

PD CLC/TS 50131-9:2014



BSI Standards Publication

Alarm systems — Intrusion and hold-up systems

Part 9: Alarm verification —
Methods and principles

bsi.

...making excellence a habit.™

National foreword

This Published Document is the UK implementation of CLC/TS 50131-9:2014.

The UK participation in its preparation was entrusted by Technical Committee GW/1, Electronic security systems, to Subcommittee GW/1/2, Installed alarm systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 71373 6
ICS 13.320

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2014.

Amendments/corrigenda issued since publication

Date	Text affected
-------------	----------------------

ICS 13.320

English Version

Alarm systems - Intrusion and hold-up systems - Part 9: Alarm verification - Methods and principles

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 9: Vérification d'alarme - Méthodes et principes

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 9: Alarmvorprüfung - Verfahren und Grundsätze

This Technical Specification was approved by CENELEC on 2014-04-11.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

page

Foreword	4
Introduction	- 5 -
1 Scope	- 6 -
2 Normative references	- 6 -
3 Terms, definitions and abbreviations	- 6 -
3.1 Terms and definitions	- 6 -
3.2 Abbreviations	- 9 -
4 Overview	- 9 -
5 Parameter variation	- 10 -
6 General recommendations for I&HAS incorporating alarm verification	- 10 -
6.1 General	- 10 -
6.2 Setting and unsetting	- 10 -
6.3 Indications	- 10 -
6.4 Processing and Notification	- 10 -
6.5 Event recording	- 11 -
6.6 Restore	- 12 -
6.7 Documentation	- 12 -
6.8 Hold-up alarms	- 12 -
7 Sequential verification of intruder alarms	- 12 -
7.1 General	- 12 -
7.2 Recommendations for system requirements	- 13 -
7.3 Installation guidelines	- 14 -
7.4 ARC responses	- 15 -
8 Sequential verification of hold-up alarms	- 15 -
8.1 Recommendations for system requirements	- 15 -
8.2 Installation guidelines	- 15 -
8.3 ARC responses	- 15 -
9 Audible alarm verification	- 16 -
9.1 System design factors	- 16 -
9.2 Installation guidelines	- 16 -
9.3 ARC responses	- 17 -
10 Visual alarm verification	- 17 -
10.1 System design factors	- 17 -
10.2 Installation guidelines	- 17 -
10.3 ARC responses	- 17 -
11 ATS faults	- 18 -
11.1 System design factors	- 18 -
11.2 Installation guidelines	- 18 -
11.3 ARC responses	- 18 -
Annex A (informative) Equipment specifications	- 19 -
A.1 General	- 19 -
A.2 Control and indicating equipment	- 19 -
A.3 Multi-output combined detectors	- 20 -
A.4 Multi-action hold-up device	- 20 -
A.5 Audible alarm verification equipment	- 21 -
A.6 Visual alarm verification equipment	- 22 -
Annex B (informative) Equipment test procedures	- 24 -
B.1 CIE	- 24 -
B.2 Multi-output combined detectors	- 26 -
B.3 Audible alarm verification equipment	- 26 -
B.4 Visual alarm verification equipment	- 27 -
Bibliography	- 28 -

Figures and Tables

Figure 1 – Time line of completed sequentially verified alarm sequence - 12 -
Figure 2 – Time line of unverified alarm sequence - 13 -
Table 1 – Types of alarm permitted to contribute to a sequentially verified intruder alarm - 13 -
Table A.1 – Tamper protection, tamper detection and environmental recommendations for audible
alarm verification equipment. - 22 -
Table A.2 – Tamper protection, tamper detection and environmental recommendations for visual alarm
verification equipment. - 23 -
Table B.1 – CIE tests for alarm verification functions (*1 of 3*) - 24 -

Foreword

This document (CLC/TS 50131-9:2014) has been prepared by CLC/TC 79 "*Alarm systems*".

EN 50131 (all parts) 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 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 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 5-3 Requirements for interconnections equipment using radio frequency techniques
- Part 5-4 System compatibility testing for I&HAS equipments located in supervised premises
- Part 6 Power supplies
- Part 7 Application guidelines
- Part 8 Security fog device/systems
- Part 9 Alarm verification – Methods and principles
- Part 10 Application specific requirements for Supervised Premises Transceiver (SPT)

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.

¹⁾ At draft stage.

Introduction

Unwanted alarms have been a significant problem for response authorities throughout Europe. Alarm verification (also known as “Confirmation”) is one means developed to reduce this problem.

Development of alarm verification technologies has been carried out nationally on an “as needed” basis, resulting in different methods and practices being used – thus negating the benefits of having common European Standards for Intrusion and Hold-up Alarm Systems (I&HAS) and associated components.

This specification provides a basis for use of the technology that could be applied to verification of intruder and hold-up alarms such that countries that wish to do so could introduce alarm verification measures in a way that will permit later standardisation across Europe.

It provides a framework with limited options for the design, manufacture and testing of equipment (especially CIE) whilst enabling a multiplicity of implementations, thus removing the restrictions to trade imposed by the use of conflicting national recommendations.

The framework includes all methods in current use. Newly developed methods could be added to this specification, or its principles used to derive guidance for the implementation of such methods.

Alarm verification technology does not supersede the need for best practice in the design and installation of such systems, but supplements the requirements of EN 50131-1 in order to increase the probability that an alarm notified to an ARC by an Intrusion and Hold-up Alarm System may be considered to be genuine.

This European Technical Specification contains recommendations affecting a number of standards and application guidelines for both systems and products. There are a number of reasons for this:

- to group all relevant recommendations in a single document to simplify reference by those wishing to introduce an implementation of alarm verification;
- to allow alarm verification to be tested before review and eventual incorporation into European Standards;
- to recommend the additional product requirements necessary to provide the additional functionality for an installed I&HAS to meet these recommendations (see Annex A), pending incorporation of these recommendations into EN 50131 (or other) product standards;
- it should also be noted that some aspects of alarm verification do not have a related standard (e.g. audible and visual methods and related equipment).

Methods of reducing unwanted alarms specific to entry and exit procedures will be detailed in a future standard.

1 Scope

This European Technical Specification is available for use where alarm verification methods are considered necessary. It provides recommendations for the addition and use of alarm verification technology in Intrusion and Hold-up Alarm Systems (I&HAS) installed to comply with EN 50131-1.

These recommendations should be incorporated into the respective standards in the EN 5013x series.

This Technical Specification does not detail methods of alarm verification relying solely on Alarm Receiving Centre (ARC) procedures, but does not preclude their use.

This Technical Specification describes alarm verification methods that could be applied and details applicable to system and equipment design. The framework limits the range of options in order to provide for local regulations and circumstances, whilst permitting a standardised approach to equipment design.

This Technical Specification also provides (in Annex A) recommendations for equipment in order to permit the manufacture of standardised equipment to provide the functionality needed by an I&HAS incorporating alarm verification technology.

The associated guidelines for use in ARCs to monitor notification from such I&HAS can be found in EN 50518-3.

NOTE Alarm verification may also be referred to as “alarm confirmation”.

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 50131-1:2006, *Alarm systems — Intrusion and hold-up systems — Part 1: System requirements*

CLC/TS 50131-7:2010, *Alarm systems — Intrusion and hold-up systems — Part 7: Application guidelines*

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

EN 50518-3:2013, *Monitoring and alarm receiving centre — Part 3: Procedures and requirements for operation*

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 the following apply.

3.1.1

abort signal or message

signal or message from an I&HAS identifiable at with the ARC to indicate that an authorised user has performed an action on the I&HAS to report that the previously notified alarm should be cancelled

3.1.2

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]