



SLOVENSKI STANDARD

SIST EN 50131-8:2019

01-september-2019

Nadomešča:
SIST EN 50131-8:2009

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

Alarm systems - Intrusion and hold-up systems - Part 8: Security fog devices

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

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

ITeH STANDARD PREVIEW
(standards.iteh.ai)
<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>

Ta slovenski standard je istoveten z: EN 50131-8:2019

ICS:

13.310	Varstvo pred kriminalom	Protection against crime
13.320	Alarmni in opozorilni sistemi	Alarm and warning systems

SIST EN 50131-8:2019

en,fr

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50131-8:2019

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>

EUROPEAN STANDARD

EN 50131-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 13.320

Supersedes EN 50131-8:2009

English Version

Alarm systems - Intrusion and hold-up systems - Part 8: Security fog devices

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 8: Dispositifs générateurs de brouillard

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

This European Standard was approved by CENELEC on 2019-02-18. 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.

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>



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	5
Introduction	7
1 Scope	8
2 Normative references	8
3 Terms, definitions and abbreviations	8
3.1 Terms and definitions	8
3.2 Abbreviations	10
4 Environmental requirements	10
4.1 Environmental classification.....	10
4.2 Environmental tests.....	10
4.3 Immunity to electromagnetic interferences	10
4.4 IP/IK rating	11
5 Access levels	11
6 Protection requirements	11
6.1 General.....	11
6.2 Product safety	11
6.3 EMC	11
6.4 Non-toxicity	11
6.5 Pressure vessels requirements.....	12
6.6 Labels and warnings	12
6.7 Energy efficiency.....	12
6.8 Warning signs	13
7 Functional requirements	13
7.1 Performance.....	13
7.2 Operation during mains failure.....	13
7.3 Operation with mains only.....	13
7.4 Additional requirement for equipment using radio frequency interconnections.....	13
7.5 Tamper.....	13
7.6 SFD damage/neutralisation	13
7.7 Ejection nozzle	14
7.7.1 Nozzle protection	14
7.7.2 Nozzle blocked or obstructed	14

7.8	Fog eject limiter	14
7.9	Stopping fog generation	14
7.10	Heater block - temperature	14
7.11	Heater block - overheating	14
7.12	Isolation of the SFD	14
7.13	Fixings	14
7.14	Visual Indications	14
7.15	Communication between the SFD and the I&HAS	14
7.15.1	General	14
7.15.2	Minimum information to be communicated	15
7.15.3	Non-critical faults	15
7.15.4	Optional signals	15
7.16	Fault monitoring	15
7.17	Power failure	15
8	Consumables	15
8.1	General	15
8.2	Formulation	15
8.3	Traceability	16
9	Marking	16
10	Documentation	16
11	Design, installation, operation and maintenance	16
Annex A (normative) Performance tests		17
A.1 General		17
A.2 Fog test chamber		17
A.3 Test procedure		17
A.4 Activation test		18
A.5 Fog output of EUT		18
A.6 Fog persistency		19
A.7 Fog output over test periods		19
A.8 Fog visibility/density table		19
A.9 Performance data		20
Annex B (normative) SFD warning sign		23
B.1 Warning sign requirements		23
Annex C (normative) Measurement procedure for power in idle mode		25

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 50131-8:2019](https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5053-491e-971a-547bc6689be2/sist-en-50131-8-2019)

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5053-491e-971a-547bc6689be2/sist-en-50131-8-2019>

EN 50131-8:2019 (E)

C.1 Test room (EN 50564:2011, 4.2)	25
C.2 Power supply (EN 50564:2011, 4.3)	25
C.3 Measuring instruments (EN 50564:2011, 4.4)	25
C.4 Preparation of unit under test (EN 50564:2011, 5.2)	25
C.5 Test setup.....	26
C.6 Measurement (EN 50564:2011, 5.3.2)	26
C.7 Reporting	26
Annex D (informative) Guidance on design, installation, operation and maintenance of the SFD	28
D.1 Risk assessment	28
D.2 General notification.....	28
D.3 Verified alarm triggering.....	28
D.4 Multi-occupancy	28
D.5 Man trap – building unoccupied	28
D.6 Hold-up – Building occupied.....	29
D.7 Installed SFD test.....	29
D.8 Training	29
D.9 Manufacturers requirements.....	29
Bibliography.....	30

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 50131-8:2019](https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5055-491e-971a-547bc6689be2/sist-en-50131-8-2019)

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5055-491e-971a-547bc6689be2/sist-en-50131-8-2019>

European foreword

This document (EN 50131-8:2019) has been prepared by CLC/TC 79 "Alarm systems".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-02-18
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-02-18

This document supersedes EN 50131-8:2009.

EN 50131-8:2019 includes the following significant technical changes with respect to EN 50131-8:2009:

- the standard no longer views a group of parts capable of generating fog as a system and instead considers it to be a device (possibly consisting of separate parts);
- all Security Fog Devices shall meet Environmental Class II;
- requirements for pressure vessels and energy efficiency measurement are now included.

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.

The EN 50131 series consists 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 2-8: Intrusion detectors – Shock detectors*
- *Part 2-9: Intrusion detectors – Active infrared beam detectors*
- *Part 2-10: Intrusion detectors – Lock state contacts (magnetic)*

EN 50131-8:2019 (E)

- *Part 2-11: Intrusion detectors – ALDDR*
- *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*
- *Part 9: Alarm verification. Methods and principles*
- *Part 10: Application Specific Requirements for Supervised Premises Transceiver (SPT)*
- *Part 12: Methods and requirements for setting and unsetting of Intruder Alarm Systems (IAS)*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 50131-8:2019](https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019)

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>

Introduction

Security Fog Devices are used both as a deterrent device for building security and as a crime reduction device for the protection of people.

This European Standard applies to a Security Fog Device that can be connected to an Intruder and Hold-up Alarm System (I&HAS). It can assist insurers, intruder alarm companies, customers and the police in understanding the principles and specifications of a Security Fog Device.

The purpose of a Security Fog Device 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 Devices.

This European Standard has been designed to be flexible enough to encourage and encompass future developments in the field of Security Fog Devices.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 50131-8:2019](https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019)

<https://standards.iteh.ai/catalog/standards/sist/e4e643c3-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>

EN 50131-8:2019 (E)**1 Scope**

This document specifies the requirements for Security Fog Devices as 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 document also gives guidance on the criteria for design, installation, operation and maintenance of Security Fog Devices.

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 286-1:1998, *Simple unfired pressure vessels designed to contain air or nitrogen — Part 1: Pressure vessels for general purposes*

EN 482, *Workplace exposure — General requirements for the performance of procedures for the measurement of chemical agents*

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 50130-5:2011, *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, *Alarm systems — Intrusion systems — Part 5-3: Requirements for interconnections equipment using radio frequency techniques*

EN 50563:2011, *External a.c. - d.c. and a.c. - a.c. power supplies — Determination of no-load power and average efficiency of active modes*

EN 50564:2011, *Electrical and electronic household and office equipment — Measurement of low power consumption*

EN ISO 16000-1, *Indoor air — Part 1: General aspects of sampling strategy (ISO 16000-1)*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

3 Terms, definitions and abbreviations**3.1 Terms and definitions**

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1**alarm verification**

process to provide information additional to a notified alarm, which increases the probability that the alarm should be considered genuine

[SOURCE: EN 50518-3:2013]

3.1.2**idle mode**

condition during which the equipment can promptly provide a primary function but is not doing so

Note 1 to entry: In the case of an SFD, it means a condition where the heater block (if any) and the heat accumulator (if any) are sufficiently warm to immediately eject in one-shot the fog quantity for which the SFD is designed.

[SOURCE: EN 62542 Edition 1, definition 5.3, modified by addition of the note to entry]

3.1.3**pressure vessel**

housing designed and built to contain gases and/or liquids under pressure, including its direct attachments up to the coupling point connecting it to other equipment

Note 1 to entry: A vessel can be composed of more than one chamber.

3.1.4**protected area**

designated space that the SFD is designed to restrict the visibility in when operated

3.1.5**obscuration**

reduction in visibility as a result of fog from the activation of an SFD

3.1.6**security fog**

artificially produced dense cloud of tiny, liquid droplets suspended in the atmosphere to achieve obscuration for protection purposes

3.1.7**security fog device**

device (or a series of separate parts that make up a device) within tamper resistant housing(s), that, when activated, produce, in the protected area, a security fog from a consumable

3.1.8**verified alarm**

alarm considered genuine as a result of the use of alarm verification

iTeh STANDARD PREVIEW
(standards.tch.at)

SIST EN 50131-8:2019

<https://standards.tch.at/catalog/standards/sist/ef6422-5033-491c-971a-547bc6689be2/sist-en-50131-8-2019>

EN 50131-8:2019 (E)**3.2 Abbreviations**

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

CLP	Classification, Labelling and Packaging
EMC	Electromagnetic compatibility
EPS	External Power Supply
IAS	Intruder Alarm System
I&HAS	Intruder and Hold-up Alarm System
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)
SFD	Security Fog Device

4 Environmental requirements**4.1 Environmental classification**

The Security Fog Device shall meet Environmental Class II (Indoor – General: environmental influences normally experienced indoors when the temperature is not well maintained) in accordance with EN 50131-1.

4.2 Environmental tests

For all operation the SFD 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 and within the safety specifications of its components.

The following Class II level environmental tests from EN 50130-5:2011 shall be applicable when testing the SFD:

- Clause 8: dry heat (operational);
- Clause 10: cold test (operational);
- Clause 14: damp heat, cyclic (operational);
- Clause 17: sulphur dioxide (SO₂) (endurance);
- Clause 20: impact (operational);
- Clause 22: vibration sinusoidal (operational).

4.3 Immunity to electromagnetic interferences

Electromagnetic compatibility (immunity, operational) shall be assessed in accordance with EN 50130-4.