
Alarmni sistemi - Sistemi in oprema za prenos alarma - 2. del: Zahteve za oddajno-sprejemne naprave v nadzorovanih prostorih (SPT) - Dopolnilo A1

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 (SPT)

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EUROPEAN STANDARD
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English Version

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

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Übertragungseinrichtungen (ÜE)

This amendment A1 modifies the European Standard EN 50136-2:2013; it was approved by CENELEC on 2023-02-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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This amendment 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.

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Europäisches Komitee für Elektrotechnische Normung

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Contents	Page
European foreword.....	3
1 Modification to subclause 4.2, “SPT classification”	4
2 Modification to subclause 5.6, “ATS and ATP fault reporting to the AS”	4
3 Modification to subclause 5.7, “Interface to the AS”	4
4 Modification to subclause 5.8, “Monitoring of the transmission network interface(s) – Fault reporting”	4
5 Modification to subclause 5.10, “Event logging”	4
6 Modification to subclause 6.1, “Modes of acknowledgement operation”	5
7 Modification to subclause 7.1, “SPT documentation”	5
8 Modification to subclause 9.1, “General”	5
9 Modification to subclause 9.4.1, “General”	6
10 Modification to subclause 9.4.2.1, “Object of the test”	7
11 Modification to Table 6, “Test of upload and download of software and firmware”	7
12 Modification to subclause 9.4.5.2, “Principle”	8
13 Modification to subclause 9.4.7.2, “Principle”	8
14 Replacement of subclause 9.4.9, “Monitoring of the transmission network interface”	9
15 Modification to subclause 9.4.14, “Store-and-forward operation”	10
16 Deletion of subclause 9.4.15, “Pass-through operation”	11
17 Addition of subclause 9.4.19, “Means for ATS performance verification”	11
18 Deletion of subclause A.1.3, “Parallel SPT outputs”	12

European foreword

This document (EN 50136-2:2013/A1:2023) has been prepared by CLC/TC 79 “Alarm systems”.

The following dates are fixed:

- latest date by which this document has to be (dop) 2024-02-13
implemented at national level by publication of
an identical national standard or by
endorsement
- latest date by which the national standards (dow) 2026-02-13
conflicting with this document have to be
withdrawn

Amendment 1 to EN 50136-2:2013 makes miscellaneous changes to correct errors and to better reflect the current state of the art.

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

iTeh STANDARD PREVIEW
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SIST EN 50136-2:2013/A1:2023

<https://standards.iteh.ai/catalog/standards/sist/c94f4581-2e73-43ab-80fd-b7cd9e20caeb/sist-en-50136-2-2013-a1-2023>

EN 50136-2:2013/A1:2023 (E)

1 Modification to subclause 4.2, “SPT classification”

Delete the existing second paragraph and replace with the following text:

“When the SPT is used together with or integrated in associated alarm systems, in case of requirement conflict, the most demanding requirement shall apply.”

2 Modification to subclause 5.6, “ATS and ATP fault reporting to the AS”

Rename the subclause as follows:

“5.6 ATS fault reporting to the AS”

Delete the paragraph and replace with the following text:

“Where the SPT is required to report an ATS failure to the AS as per EN 50136-1:2012,¹ Table 5, this shall take place within the reporting times of ‘failure of all ATPs at the same time’ shown in EN 50136-1:2012¹, Table 3 (last row).

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

3 Modification to subclause 5.7, “Interface to the AS”

Replace paragraph 3 with the following text:

“To allow compatibility of equipment from different manufacturers, this document provides two possible standard interfaces”:

4 Modification to subclause 5.8, “Monitoring of the transmission network interface(s) – Fault reporting”

Delete the existing text and replace with the following:

“If network interface monitoring and fault reporting to the AS and/or RCT is implemented, the manufacturer’s documentation shall describe how this is achieved.

NOTE Implementation of network interface monitoring and fault reporting is not mandatory. However, it can be useful for the ATSP to help determine and analyse the cause of ATP failures.”

5 Modification to subclause 5.10, “Event logging”

Delete the existing fourth paragraph and replace with the following text:

“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. When the event log memory is shared with another application, the minimum requirements of Table 2 shall be met for the SPT events and shall not be overwritten by any other application.”

Delete existing text between Table 1 and Table 2 and replace with the following text:

“Where the SPT and the AS are integrated into a single device they may share the same internal memory provided that the minimum logging requirements for both SPT and AS are met.”

¹ As amended by EN 50136-1:2012/A1:2018.

6 Modification to subclause 6.1, “Modes of acknowledgement operation”

Rename the subclause as follows:

“6.1 Mode of operation”

Delete the existing clause and replace by the following text:

“When an alarm is received by the SPT, the SPT shall secure the alarm and acknowledge the correct receipt of the alarm to the AS.

The SPT shall deliver the alarm to the RCT according to the requirements of the ATS category selected.

All alarm messages shall include a date and time stamp that is accurate to the resolution specified in 5.10.

Securing the alarm shall be achieved by storing the alarm in the SPT’s non-volatile memory, this is to secure alarms during a power failure or other ATS failure; stored alarms shall be transmitted when the fault condition clears.

NOTE 1 The loss of an alarm message is regarded as a situation that is worse than sending a delayed message.

NOTE 2 If an ATS fault is detected after the SPT received and secured the alarm, this will be reported to both the AS and the AMS in accordance with the requirements of EN 50136-1.”

Delete subclauses 6.1.1, 6.1.2 and 6.1.3.

Add the following subclause 6.5:

“6.5 Means of ATS performance verification

Where applicable for the ATS categories supported by the SPT, and where the SPT has integrated functions to monitor the performance of the ATS, the manufacturer shall provide in his/her documentation a description of how this is achieved.

The manufacturer documentation shall describe the means to achieve the following performance measurements:

- transmission time (EN 50136-1:2012¹, Table 2),
- reporting time (EN 50136-1:2012¹, Table 3),
- ATS Availability (EN 50136-1:2012¹, Table 6).”

7 Modification to subclause 7.1, “SPT documentation”

Add the following item to the list of SPT documentation items:

“

- Description of test to verify the ATS performance to achieve compliance with EN 50136-1:2012¹, Table 2, Table 3 and Table 6.”

8 Modification to subclause 9.1, “General”

Delete the existing paragraph and replace with the following text:

“9.1 General

The manufacturer shall provide a fully functional test setup. Other ATS components such as AS, network and the RCT may be provided as simulating equipment and/or network(s).

Where an RCT (or simulated RCT) is required for the tests, it shall be capable of meeting the requirements of EN 50136-1.

The tests shall be reproducible and deliver the same results when carrying out the same test procedure.”

EN 50136-2:2013/A1:2023 (E)

9 Modification to subclause 9.4.1, “General”

Replace Table 4 with the following:

“

Table 4 — Summary of functional tests

Subclause	Requirement to test	Test/validation objective	Validate or test
5.2	Access levels	Demonstrate that all access levels exist	Test (9.4.2)
5.5	Parameter storage	Demonstrate that storage is immune to power failure	Test (9.4.4)
5.4	Uploading and downloading of software and firmware	Demonstrate that the SPT will recover after an unsuccessful firmware upload/download	Test (9.4.3)
5.6	ATS and ATP fault reporting to the AS	Demonstrate function	Test (9.4.5)
5.7	Interface to AS (serial)	To demonstrate that any available interface shall comply with SPT manufacturer's documentation	Validate (9.4.6)
	Interface to AS (parallel)	To demonstrate that the SPT interface shall comply with Annex A	Test (9.4.7)
	Interface to AS (proprietary)	To demonstrate that any available interface shall comply with SPT manufacturer's documentation	Validate (9.4.8)
5.8	Monitoring of the transmission network interface	To demonstrate function	Test (9.4.9)
5.10	Protection of the log	To demonstrate compliance against manufacturer's documentation	Validate (9.4.11)
	Log capacity – Table 2	To demonstrate the capacity to store at least an equal quantity of events as illustrated in Table 2	Test (9.4.12)
	Clock resolution	To demonstrate that the clock remains accurate in line with 5.10	Test (9.4.13)
	Event logging– Table 1	To demonstrate compliance with Table 2	Test (9.4.10)
6.1	Mode of operation	To demonstrate that the SPT secures alarm messages and meets the requirements of 6.1	Test (9.4.14)
6.2	SPT alarms	To demonstrate that the SPT generates the required alarms	Test (9.4.16)
6.3	Substitution security	Verify the manufacturer declaration how substitution security is implemented and complies with the requirements of 6.3.	Validate (9.4.17)
6.4	Information security	Verify the manufacturer declaration how information security is implemented and complies with the requirements of 6.4	Validate (9.4.17)

Subclause	Requirement to test	Test/validation objective	Validate or test
6.5	Means of performance verification	Verify the manufacturer declaration how performance verification is implemented and complies with the requirements of 6.5	Validate (9.4.19)
7	Documentation	Verify the manufacturer documentation against the requirements of Clause 7.	Validate (9.4.18)

“

10 Modification to subclause 9.4.2.1, “Object of the test”

Delete the existing text and replace with the following text:

“9.4.2.1 Object of the test

The object of the test is to demonstrate the ability of the SPT to comply with 5.2 to provide up to 4 levels of access and verify the relevant access to the functions and controls.”

11 Modification to Table 6, “Test of upload and download of software and firmware”

Delete the existing table and replace with the following table:

“

Table 6 — Test of upload and download of software and firmware

Step	Test condition	Test procedure	Measurement	Pass criteria
1	The SPT and any necessary equipment to allow the SPT to perform as required shall be installed and in a functional state.	At access level 1, attempt to apply a firmware update.	Record whether a firmware update is permitted.	A firmware update shall not be permitted.
2	As above	Repeat as above for access level 2.	As above	As above
3	As above	Repeat as above for access level 3.	As above	As above
4	As above	Repeat as above for access level 4.	As above	A firmware update shall be permitted.
5	As above	Repeat as above for access level 4. Disconnect from the network during the firmware update procedure.	Record whether the SPT fails to operate or restores normal operation.	The SPT shall operate normally after the attempt to download firmware.

“

EN 50136-2:2013/A1:2023 (E)

12 Modification to subclause 9.4.5.2, “Principle”

Add the following text below Table 8:

“Removal of an Ethernet cable or the antenna is not a suitable test. This only monitors the network interface like measuring the line voltage for the analogue lines. The manufacturer shall specify in the documentation how the test shall be performed.”

13 Modification to subclause 9.4.7.2, “Principle”

Replace Table 11 with the following Table:

“

Table 11 — Test of standardized parallel interface to the AS

Step	Test condition	Test procedure	Measurement	Pass criteria
1	The SPT and an AS or an equivalent AS Interface simulator are connected via the parallel AS interface and are performing as required. The SPT is connected to a fully operational ATS.	An alarm is triggered by the AS to every SPT parallel alarm Input as required by Annex A.	Record if a change of $\pm 40\%$ of the quiescent resistance value is recognized as an alarm and transmitted to the SPT network interface.	A change of more than $\pm 40\%$ from the quiescent resistance value is recognized as an alarm.
2	As above	An AS fault or other message is triggered by the AS to every SPT message/fault input as required by Annex A.	Record if a change from less than $100\ \Omega$ impedance to more than $500\ \text{k}\Omega$ impedance for longer than $200\ \text{ms}$ is recognized as a change of state from normal to active state.	A change of impedance from less than $100\ \Omega$ to more than $500\ \text{k}\Omega$ is recognized as a change of state of the message/ fault input of the SPT.
3	As above	Make sure that the ATS is not available.	Monitor the state of the SPT fault output (A.1.3.2) to the AS	The SPT fault output (A.1.3.2)) shall change state within the reporting time of the appropriate category.
4	As above	Activate all SPT outputs and connect a source of $20\ \text{mA}$ to all individual outputs.	Record whether all SPT outputs can sink $20\ \text{mA}$ in the case of an activated output to the AS.	All SPT outputs to the AS can sink at least $20\ \text{mA}$.
5	As above	Tamper the interface to the AS by removing or shortening the interface connection of the SPT to the AS.	Record if an alarm message is generated.	Tamper of the SPT to AS connection is detected and reported to the RCT.

“