



SLOVENSKI STANDARD

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Alarmni sistemi - Sistemi za javljanje vloma - 8. del: Naprava in sistem za pripravo megle za varovanje

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

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

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

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

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

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

This draft European Standard is submitted to CENELEC members for CENELEC enquiry.
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It has been drawn up by CLC/TC 79.

If this draft becomes a European Standard, 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.

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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 draft European Standard was prepared by the Technical Committee CENELEC TC 79, Alarm systems. It is submitted to the CENELEC enquiry.

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 Intrusion detectors – Microwave detectors
- Part 2-4 Intrusion detectors – Combined passive infrared and microwave detectors
- Part 2-5 Intrusion detectors – Combined passive infrared and ultrasonic detectors
- Part 2-6 Intrusion detectors – Opening contacts (magnetic)
- Part 2-7 Intrusion detectors – Glass break detectors acoustic or seismic
- Part 2-8 Intrusion detectors – Vibration detectors
- Part 2-9 Intrusion detectors – Active infrared detectors
- Part 2-10 Intrusion detectors – Proximity detectors
- Part 3 Control and indicating equipment
- Part 4 Warning devices
- Part 5-1 Requirements for interconnections equipment using dedicated wired links
- Part 5-2 Requirements for interconnections equipment using non-dedicated wired links
- Part 5-3 Requirements for interconnections equipment using radio frequency techniques
- Part 6 Power supplies
- Part 7 Application guidelines
- Part 8 Security fog device/system

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Introduction

This European Standard applies to security fog devices/systems that are part of an I & HAS and are 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 device.

The purpose of a security fog device/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 device/systems.

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

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1 Scope

This European Standard specifies the requirements for security fog devices 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 devices.

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

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 confirmed intrusion

signals 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 term is used to describe the reduction in visibility as a result of the activation of a security fog device

3.1.3 protected area

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

3.1.4 security fog device(s)

a device (or a series of separate independent components that make up a device) 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 security fog device will only operate once the I & HAS has operated and a detection device in the area of the security fog device has triggered

3.1.6 wet fog

wet fog may result from incomplete atomisation of the fogging agent causing a direct spray or spatter from the fog ejection nozzle. Wet fog 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 following abbreviations apply.

ARC	Alarm Receiving Centre
CIE	Control and Indicating Equipment
EMC	Electromagnetic compatibility
HAS	Hold-up Alarm System
IK	Impact test classification
IP	Ingress Protection classification
I & HAS	Intruder and Hold-up Alarm System
LEA	Law Enforcement Authority (Police or governmental body that responds to activations from security systems)

4 Environmental

4.1 Environmental classification

All security fog devices/systems shall meet, as a minimum, Environmental Class II (Indoor – General: environmental influences normally experienced indoors when the temperature is not well maintained).

EXAMPLES 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

The following Class II level environmental tests from EN 50130-5 are applicable when testing security fog devices:

- 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: EMC operational (EN 50130-4).

5 Access levels

5.1 Access – General

The access levels used in this standard are as stated in EN 50131-1 except for access level 2. Access level 2 “user” should not be able to access the security fog device.

5.2 Levels of access

The levels of access are as follows:

- level 1 – no functions available to user;
- level 2 – functions available from I & HAS (tests, etc.);
- level 3 – maintenance company (replenish consumables, etc.);
- level 4 – manufacturer (replacement components).

6 Regulation requirements

6.1 General

The security fog device should operate to the following minimum relevant European regulation.

6.2 Electrical safety

The electrical (safety) construction of the security fog device should be to EN 60065.

6.3 Safety data sheets

The transport, storage and handling of consumables, with respect to their nature (see specific safety data sheets).

6.4 EMC requirements

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

6.5 Warning signs

Security fog device/system warning signs should be posed 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 device that contains pressure vessels should ensure that transportation and usage meets the current industry safety requirements (see Directive 97/23/EC, Article 3).

7 Device/system parameters

7.1 Performance

The security fog device should 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 at Annex A).

The performance of the security fog device should be detailed as shown in Annex A.

7.2 Battery backup requirement

The battery backup requirements of security fog device/systems do not allow compliance of EN 50131-1 due to the amount of energy used to power the security fog device/system.

As a general requirement a security fog device/system should be capable of a single full system operation for a period within 1 h after mains fail.

7.3 IP/IK rating

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

- IP rating of IP20;
- IK rating of IK08.

7.4 Wire free interconnections

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

8 General requirements

8.1 Tamper

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

8.2 Fog neutralisation

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

8.3 Discharge nozzle

8.3.1 Nozzle protection

The discharge nozzle should be protected to avoid any risk of injury with the security fog device in standby mode.

8.3.2 Nozzle blocked

If the discharge nozzle becomes blocked then it should not cause a hazard.