BS EN 50134-5:2021

BSI Standards Publication

Alarm systems — Social alarm systems

Part 5: Interconnections and communications

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This British Standard is the UK implementation of EN 50134-5:2021. It supersedes BS EN 50134-5:2004, which will be withdrawn on 2 February 2022.

The UK participation in its preparation was entrusted to Technical Committee GW/1, Electronic security systems and products.

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

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European foreword

This document (EN 50134-5:2021) has been prepared by CLC/TC 79, “Alarm systems”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-06-07
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2024-06-07

This document supersedes EN 50134-5:2004 and all of its amendments and corrigenda (if any).

EN 50134-5:2021 includes the following significant technical changes with respect to EN 50134-5:2004:

— The minimum performance parameters for the interconnection including availability, monitoring, security, transmission time are now determined by updated reference to EN 50136-1:2012[1].

— Requirements for microphone and speaker performance to deliver two-way speech have been removed and are now determined with EN 50134-3:2012.

— Requirements for the alarm transmission system have been updated to take account of the general migration of voice traffic to packet-based IP infrastructures by telecommunications providers.

— The minimum technical performance requirements of the alarm transmission system are now prescribed by updated reference to EN 50136-1:2012[1].

— The requirements for an ATS used within social alarm systems are set out as custom categories utilizing performance metrics drawn from more than one standardized ATS configuration class described with EN 50136-1:2012[1].

— Performance parameters are now prescribed for both sessional connected, switched paths or packed switched networks.

— Different technical performance requirements for the alarm transmission system now included for a controller designed for use with one local unit or multiple local units.

— Requirements have been added where digital to analogue or analogue to digital signal conversion is utilized.

— Requirements have been added where a digital to analogue conversion unit undertakes translation between an analogue signalling protocol and a digital signalling protocol.

— Account has been taken of the increasing use of logical alarm triggering where data from several sources are combined to determine whether a specified alarm triggering condition has been met. Minimum requirements are now included logical alarm triggering from any of the following: trigger device, local unit and controller, device provisioning and management platform and the alarm management system.

— Security requirements including design considerations, use of cryptographic algorithms and security protocols now included to protect components of a social alarm system from malicious attacks, inadvertent influences and to ensure privacy and integrity of the transmitted information.

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Introduction

A social alarm system provides 24 h facilities for alarm triggering, identification, signal transmission, alarm reception, logging and 2-way speech communication, to provide reassurance and assistance for people considered to be at risk.

The social alarm system provides streaming media between the local unit, the controller and the alarm receiving centre. As a minimum it is in the form of voice communication but in addition it may include, status data, video and voice or other continuous streaming data. Alarm, fault, and status messages may be received and processed at a single, multiple or different ARC's.

The social alarm system can include one or many trigger devices connected to the local unit and/or controller via interconnections, the security and integrity of which are essential to proper operation of the alarm system.

As communications providers continue to migrate towards Next Generation Networks they are increasingly converging voice traffic onto their packet based IP infrastructures, which might no longer have a regulatory requirement to support in-call DTMF tones. This could have an adverse impact on the reliability of in-call tone-based protocols used in social alarm systems, which could drive future systems development to the use of communication protocols engineered for packet based transmission environments.

Social alarm systems are part of a family of alarm systems sharing common standards for aspects such as the performance characteristics of the alarm transmission system. These common performance metrics are defined within the EN 50136 series and this document selects the appropriate performance parameters for social alarm systems by reference to the EN 50136 series.

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1 Scope

This document specifies the minimum requirements for the performance, reliability and security characteristics of interconnections, alarm transmission systems and communications within a social alarm system.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 50134 series, *Alarm systems - Social alarm systems*

EN 50134-2:2017, *Alarm systems - Social alarm systems - Part 2: Trigger devices*

EN 50134-3:2012, *Alarm systems - Social alarm systems - Part 3: Local unit and controller*

CLC/TS 50134-9, *Alarm systems - Social alarm systems - Part 9: IP Communications Protocol*

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

EN 50136-2:2013, *Alarm systems - Alarm transmission systems and equipment - Part 2: Requirements for Supervised Premises Transceiver (SPT)*

EN 50136-2-4:1998, *Alarm systems. Alarm transmission systems and equipment. Requirements for equipment used in systems with voice communicators using the public switched telephone network*

EN 50136-3, *Alarm systems - Alarm transmission systems and equipment - Part 3: Requirements for Receiving Centre Transceiver (RCT)*

EN 50518:2019, *Monitoring and Alarm Receiving Centre*

EN 50600 series, *Information technology - Data centre facilities and infrastructures*

ETSI EN 300 220-2, *Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard for access to radio spectrum for non specific radio equipment*

ETSI EN 300 328, *Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum*

ETSI EN 300 440, *Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU*

ETSI EN 301 406, *Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU*

ETSI EN 302 065-1, *Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Requirements for Generic UWB applications*

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[1] As impacted by EN 50136-1:2012/A1:2018.

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