

© Copyright SEK. Reproduction in any form without permission is prohibited.

Larmsystem – Trygghetslarm – Del 2: Larmknappar och andra givare

*Alarm systems –
Social alarm systems –
Part 2: Trigger devices*

Som svensk standard gäller europastandarden EN 50134-2:2017. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50134-2:2017.

Nationellt förord

Tidigare fastställd svensk standard SS-EN 50134-2, utgåva 1, 1999, gäller ej fr o m 2020-08-14.

ICS 13.320.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50134-2

November 2017

ICS 13.320

Supersedes EN 50134-2:1999

English Version

Alarm systems - Social alarm systems - Part 2: Trigger devices

Systèmes d'alarme - Systèmes d'alarme sociale - Partie 2:
Déclencheurs

Alarmanlagen - Personen-Hilferufanlagen - Teil 2:
Auslösegeräte

This European Standard was approved by CENELEC on 2017-08-14. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard 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.

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, Serbia, 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

European foreword	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Requirements	8
 4.1 General Requirements	8
 4.2 Functional requirements	8
 4.2.1 Trigger device with an internal primary battery.....	8
 4.2.2 Trigger device using the mains supply as its primary source of power	9
 4.2.3 Manually activated trigger devices	9
 4.2.4 Automatically activated trigger devices	9
 4.3 Interconnections and communications	9
 4.4 Documentation	10
 4.4.1 Marking	10
 4.4.2 User documentation	10
5 Test of manually activated trigger devices	10
 5.1 Test categories.....	10
 5.2 Standard atmospheric condition for testing	10
 5.3 Number of trigger devices used for testing	11
 5.4 General conditions for tests	11
 5.4.1 Triggers using wired transmission	11
 5.4.2 Triggers using wire-free transmission.....	11
 5.5 Functional tests.....	12
 5.5.1 Wired triggers devices.....	12
 5.5.2 Triggers using wire-free transmission.....	12
 5.5.3 Fixed trigger type	13
 5.5.4 Portable trigger with neckband relief (anti-strangle) device	13
 5.5.5 Push button fixed trigger types	13
 5.5.6 Push button portable trigger types	14
 5.5.7 Pull switch fixed trigger type	15
 5.5.8 Pull activated portable trigger	15
 5.6 Environmental tests	16
 5.6.1 General.....	16

5.6.2	Selection of tests and severities (environmental classes)	17
5.6.3	Tests applicable to the different environmental classes	17
5.6.4	Environmental test exposures not applicable to different types of triggers	17
	Table 1 — Environmental tests for fixed trigger devices	18
	Table 2 — Environmental tests for Portable trigger devices	19
5.6.5	Specific environmental test requirements for different types of trigger devices	20
	Annex A (normative) Measurements of contact and insulation resistances for mechanical contact function	26
A.1	General	26
A.2	Measurements of contact resistance	26
A.3	Measurements of insulation resistance	26
	Annex B (normative) Strain relief test jig	27
	Annex C (normative) Test set-up by using rf-shielded test fixtures	28
C.1	RF-shielded test fixture for the trigger device	28
C.2	RF-shielded test fixture for the local unit or controller	28
C.3	Interconnection between trigger device and local unit or controller	29
	Bibliography	30

European foreword

This document (EN 50134-2:2017) has been prepared by CLC/TC 79 "Alarm systems".

The following dates are fixed:

- latest date by which this document has to be (dop) 2018-08-14 implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards (dow) 2020-08-14 conflicting with this document have to be withdrawn

This document supersedes EN 50134-2:1999.

EN 50134-2:2017 includes the following significant technical changes with respect to EN 50134-2:1999:

- The scope has been extended to provide requirements for manually and automatically activated trigger devices transmitting a triggering signal;
- The normative references have been updated to take account of latest revisions and to include ETSI EN 300 220-3-1 ETSI EN 303 406 for wireless radio trigger devices;
- The definitions have been updated to reflect changes in other parts of the series;
- in the general requirements, some requirements have been added to cover both manually and automatically activated trigger devices;
- New or amended requirements have been added to include:
 - The activation of one or many trigger devices not to inhibit the transmission of a triggering signal from any other trigger device within the same or adjacent systems.
 - Trigger devices to generate an alarm triggering signal that can be decoded and differentiated from that of another trigger device connected to the same local unit or controller.
 - Trigger devices using wire-free communications to transmit an identification code with sufficient different combinations to prevent the operation of the trigger device producing unwanted triggering in an adjacent system.
 - Trigger devices using wire-free communications to automatically generate a triggering signal at least once every 24 h to indicate their continued active presence.
 - No longer require a portable trigger devices where its only function is to be used as part of a social alarm system to use primary non-rechargeable batteries.
- Functional Requirements:
 - Require the manufacturer to state the normal expected rate of activation for the device being not less than one activation per day.
 - Require the trigger device to be capable of operating to the manufacturer's specified performance level for a period of at least 1 year or, if greater, the manufacturer's stated duration without recharging or replacement of the battery.

- For devices where the trigger device is activated by a push button require to be physically distinguishable from any other controls.
 - Revise the push button of activation area to a minimum of 150 mm², with a minimum dimension of not less than 10 mm.
 - For automatically activated trigger devices where the option exists, to indicate the return to the normal condition to the local unit and controller the manufacturer to indicate the conditions by which the normal state is determined.
- In interconnections & Communications, a requirement to comply with EN 50134-5 has been added.
- Addition for a trigger device using a wireless radio interconnection require to comply with the requirements of ETSI EN 300 220-3-1 or ETSI EN 303 406 applicable to the frequency in use.
- Addition of requirements where a trigger device uses bi-directional techniques for communicating an alarm triggering signal to the local unit and controller.
- In documentation, requirements have been amended for marking and user documentation.
- Tests for manually activated trigger devices have been amended to reflect revisions to reference standards.
- Removal of the requirement to test in accordance with EN 300-220-2 and publish results of tests for wire free radio interconnections.

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.

EN 50134, *Alarm systems — Social alarm systems* is currently composed of the following parts:

- *Part 1: System requirements;*
- *Part 2: Trigger devices* [the present document];
- *Part 3: Local unit and controller;*
- *Part 5: Interconnections and communications;*
- *Part 7: Application guidelines* [Technical Specification].

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.

A social alarm system comprises a number of system parts, which can be configured in different ways to provide this functionality.

A user can request assistance by the use of a manually activated trigger device resulting in an alarm triggering signal. In certain cases alarm triggering signals can be generated by automatic trigger devices. A local unit or controller receives the alarm triggering signal, switching from the normal to the alarm condition and indicating this to the user (some systems use an optional pre-alarm condition that allows the user to reset the alarm for a short period of time).

Failure in the operation of a social alarm system or any of its parts may compromise the ability to provide timely reassurance and assistance which may lead to a risk to a user's life. The trigger device is a part of the system and should be designed to ensure reliability beyond that of a normal consumer device.

The design should take into consideration how to make it easier for the user to activate the trigger device while preventing accidental triggering of the device.

This standard specifies the minimum requirements for the trigger device to ensure this system part provides the functionality and reliability required by a social alarm system.

1 Scope

This European Standard specifies the requirements for manually and automatically activated trigger devices transmitting a triggering signal.

This European Standard specifies the requirements and tests for trigger devices forming part of a social alarm system.

This European Standard applies to all trigger devices that transmit a triggering signal to a local unit or controller using wired or wire-free interconnections methods.

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 50134-1:2002, *Alarm systems - Social alarm systems - Part 1: System requirements*

EN 50134-5, *Alarm systems - Social alarm systems - Part 5: Interconnections and communications*

EN 60447, *Basic and safety principles for man-machine interface, marking and identification - Actuating principles (IEC 60447)*

EN 61020-1:2009, *Electromechanical switches for use in electrical and electronic equipment - Part 1: Generic specification (IEC 61020-1:2009)*

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*

ETSI EN 300 220-3-1, *Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 3-1: Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Low duty cycle high reliability equipment, Social Alarms Equipment operating on designated frequencies (869,200 MHz to 869,250 MHz)*

ETSI EN 303 406, *Short Range Devices (SRD); Social Alarms Equipment operating in the frequency range 25 MHz to 1 000 MHz*