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Alarmni sistemi - Sistemi za javljanje vloma in ropa - 1. del: Sistemske zahteve

Alarm systems - Intrusion and hold-up systems -- Part 1: System requirements

Alarmanlagen - Einbruch- und Überfallmeldeanlagen -- Teil 1: Systemanforderungen

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up -- Partie 1: Exigences système

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ICS:

13.310	Varstvo pred kriminalom	Protection against crime
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EUROPEAN STANDARD

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English version

Alarm systems - Intrusion and hold-up systems Part 1: System requirements

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up Partie 1: Exigences système

Alarmanlagen - Einbruch- und Überfallenmeldeanlagen Teil 1: Systemanforderungen

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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, 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

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Foreword

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

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50131-1 on 2006-04-04.

This European Standard supersede EN 50131-1:1997.

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)	2007-05-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-05-01

This standard is part of the EN 50131 series of European Standards and Technical Specifications “Alarm systems - Intrusion and hold-up systems”, written to include the following parts:

Part 1	System requirements
Part 2-2	Requirements for 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	Requirements for opening contacts (magnetic)
Part 2-7 [1)]	Intrusion detectors - Glass break detectors
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 [1)]	Security fog devices

1) At draft stage.

Contents

Introduction

This European Standard applies to Intrusion and Hold-up Alarm Systems. The standard is also intended to apply to Intruder Alarm Systems which include only intrusion detectors and to Hold-up Alarm Systems which include only hold-up devices.

This European Standard is a specification for Intrusion and Hold-up Alarm Systems (I&HAS) installed in buildings, it includes four security grades and four environmental classes.

The purpose of an I&HAS is to enhance the security of the supervised premises. To maximise its effectiveness an I&HAS should be integrated with appropriate physical security devices and procedures. This is particularly important to higher grade I&HAS.

This standard is intended to assist insurers, intruder alarm companies, customers and the police in achieving a complete and accurate specification of the supervision required in particular premises, but it does not specify the type of technology, the extent or degree of detection, nor does it necessarily cover all of the requirements for a particular installation.

All references to the requirements for I&HAS refer to basic minimum requirements and the designers of such installed I&HAS should take into account the nature of the premises, the value of the contents, the degree of risk of intrusion, the threat to personnel and any other factors which may influence the choice of grade and content of an I&HAS.

Recommendations for design, planning, operation, installation and maintenance are given in Application Guidelines CLC/TS 50131-7.

This standard is not intended to be used for testing individual I&HAS components. Requirements for testing individual I&HAS components are given in the relevant component standards.

I&HAS and components thereof are graded to provide the level of security required. The security grades take into account the risk level which depends on the type of premises, the value of the contents, and the typical intruder or robber expected.

1 Scope

This European Standard specifies the requirements for Intrusion and Hold-up Alarm Systems installed in buildings using specific or non-specific wired interconnections or wire-free interconnections. These requirements also apply to the components of an I&HAS installed in a building which are normally mounted on the external structure of a building e.g. ancillary control equipment or warning devices. The standard does not include requirements for exterior I&HAS.

This standard specifies performance requirements for installed I&HAS but does not include requirements for design, planning, installation, operation or maintenance.

These requirements also apply to I&HAS sharing means of detection, triggering, interconnection, control, communication and power supplies with other applications. The operation of an I&HAS shall not be adversely influenced by other applications.

Requirements are specified for I&HAS components where the relevant environment is classified. This classification describes the environment in which an I&HAS component may be expected to operate as designed. When the requirements of the four environmental classes are inadequate, due to the extreme conditions experienced in certain geographic locations, special national conditions are given in Annex A. General environmental requirements for I&HAS components are described in Clause 7.

The requirements of this European Standard also apply to IAS and HAS when these systems are installed independently.

When an I&HAS does not include functions relating to the detection of intruders, the requirements relating to intrusion detection do not apply.

When an I&HAS does not include functions relating to hold-up, the requirements relating to hold-up do not apply.

NOTE Unless otherwise stated the abbreviation I&HAS is intended to also mean IAS and HAS.

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.

CLC/TS 50131-7	2003	Alarm systems – Intrusion systems – Part 7: Application guidelines
EN 50130-4	1995	Alarm systems – Part 4: Electromagnetic compatibility – Product family standard: Immunity requirements for components of fire, intruder and social alarm systems
EN 50130-5	1998	Alarm systems – Part 5: Environmental test methods
EN 50131-6	1997	Alarm systems – Intrusion systems – Part 6: Power supplies
EN 50136	series	Alarm systems – Alarm transmission systems and equipment
EN 60065	2002	Audio, video and similar electronic apparatus – Safety requirements (IEC 60065:2001, mod.)
EN 60073	2002	Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicators and actuators (IEC 60073:2002)

EN 60950-1	2006	Information technology equipment – Safety – Part 1: General requirements (IEC 60950-1:2005, mod.)
EN 61000-6-3	2001	Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments (CISPR/IEC 61000-6-3:1996, mod.)

3 Definitions and abbreviations

3.1 Definitions

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

3.1.1
action
(relating to setting and unsetting) deliberate operation or act by the user which is part of the setting or unsetting procedure

3.1.2
access level
level of access to particular functions of an I&HAS

3.1.3
active
state of a detector in the presence of a hazard

3.1.4
active period
period during which an alarm signal is present

3.1.5
alarm
warning of the presence of a hazard to life, property or the environment

3.1.6
alarm receiving centre
continuously manned centre to which information concerning the status of one or more I&HAS is reported

3.1.7
alarm company
organisation which provides services for I&HAS

3.1.8
alarm condition
condition of an I&HAS, or part thereof, which results from the response of the system to the presence of a hazard

3.1.9
alarm notification
passing of an alarm condition to warning devices and/or alarm transmission systems

3.1.10
alarm system
an electrical installation which responds to the manual or automatic detection of the presence of a hazard

3.1.11
alarm transmission systems
equipment and network used to transfer information concerned with the state of one or more I&HAS to one or more alarm receiving centres

NOTE Alarm transmission systems exclude local direct connections, i.e. interconnections between parts of an I&HAS which do not require an interface to transform the I&HAS information into a form suitable for transmission.

3.1.12
alert indication
an audible and/or visual indication, available at access level 1, when an I&HAS is in the unset state, indicating that further indication(s) are available to users at access levels 2, 3, or 4

3.1.13
alternative power source
power source capable of powering the system for a predetermined time when a prime power source is unavailable

3.1.14
ancillary control equipment
equipment used for supplementary control purposes

3.1.15
application
electronic security system, EXAMPLE: social alarm, CCTV, access control or fire system or a non-security electronic/electrical system EXAMPLE: heating, air conditioning, lighting

3.1.16 authorisation
permission to gain access to the various functions of an I&HAS

3.1.17
authorisation codes
physical or logical keys which permit access to I&HAS functions

3.1.18
availability of interconnection
condition when an interconnection is capable of conveying a signal or message

3.1.19
component substitution
the replacement of I&HAS components with alternative devices which prevent an I&HAS operating as designed

3.1.20
communication
transmission of messages and/or signals between I&HAS components

NOTE The transmission of a signal may include the continual passing of an electrical current through a switch or relay forming the interface between I&HAS components. It is not necessary to change the status of any such switch or relay. Due to the nature of data communication the transmission of a message may require deliberate initiation, e.g. in response to a poll or at specified time intervals, this initiation may or may not require the change of status of a switch or relay.

3.1.21
continually
recurring frequently at regular intervals

3.1.22
control and indicating equipment
equipment for receiving, processing, controlling, indicating and initiating the onward transmission of information

3.1.23
entry/exit route
route by which authorised entry or exit to the supervised premises or part thereof may be achieved

3.1.24
event
condition arising from the operation of an I&HAS e.g. set/unset

3.1.25
event recording
storage of events arising from the operation of an I&HAS e.g. for analysis

3.1.26
fault condition
condition of an alarm system which prevents an I&HAS or parts thereof from functioning normally

3.1.27
fault signal/message
information generated due to the presence of a fault

3.1.28
hold-up alarm system
alarm system providing the means for a user to deliberately generate a hold-up alarm condition

3.1.29
hold-up device
device which when triggered causes a hold-up alarm signal or message to be generated

3.1.30
hold-up alarm condition
condition of an alarm system, or part thereof, which results from the response of an I&HAS to the triggering of a hold-up device

3.1.31
indication
information (in audible, visual or any other form) provided to assist the user in the operation of an I&HAS

3.1.32
inhibit
status of a part of an I&HAS in which an alarm condition cannot be notified, such status remaining until the I&HAS or part thereof is unset

3.1.33
interconnection
means by which messages and/or signals are transmitted between I&HAS components

3.1.34
interconnection media
medium by which signals or messages are conveyed

3.1.35
interference
corruption of signals and/or messages passing between I&HAS components

3.1.36
intruder alarm system
alarm system to detect and indicate the presence, entry or attempted entry of an intruder into supervised premises

3.1.37
intruder alarm condition
condition of an I&HAS, or part thereof, which results from the response of the I&HAS to the presence of an intruder

3.1.38
intruder signal or message
information generated by an intruder detector

3.1.39
intrusion detector
device designed to generate an intruder signal or message in response to the sensing of an abnormal condition indicating the presence of a hazard

3.1.40
intrusion and hold-up alarm system
combined intruder and hold-up alarm system

3.1.41
isolation
status of a part of an alarm system in which an alarm condition cannot be notified, such status remaining until manually cancelled

3.1.42
masked
condition whereby the field of view of a movement detector is blocked

3.1.43
message
series of signals routed via interconnections which include identification, function data and the various means for providing its own integrity, immunity and proper reception

3.1.44
message substitution
intentional or unintentional creation of alternative message between I&HAS components which prevent the correct operation of an I&HAS

3.1.45
monitoring
process of verifying that interconnections and equipment are functioning correctly

3.1.46
non-specific wired interconnection
interconnection conveying information pertaining to two or more applications

3.1.47
normal condition
state of an I&HAS where no conditions exist which would prevent the setting of an I&HAS

3.1.48
notification
passing of an alarm, tamper or fault condition to warning devices and/or alarm transmission systems

3.1.49
operator
authorised individual (a user) using an I&HAS for its intended purpose

3.1.50
override
intervention, by a user, to permit setting when a fault condition exists

3.1.51
part set
status of a zone of an I&HAS in which an intruder or hold-up alarm condition can be notified but part of the I&HAS is unset

3.1.52
pending indication
means of indicating that further information is available for display when all information cannot be displayed simultaneously

3.1.53
periodic communication
any valid signal or message

3.1.54
power supply
part of an alarm system which provides power for an I&HAS

3.1.55
prime power source
power source used to support an I&HAS under normal operating conditions

3.1.56
restore
procedure of cancelling an alarm, tamper, fault or other condition and returning an I&HAS to a previous condition

3.1.57
self powered device
device incorporating its own power sources

3.1.58
sensor
part of a detector which senses a change in condition

3.1.59
set
status of an I&HAS or part thereof in which an intruder or hold-up alarm condition can be notified

3.1.60
signal
variable parameters by which information is conveyed

3.1.61
significant reduction of range
reduction of the detection range of a movement detector, measured on the central axis of the detector, exceeding 50 % of specified range, as specified in the System Design Proposal (see CLC/TS 50131-7, F.5)