SLOVENSKI STANDARD

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Alarmni sistemi - Sistemi za javljanje vloma in ropa - 10. del: Aplikacijsko specifične zahteve za oddajno-sprejemne naprave v nadzorovanih prostorih

Alarm systems - Intrusion and hold-up systems - Part 10: Application specific requirements for Supervised Premises Transceiver (SPT)

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 10: Anwendungsspezifische Anforderungen an Übertragungseinrichtungen (ÜE)

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 10: Exigences d’application spécifiques pour les transmetteurs des locaux surveillés

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Alarm systems - Intrusion and hold-up systems - Part 10: Application specific requirements for Supervised Premises Transceiver (SPT)

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 10: Exigences d'application spécifiques pour les transmetteurs des locaux surveillés

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This draft European Standard is submitted to CENELEC members for CENELEC enquiry. Deadline for CENELEC: 2011-09-02.

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

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Foreword

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

The EN/TS 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 (acoustics)
Part 2-7-2	Intrusion detectors – Glass break detectors (passive)
Part 2-7-3	Intrusion detectors – Glass break detectors (active)
Part 2-8 [1)]	Intrusion detectors – Shock detectors
Part 2-9 [1)]	Intrusion detectors – Active infrared detectors
Part 3	Control and indicating equipment
Part 4	Warning devices
Part 5-1 [1)]	Requirements for wired interconnection for I&HAS equipments located in supervised premises
Part 5-X [1)]	System compatibility testing for I&HAS equipments located in supervised premises
Part 5-3	Requirements for interconnections equipment using radio frequency techniques
Part 6	Power supplies
Part 7	Application guidelines
Part 8	Security fog device/systems
Part 9 [1)]	Alarm verification – Methods and principles
Part 10 [1)]	Application specific requirements for Supervised Premises Transceiver (SPT)

1) At draft stage.

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Introduction

This European Standard should be read in conjunction with EN/TS 50136 series, particularly EN 50136-2, and includes requirements for Supervised Premises Transceivers (SPT) specific to Intrusion and hold-up alarm system (I&HAS) applications.

EN 50131-1 requires that notification be by warning device (WD) and/or alarm transmission system (ATS). The SPT is the equipment that forms part of the ATS and provides the interface to the I&HAS. A WD is a local means of notification whereas the SPT is a means of initiating notification at a distance through Annunciation Equipment (AE), via a network and Receiving Centre Transceiver (RCT).

EN 50131-1 in particular states the Alarm Transmission System (ATS) performance criteria to be used with an I&HAS according to its security grade.

1 Scope

This European Standard specifies requirements for SPT used in I&HAS to transmit alarm and other messages to a location remote from the supervised premises.

NOTE Requirements for the transmission of alarms are given in the EN/TS 50136 series of standards. EN 50136-2 gives requirements for SPT for use in any type of alarm system (e.g. fire, social care, intrusion, etc). This European Standard gives specific requirements for SPT used in Intrusion and Hold-up Alarm Systems (I&HAS) and should be used in combination with EN 50136-2.

The requirements of this European Standard apply to separate SPT, SPT located within the housings of other I&HAS components and also when the SPT functionality is integrated with the CIE or other parts of an I&HAS.

This European Standard does not give requirements for the ATS network or performance.

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	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 50131-1:2006 + A1:2009	Alarm systems – Intrusion and hold-up systems – Part 1: System requirements
EN 50131-6	Alarm systems – Intrusion and hold-up systems – Part 6: Power supplies
EN 50136-1:201X [2)]	Alarm systems – Alarm transmission systems and equipment – Part 1: General requirements for alarm transmission systems
EN 50136-2:201X [2)]	Alarm systems – Alarm transmission systems and equipment – Part 2: Requirements for Supervised Premises Transceiver (SPT)
EN 60068-1:1994	Environmental testing – Part 1: General and guidance (IEC 60068-1:1988 + corr. Oct. 1988 + A1:1992)
EN 60068-2-75	Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests (IEC 60068-2-75:1997)
EN 60529	Degrees of protection provided by enclosures (IP code) (IEC 60529)
EN 62262	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IEC 62262)

2) At draft stage.

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50131-1:2006 and EN 50136-1:201X and the following apply.

3.1.1
average current consumption
average of all current consumed by the SPT during one hour of normal functioning, including the transmission of an alarm once every five minutes, using the transmission technology with the highest current consumption

3.1.2
peak current consumption
maximum momentary current consumed by the SPT

3.1.3
External Power Source
energy supply external to the I&HAS which may be non-continuous

NOTE Refer to EN 50131-6. External Power Source (EPS) is applicable to types A and type B PS only. Typically, EPS is provided by mains AC.

3.2 Abbreviations

For the purposes of this document, the following abbreviations apply:

AC Alternative Current
AE Annunciation Equipment
APS Alternative Power Source
ATS Alarm Transmission System
CIE Control and Indicating Equipment
EMC Electromagnetic Compatibility
EPS External Power Source
EUT Equipment Under Test
I&HAS Intruder and Hold-up Alarm Systems
PS Power Supply
RCT Receiving Centre Transceiver
SD Storage Device
SPT Supervised Premises Transceiver
WD Warning Device

4 General requirements

4.1 Additional functions

Functions additional to the mandatory functions specified in this European Standard may be included providing that they do not influence the correct operation of the mandatory functions.

4.2 Equipment features

SPT shall include features for the detection of input status, generation of output signals (to the CIE), and indication as required in Clause 7.

SPT shall also include features as required by EN 50136-2.

4.3 SPT structure

The SPT may be in a single housing or be distributed in multiple housings, and may be housed with other I&HAS components (e.g. CIE). The functionality of the SPT may be fully or partly integrated with other components of an I&HAS (e.g. CIE). The I&HAS specific functionality of the SPT may be provided separately from the generic alarm transmission functionality (i.e. functionality within the scope of EN 50136-2) or the two sets of functions may be combined (e.g. using a single processor).

5 Security grade

The SPT shall comply with one of the four security grades described in EN 50131-1 (with grade 1 being the lowest and grade 4 being the highest).

6 Environmental performance

6.1 Requirements

The SPT shall be suitable for use in one of the environmental classes defined in EN 50131-1.

6.2 Environmental tests

EN 50130-5 describes environmental test methods relevant to I&HAS components. The tests applicable are specified in 10.7 of this European Standard.

EN 50130-4 specifies EMC susceptibility tests relevant to I&HAS components. The operating conditions for these tests are specified in 10.7 of this European Standard.

7 Functional requirements

7.1 Tamper

7.1.1 General

All terminals and means of mechanical and electronic adjustment shall be located within the SPT housing(s). The SPT housing(s) shall be provided with the means to prevent access to internal elements to minimize the risk of tampering, according to the grade of the SPT.

Provision shall be made to allow adequate fixing of the enclosure to the mounting surface.

7.1.2 Tamper protection

The construction of the SPT enclosure(s) shall meet the tamper protection requirements of EN 50131-1 and the impact requirements of the appropriate grade according to Table 1.

The cover of the enclosure shall be secured with one or more screws or bolts or alternatively by a mechanical lock. The cover of the enclosure shall be opened only with the use of one or more keys or suitable tools.

Table 1 – Tamper protection

	Grade 1	Grade 2	Grade 3	Grade 4
Severity level (IK code) (design specification) (re: EN 62262)	04	06	06	06
Impact energy (Joule) (test condition)	0,5	1	1	1

7.1.3 Tamper detection

7.1.3.1 General

A tamper signal or message shall be generated according to the requirements specified in Table 2 and before access can be gained to override the detection or interfere with the functionality of the SPT.

Table 2 – Tamper detection

Tamper detection	Grade 1	Grade 2	Grade 3	Grade 4
Access to the inside of the housing	M	M	M	M
Removal from mounting	OP	OP	M	M
Removal from mounting (wire free)	OP	M	M	M
Key M = Mandatory OP = Optional				

7.1.3.2 Access to the housing

Opening the SPT housing by normal means shall generate a tamper signal or message.

The housing shall not permit the introduction of tools of dimensions as specified in Table 3 to defeat the tamper detection before it has operated.

Table 3 – Tool dimension for tamper detection

	Grade 1	Grade 2	Grade 3	Grade 4
Steel rod as specified in EN 60529, with diameter	2,5 mm	2,5 mm	1 mm	1 mm
Flat bar of dimension	10 mm × 1 mm × L, with L > 300 mm	10 mm × 1 mm × L, with L > 300 mm	5 mm × 0,5 mm × L, with L > 300 mm	5 mm × 0,5 mm × L, with L > 300 mm
Steel wire of tensile strength 650 MPa - 825 MPa and dimensions	N/A	N/A	1 mm Ø x 300 mm	1 mm Ø x 300 mm

In grades 1 and 2 only, this requirement does not include insertion of the tool via indicators or operating controls.

7.1.3.3 Removal from mounting

Attempts to remove the SPT from its mounting surface for a distance greater than that defined in Table 4 shall generate a tamper signal or message according to Table 2.