are installed in windows or doors and windows or doorframes to allow to monitor the lock/unlock status only or the lock/unlock status combined with the open/close status of a window/door simultaneously and are as such located in supervised premises. They provide the necessary range of signals or messages to be used by the rest of the intrusion alarm system.

A detector fulfils 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 combination of the two separate units of the lock state contact is 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 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 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, 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*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN