

Alarm systems - Intrusion and hold-up systems -- Part 6: Power supplies

Alarm systems - Intrusion and hold-up systems --
Part 6: Power supplies

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50131-6:2008 sisaldab Euroopa standardi EN 50131-6:2008 ingliskeelset teksti. Standard on kinnitatud Eesti Standardikeskuse 20.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas. Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 18.01.2008. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 50131-6:2008 consists of the English text of the European standard EN 50131-6:2008. This standard is ratified with the order of Estonian Centre for Standardisation dated 20.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation. Date of Availability of the European standard text 18.01.2008. The standard is available from Estonian standardisation organisation.
--	---

ICS 13.310

Võtmesõnad: artificial weathering tests, documents, intrusion detector, marking, operating requirements, performance evaluation, specifications, supply, testing conditions, tests, warning systems

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

English version

**Alarm systems -
Intrusion and hold-up systems -
Part 6: Power supplies**

Systèmes d'alarme -
Systèmes d'alarme contre l'intrusion
et les hold-up -
Partie 6: Alimentation

Alarmanlagen -
Einbruch- und Überfallmeldeanlagen -
Teil 6: Energieversorgungen

This European Standard was approved by CENELEC on 2007-12-01. 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: rue de Stassart 35, B - 1050 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 Unique Acceptance Procedure and was approved by CENELEC as EN 50131-6 on 2007-12-01.

This European Standard supersedes EN 50131-6:1997 + corrigendum April 1998.

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) 2008-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-12-01

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 / Microwave detectors
- Part 2–5 Intrusion detectors – Combined passive infrared / Ultrasonic detectors
- Part 2–6 Intrusion detectors – 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

Contents

Introduction	5
1 Scope	6
2 Normative references	6
3 Definitions and abbreviations	7
3.1 Definitions	7
3.2 Abbreviations	9
4 Functional requirements	9
4.1 General	9
4.2 Monitoring of PS	11
4.3 APS Capability	14
4.4 Recharging for PS type A	14
4.5 Over-voltage Protection	15
4.6 Short Circuit Protection	15
4.7 Overload Protection	15
4.8 Deep Discharge Protection	15
4.9 Automatic changeover to APS	15
4.10 Ripple	15
4.11 Tamper Security	15
4.12 Environmental	17
4.13 Safety	17
4.14 EMC	18
4.15 Electrical	18
5 Marking	19
6 Documentation	19
7 Tests	20
7.1 General test conditions	21
7.2 Reduced Functional Test	21
7.3 PS Rating	22
7.4 Output Voltage Stability - Gradual Load Variation	23
7.5 Output Voltage Stability – Switched Load Variation	24
7.6 Signalling: Loss of EPS	25
7.7 Signalling: Storage Device – Low Voltage	26
7.8 Signalling: Storage Device – Failure	27
7.9 Signalling: Low Output Voltage	28
7.10 Signalling: Power Unit Failure	29
7.11 Signalling: Power Unit Failure – SD Charging	29
7.12 Remote Test	30
7.13 SD Recharging	31
7.14 Over-voltage Protection	32
7.15 Short Circuit protection	33
7.16 Overload Protection	34
7.17 Deep Discharge Protection	35
7.18 Automatic Changeover to APS	36

7.19	Tamper Protection	36
7.20	Tamper Protection – Access to the inside of the housing	4
7.21	Tamper Detection – Removal from Mounting	38
7.22	Tamper Detection – Penetration of the housing	39
7.23	Environmental and EMC	39
7.24	Marking and Documentation	40
Annex A (informative) Determination of Storage device failure		41
Figure 1 — Power Supply Types		10
Table 1 — Power Supply Functions.....		11
Table 2 — Power Supply Signalling.....		12
Table 3 — Maximum Time to Detect and Signal Storage Device – Low Voltage.....		13
Table 4 — Tamper Detection.....		16
Table 5 — Removal from Mounting		16
Table 6 — Environmental and EMC Tests and Severity		17
Table 7 — Tests for PS according to type		20
Table A.1 — Minimum Load times for Common Storage Devices in Use in I&HAS		41

Introduction

This European Standard deals with power supplies (PS) of intrusion and hold-up alarm systems (I&HAS) installed in buildings. It includes devices that are installed inside or outside of the supervised premises and mounted in indoor or outdoor environments.

This document is a preview generated by EVS

1 Scope

This European Standard specifies the requirements, performance criteria and testing procedures for PS to be used as part of Intrusion and Hold up Alarm Systems. The PS shall either be an integral part of an I&HAS component or stand-alone. The control functions of the PS may be incorporated as part of the PS device, or may be provided by another I&HAS component e.g. a CIE.

This European Standard is not applicable when the PS requirements for I&HAS components are included within the relevant product standard.

The requirements correspond to each of the four security grades given in the European Standard EN 50131-1, Alarm systems - Intrusion and hold-up systems - Part 1: System requirements. Requirements are also given for four environmental classes covering applications in internal and outdoor locations.

This standard covers mandatory functions which shall be provided on all PS and optional functions which may be provided.

Other functions associated with I&HAS not specified in this standard may be provided. Such functions shall not affect the requirements of any mandatory or optional functions.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>
EN 50130-4		Alarm systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder 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
EN 60065		Audio, video and similar electronic apparatus - Safety requirements (IEC 60065)
EN 60068-1		Environmental testing - Part 1: General and guidance (IEC 60068-1)
EN 60529		Degrees of protection provided by enclosures (IP code) (IEC 60529)
EN 60950	Series	Information technology equipment - Safety (IEC 60950 series, partly modified)
EN 61000-6-3		Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments (CISPR/IEC 61000-6-3)
EN 62262		Degrees of protection provided by enclosure for electrical equipment against external mechanical impacts (IK code) (IEC 62262)