SLOVENSKI STANDARD
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SIST EN 50136-2-1:1999/A1:2001
SIST EN 50136-2-2:1999
SIST EN 50136-2-3:1999
SIST EN 50136-2-4:1999

Alarmni sistemi - Sistemi in oprema za prenos alarma - 2. del: Zahteve za oddajno-sprejemne naprave v nadzorovanih prostorih

Alarm systems - Alarm transmission systems and equipment - Part 2: Requirements for Supervised Premises Transceiver (SPT)

Alarmanlagen - Alarmübertragungsanlagen und -einrichtungen - Teil 2: Anforderungen an Übertragungseinrichtungen (ÜE)

Systèmes d'alarme - Systèmes et équipements de transmission d’alarme - Partie 2: Exigences pour les transmetteurs des locaux surveillés

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EUROPEAN STANDARD

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English version

Alarm systems - Alarm transmission systems and equipment - Part 2: Requirements for Supervised Premises Transceiver (SPT)

Systèmes d'alarme -
Systèmes et équipements de transmission d'alarme -
Partie 2: Exigences pour les transmetteurs des locaux surveillés (SPT)

Alarmanlagen -
Alarmübertragungsanlagen und -einrichtungen -
Teil 2: Anforderungen an Übertragungseinrichtungen (ÜE)

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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 document (EN 50136-2:2013) has been prepared by CLC/TC 79 "Alarm systems".

The following dates are proposed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-08-12
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-08-12

This document supersedes EN 50136-2-1:1998+corr.Apr.1998+A1:2001, EN 50136-2-2:1998, EN 50136-2-3:1998 and EN 50136-2-4:1998.

EN 50136-2:2013 includes the following significant technical changes with respect to EN 50136-2-1:1998+corr.Apr.1998+A1:2001, EN 50136-2-2:1998, EN 50136-2-3:1998 and EN 50136-2-4:1998:

1) referenced based standards were updated to the latest versions;

2) definitions were updated;

3) requirements were aligned with new ATS categories of the revised system standard EN 50136-1;

4) test methods were added;

5) the scope was changed to reflect the amalgamation of EN 50136-2-2:1998, EN 50136-2-3:1998 and EN 50136-2-4:1998 and to achieve compatibility with application specific standards such as fire alarm transmission systems and social alarm transmission systems;

6) significant changes were made to the structure of the document to achieve general alarm transmission requirements for SPT. Application specific requirements were removed;

7) the title was corrected to match the scope of the document.

This revision was prepared to bring the procedures up-to-date with current technical developments, taking account of changes in the basic standards and the experience gained in the use of the standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This European Standard is part of a series. This series is intended to give the requirements applicable to alarm transmission systems in general.

EN 50136 consists of the following parts, under the general title *Alarm systems — Alarm transmission systems and equipment*:

– *Part 1: General requirements for alarm transmission systems*;

– *Part 2: Requirements for Supervised Premises Transceiver (SPT)*;

– *Part 3: Requirements for Receiving Centre Transceiver (RCT)*;

– *Part 4: Annunciation equipment used in alarm receiving centres* (Technical Specification);

– *Part 7: Application guidelines* (Technical Specification);

– *Part 9: Requirements for common protocol for alarm transmission using the Internet protocol* (Technical Specification).

1 Scope

This European Standard specifies the general equipment requirements for the performance, reliability, resilience, security and safety characteristics of supervised premises transceiver (SPT) installed in supervised premises and used in alarm transmission systems (ATS). A supervised premises transceiver can be a stand-alone device or an integrated part of an alarm system.

These requirements also apply to SPT's sharing means of interconnection, control, communication and power supplies with other applications.

The alarm transmission system requirements and classifications are defined within EN 50136-1. Different types of alarm systems may in addition to alarm messages also send other types of messages, e.g. fault messages and status messages. The term alarm is used in this broad sense throughout the document. Additional requirements for the connection of specific types of alarm systems are given in the relevant European Standards.

Because the SPT can be applied in different applications (e.g. I&HAS, fire and social alarm systems), requirements for the SPT, additional to those of this European Standard, may be specified in separate application specific documents.

This European Standard specifies the requirements specific to alarm transmission. Application specific requirements for the connection of the SPT to specific types of alarm systems are given in the EN 50131 (all parts) for I&HAS, and EN 54 (all parts) for fire. For other SPT applications, see the relevant National or European standards.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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, hold up, CCTV, access control and social alarm systems*

EN 50130-5, *Alarm systems — Part 5: Environmental test methods*

EN 50136-1:2012, *Alarm systems — Alarm transmission systems and equipment — Part 1: General requirements for alarm transmission systems*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50136-1:2012 and the following apply.

3.1.1
alternative power source
power source capable of powering the SPT for a predetermined time when a prime power source is unavailable

3.1.2
indication
information (in audible, visual or any other form) about the state of the SPT, RCT and/or ATS

3.1.3
logical access
access to SPT data (e.g. configuration, status, software)

3.1.4
local access
access to the SPT from within the protected premises where physical access is required before logical access can be achieved

3.1.5
remote access
access to the SPT not requiring physical access

3.1.6
prime power source
power source used to support an SPT under normal operating conditions

3.2 Abbreviations

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

AE Annunciation Equipment

AS Alarm System

ATP Alarm Transmission Path

ATS Alarm Transmission System

CIE Control and Indicating Equipment

EMC Electromagnetic Compatibility

GND Ground

GPRS General Packet Radio Services

I&HAS Intruder and Hold-up Alarm Systems

NTP Network Time Protocol

RCT Receiving Centre Transceiver

SPT Supervised Premises Transceiver

4 General requirements

4.1 General

Where appropriate, equipment shall comply with local, national and European requirements and regulations for connection and transmission via public or private networks.

Requirements in this European Standard shall be considered as a minimum. As the SPT is used together with or integrated in associated alarm systems, the requirements of the specific applications or related standards shall apply.

Specific applications may require additional testing of the SPT. If such characteristics for a non-alarm application are provided and are submitted for testing, they shall be specified by the manufacturer at the time of testing.

4.2 SPT classification

This European Standard defines SPT requirements. For some specific characteristics also, a classification system or measuring scale is introduced. For the purpose of SPT classification, reference is made to the ATS categories in EN 50136-1. The SPT shall be labelled with each category or range of categories that it can be applied to.

If a Custom Category (category C) is defined then the requirements corresponding to Tables 1, 2 and 3 shall also be defined.

5 Functional requirements

5.1 General

The SPT shall be able to receive alarms from one or more ASs and transmit the alarm to one or more RCTs via one or more ATPs within the requirements of the appropriate ATS category.

5.2 Access levels

This European Standard specifies four levels of access that categorise the ability of users to gain logical access to the SPT functions.

Physical access requirements may be defined in the relevant application specific standards.

Access levels are defined as following:

- Level 1: access to functions, indications and notifications available to any individual without authentication;
- Level 2: access to information about the operational status of the SPT. Access level 2 may also allow access to basic functional tests and the management of other Access level 2 users;
- Level 3: maintenance and commissioning functions, access to affect the SPT configuration including the addition, removal or replacement of components and other operations that directly, or indirectly, may influence the functions of the SPT;
- Level 4: access to update the software and read-only functions.

Access to level 2, 3 and level 4 functions shall require authorisation with a key.

Access at level 3 should be authorised by a user with level 2 access. Access at level 4 should be authorised by a user with level 3 access. This may be achieved by a one time authorisation as part of a service level agreement.

Access at levels 2, 3 and 4 may be achieved providing authorisation, equivalent to 1 000 000 key differs is achieved.

Where it is possible to attempt to gain access more than 3 times in a 60-second period the SPT shall have the ability to delay repeated attempts. After the third attempt, each further attempt shall be prevented for a minimum of 90 s.

Where factory default keys are provided, it shall not be possible to complete the SPT commissioning without first, changing these keys e.g. during installation. It shall not be possible to read any key that provides authorisation for access at levels 2, 3 or 4.

5.3 Remote access

Remote access to the SPT shall meet at least the same information security requirements that are required for alarm transmission as defined in EN 50136-1 for the appropriate category.

5.4 Uploading and downloading of software and firmware

Where upload and download functions are provided, the upload and download of software to a SPT is only allowed to be performed by users with appropriate access level, as defined in 5.2.

The software to be replaced by a software download shall be stored. If there is a loss of connection or another transmission fault disrupts the download, the last fully functional software version shall be restored, and the SPT shall work as before the unsuccessful download.

EXAMPLE Procedure of a download: download software, check and validate the download, activate downloaded software.

5.5 Storage of parameters

Power cycle or a boot up sequence shall not result in the loss of any site specific data. The SPT shall return to normal operation.

5.6 ATS and ATP fault reporting to the AS

Where the SPT is required to report an ATS and/or ATP failure to the AS as per EN 50136-1:2012, Table 5, this shall take place within the reporting times shown in EN 50136-1:2012, Table 3.

For an ATS with more than one ATP, as long as service is not lost, a single path line fault may be held by the SPT for a period that is agreed between the interested parties until it is released to the AS.

Where an AS includes the ability to display the status of each ATP the SPT may be configured to pass individual ATP failures to the AS within the reporting times shown in EN 50136-1:2012, Table 3.

The manufacturer's documentation should define the process for the reporting of ATS faults to the AS.

5.7 Interface to the AS

The connections to the AS shall be monitored in accordance with EN 50136-1.

The maximum time to detect and generate an interface failure shall meet the requirements of the associated application and shall not exceed the ATS reporting time of the appropriate category as specified in EN 50136-1:2012, Table 3.

To allow compatibility of equipment from different manufacturers, this European Standard specifies two electrical interfaces:

- parallel interface between AS and SPT, see A.1;
- serial interface between AS and SPT, see A.2.

This does not exclude the use of any other type of interface to the AS, provided that the specific requirements of this standard are met.

The manufacturer shall state in the associated documentation which type(s) of interface(s) to the AS are provided.

5.8 Monitoring of the transmission network interface(s) – Fault reporting

If required by the ATS category, the SPT shall be configured to detect the failure of a transmission network interface and generate an ATP fault to the AS.

The manufacturer's documentation shall describe the process for monitoring and reporting the network interface fault to the AS.

NOTE 1 The message generated by the SPT can indicate either an ATP fault or an interface fault.

Where required, transmission network interface faults shall be reported within the time specified in EN 50136-1:2012, Table 3.

For dual path category (Dx) ATSs, a fault on one of the transmission network interfaces shall be reported to the RCT over the remaining ATP within the time specified in EN 50136-1.

NOTE 2 An SPT network interface fault provides indication of a path fault.

Monitoring the state of a transmission network interface should not be used to monitor the state of an associated ATP.

NOTE 3 An ATP can be in a failed state whilst the associated network interface is in an operational state.

5.9 Power supply for the SPT

The SPT may be powered by the associated AS power supply (dedicated or shared) or by an integral SPT power supply.

Where an integral SPT power supply is used, it shall meet the requirements of the most demanding associated AS.

5.10 Event logging

A logging function for all categories of SPT except SP1 and DP1, shall be provided for the purposes of providing an audit trail and problem resolution.

Dependent upon the ATS category where the SPT is applied, the events specified in Table 1 shall be recorded in the SPT.

The means used to record the events shall be protected against the accidental or deliberate deletion or alteration of the contents.

The means of recording events shall be non-volatile and have a capacity complying with the requirements of Table 2. When the event recorder reaches maximum capacity, further events may cause the oldest events to be erased.

The log shall record, in addition to the event, the time and date at which the event occurred. The timing resolution shall be a minimum of 1 s and it shall be accurate to the coordinated universal time within +/- 5 s.

The SPT shall provide a means to adjust the date and time.

Event optimisation is permitted, provided that all diverse events are recorded and that the first and the last repeated identical sequence of events in a 12 h period are recorded. Where this is done the number of repetitions need to be recorded.

When required by Table 1, the logging of access to the SPT shall include user identification.