



SLOVENSKI STANDARD
SIST EN 50131-8:2009

01-oktober-2009

Alarmni sistemi - Sistemi za javljanje vloma - 8. del: Sistem za varnostno meglo

Alarm systems - Intrusion hold-up alarm systems -- Part 8: Security fog device/systems

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Ta slovenski standard je istoveten z: EN 50131-8:2009

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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
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50131-8

May 2009

ICS 13.320

English version

**Alarm systems -
Intrusion and hold-up systems -
Part 8: Security fog device/systems**

Systèmes d'alarme -
Systèmes d'alarme contre l'intrusion
et les hold-up -
Partie 8: Systèmes/dispositifs
générateurs de fumée

Alarmanlagen -
Einbruch- und Überfallmeldeanlagen -
Teil 8: Nebelgeräte/Nebelsysteme
für Sicherungsanwendungen

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This European Standard was approved by CENELEC on 2009-04-01. 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: avenue Marnix 17, B - 1000 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 formal vote and was approved by CENELEC as EN 50131-8 on 2009-04-01.

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) 2010-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-04-01

The series EN/TS 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 | 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/systems |

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Introduction

This European Standard applies to a security fog system that is part of an Intruder and Hold-up Alarm System (I&HAS) and is used both as a security deterrent device for building security and as a crime reduction device for the protection of people.

This European Standard is intended to assist insurers, intruder alarm companies, customers and the police in understanding the principles and specification of a security fog system.

The purpose of a security fog system is to reduce the visibility in a protected area by the use of a non-toxic fog in order to form a barrier between the criminal and the criminal's intended target.

This European Standard is not intended to cover standalone or mobile security fog systems.

This European Standard has been designed to be flexible enough to encourage and encompass future developments in the field of security fog systems.

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1 Scope

This European Standard specifies the requirements for security fog systems as a part of an I&HAS. It covers application and performance and also gives the necessary tests and trials to ensure efficiency and reliability of such obscuration devices.

This European Standard also gives guidance on the criteria for design, installation, operation and maintenance of security fog systems.

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 A1:1998 A2:2003 | 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 50131-1:2006 | Alarm systems – Intrusion and hold-up systems – Part 1: System requirements |
| EN 50131-5-3:2005 A1:2008 | Alarm systems – Intrusion systems – Part 5-3: Requirements for interconnections equipment using radio frequency techniques |
| EN 60065:2002 A1:2006 + corr. Aug. 2007 A11:2008 | Audio, video and similar electronic apparatus – Safety requirements (IEC 60065:2001, mod. + A1:2005, mod.) |
| EN 61000-6-3:2007 | Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:2006) |

3 Definitions and abbreviations

3.1 Definitions

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

3.1.1

confirmed intrusion

signals or messages emanating from two or more independent intrusion detectors indicating there is a high probability that a genuine intrusion or genuine attempted intrusion has occurred within a specified timeframe

3.1.2

obscuration

the reduction in visibility as a result of the activation of a security fog system

3.1.3**protected area**

the designated space the security fog system is designed to restrict the visibility in when operated

3.1.4**security fog system**

a device (or a series of separate independent components that make up a device) or system within tamper resistance housing(s), that, when activated, produces a dense artificial fog, from a consumable, to reduce visibility in the protected area

3.1.5**verification**

the process whereby the security fog system will only operate once the Intruder Alarm System (IAS) has operated and a detection device in the area of the security fog system has triggered or an Hold-up Alarm System (HAS) has been operated

3.1.6**wet fog**

this may result from incomplete atomisation of the fogging agent causing a direct spray or spatter from the fog ejection nozzle. This may also result from poor atomisation of the fogging agent causing individual fog particle size to be too large. Such large particles may fall down and settle on level surfaces as a greasy residue

3.2 Abbreviations

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

| | |
|-----|--|
| EMC | Electromagnetic compatibility |
| IK | Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts |
| IP | Ingress protection classification |
| LEA | Law Enforcement Authority (Police or governmental body that responds to activations from security systems) |

4 Environmental**4.1 Environmental classification**

The security fog system shall meet, as a minimum, Environmental Class II (Indoor – General: environmental influences normally experienced indoors when the temperature is not well maintained) in accordance with EN 50131-1.

EXAMPLE In corridors, halls or staircases and where condensation can occur on windows and in unheated storage areas or warehouses where heating is intermittent.

NOTE Temperatures may be expected to vary between -10 °C and +40 °C with the average relative humidity of approximately 75 % non-condensing.

4.2 Environmental tests

For all operation the security fog system shall not activate, generate tamper, fault or other signals or messages when subject to the specific range of environmental and EMC conditions and shall continue to function normally.

The following Class II level environmental tests from EN 50130-5 shall be applicable when testing the security fog system:

- a) Clause 8: dry heat operational;
- b) Clause 10: cold test operational;
- c) Clause 14: damp heat, cyclic operational;
- d) Clause 17: sulphur dioxide (SO₂) (endurance);
- e) Clause 20: impact operational;
- f) Clause 22: vibration sinusoidal (operational);
- g) Clause 23: vibration sinusoidal (endurance);
- h) Clause 27: electromagnetic compatibility, immunity (operational).

5 Access levels

The access levels used in this standard shall be as stated in EN 50131-1:2006, 8.3.1, except for access level 2. Access level 2 “user” shall not be able to access the security fog system.

6 Regulation requirements

6.1 General

The security fog system shall operate to the following minimum relevant European regulations.

6.2 Electrical safety

The electrical (safety) construction of the security fog system shall be to EN 60065.

6.3 Safety data sheets

The transport, storage and handling of consumables, shall comply with the requirements stated on the safety data sheets.

6.4 EMC requirements

The security fog system shall meet the EMC conditions and the severity levels defined in EN 61000-6-3 and EN 50130-4.

6.5 Warning signs

As a minimum security fog device/system warning signs shall be positioned on the normal entry point(s) to the building (European safety signs Directive 92/58/EEC). See Annex B.

6.6 Pressure vessels

Any security fog system that contains pressure vessels shall be transportation and its usage shall meet the current industry safety requirements (see Directive 97/23/EC, Article 3).

7 Device/system parameters

7.1 Performance

The security fog system shall meet the following minimum performance:

- Reduction of visibility to 1 m within 60 s in a minimum volume of 150 m³ and maintaining obscuration for a period of 10 min in an un-vented room (performance tests shown in Annex A).

The performance of the security fog system shall be detailed as shown in Annex A.

7.2 Battery backup requirement

The battery backup requirements of a security fog system cannot achieve compliance of EN 50131-1 due to the amount of energy used to power the security fog system.

As a general requirement a security fog system shall be capable of a single full system operation for a period within one hour after mains fail.

A single full system operation shall be defined by the manufacturer in the security fog system specification.

7.3 IP/IK rating

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All component parts shall be housed in an enclosure meeting the following requirements:

- IP rating of IP20; [SIST EN 50131-8:2009](https://standards.iteh.ai/catalog/standards/sist/4ba980b2-fc6b-4992-ada-37b1209259a6/sist-en-50131-8-2009)
- IK rating of IK08. <https://standards.iteh.ai/catalog/standards/sist/4ba980b2-fc6b-4992-ada-37b1209259a6/sist-en-50131-8-2009>

7.4 Wire free interconnections

If wire free interconnections are used then the requirements shall meet EN 50131-5-3.

8 General requirements

8.1 Tamper

All material parts and components of the security fog system shall be inside (a) secure, tamper-resistant outer case(s). The opening by normal means of access to the outer case(s) shall create an (a tamper message or signal) alarm condition.

The security fog system shall not eject fog on an individual tamper signal or message if the I&HAS is in the unset condition.

8.2 Fog neutralisation

A security fog system shall not be damaged or neutralised by the phenomenon (fog) it is supposed to produce.