SLOVENSKI STANDARD
oSIST prEN 50726-1:2023

01-april-2023

Sistemi za izredne razmere in nevarnosti – 1. del: Sistemi za odzivanje na izredne razmere in nevarnosti (EDRS) – Osnovne zahteve, dolžnosti, odgovornosti in dejavnosti

Emergency and danger systems - Part 1: Emergency and danger response systems (EDRS) - Basic requirements, duties, responsibilities and activities

Notfall- und Gefahren-Systeme - Teil 1: Notfall- und Gefahren-Reaktions-Systeme (NGRS) - Grundlegende Anforderungen, Aufgaben, Verantwortlichkeiten und Aktivitäten

Systèmes d'urgence et de prévention des dangers - Partie 1: Systèmes d'urgence et d'intervention en cas de danger (EDRS) - Exigences de base, fonctions, responsabilités et activités

Ta slovenski standard je istoveten z: **prEN 50726-1**

ICS:

13.320 Alarmni in opozorilni sistemi Alarm and warning systems

oSIST prEN 50726-1:2023 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 50726-1

January 2023

ICS 13.320 -

English Version

Emergency and danger systems - Part 1: Emergency and danger response systems (EDRS) - Basic requirements, duties, responsibilities and activities

Systèmes d'¿urgence et de danger -¿ Partie 1: Systèmes d¿'urgence et d¿'intervention de danger ¿- Exigences de base, fonctions, responsabilitiés et activités

Notfall- und Gefahren-Systeme - Teil 1: Notfall- und Gefahren-Reaktions-Systeme (NGRS) - Grundlegende Anforderungen, Aufgaben, Verantwortlichkeiten und Aktivitäten

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2023-04-14.

It has been drawn up by CLC/TC 79.

If this draft becomes a European Standard, 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.

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

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European foreword

This document [prEN 50726-1:2023] has been prepared by CLC/TC 79 “Alarm systems”.

This document is currently submitted to the Enquiry.

The following dates are proposed:

• latest date by which the existence of this document has to be announced at national level	(doa)	dor + 6 months
• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	dor + 12 months
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 36 months (to be confirmed or modified when voting)

Introduction

This document is based on draft standard E DIN VDE V 0827-1 (VDE V 0827-1):2015-04.

National working body UK 713.1 "Alarm and surveillance systems" of DKE German Commission for Electrical, Electronic and Information Technologies of DIN and VDE (www.dke.de) is responsible for the present document.

A pre-standard is the result of standardization work that has not yet been published as a standard by DIN due to certain reservations with regard to the contents or because of its deviating preparation procedure.

The present pre-standard has become necessary because:

a) the field of emergency and danger response systems (EDRS) is becoming increasingly important;

b) all existing standards and guidelines in the field of alarm system technology apply to specific use cases such as intrusion alarm technology or fire alarm technology, etc.

This pre-standard is aimed in particular at the police, insurance providers, planners, architects, manufacturers and expert companies dealing with safety/security systems, as well as builders, owners, organisation in charges, users and occupants of properties at risk (in particular public buildings such as education facilities, agencies, nursery schools and similar facilities).

Experience with this document is requested:

c) preferably in tabular form as a file via e-mail to dke@vde.com; the template for this table may be obtained on the Internet at www.dke.de/stellungnahme;

d) or in paper form to DKE Deutsche Kommission Elektrotechnik Elektronik Informationstechnik in DIN und VDE, Stresemannallee 15, 60596 Frankfurt/Main.

1 Scope

This document applies to the planning, installation, commissioning, operation and maintenance of an emergency and danger response system. An emergency and danger response system is part of an overall solution for dealing with specific events such as emergencies or crises.

This document

- specifies:
  - technical processes and responsibilities for supporting all procedures from the registration of an event (emergency, danger) up to its final processing;
  - the technical risk management including the definition of safety/security goals and the workflow organization as well as the necessary specifications regarding a technical risk management file;
  - associated duties, responsibilities and activities as parts of an integrated overall risk management process to achieve the safety and security goals, effectiveness and efficiency as well as data and system safety/security;
  - three different grades of safety/security, with the respective product functionalities required to achieve them;
  - the basic requirements for emergency and danger response systems (EDRS) in public buildings such as education facilities (e.g. schools, universities), government facilities, kindergartens and similar facilities;
  - the responsibilities under applicable national law about Safety and Health at Work Laws and thus particularly addresses the responsibility of employers;
- describes:
  - the process of establishing, maintaining and updating a risk management file in which, inter alia, the technical risks are listed and evaluated and the residual technical risks are defined, resulting in the grade and structure of the EDRS;
- is intended to support the implementation of:
  - National legal and other provisions (e.g. Act on Equal Opportunities for People with Disabilities, Safety and Health at Work Laws, education laws);
- gives relevant guidance on:
  - the organizational risk management;
- does not replace the specifications of standards to the following systems:
  - fire safety systems including, but not limited to, fire detection and fire alarm systems, fixed firefighting systems, smoke and heat control systems,
  - security systems including, but not limited to, intrusion and hold-up alarm systems, electronic access control systems, external perimeter security systems and video surveillance systems,
  - applicable national standards on call systems.

All such systems can, however, be integrated into an emergency and danger response system (EDRS), taking into account the relevant provisions made in the respective standards for such products and systems.

Other products and systems from the entire field of standardization, such as alarm systems, danger warning and danger alarm systems, escape routing systems, public address systems used to respond to a danger, can also be used in or integrated into an emergency and danger response system if the relevant requirements of the standards for such products or systems are met.

This document does not specify any risk levels, in particular no acceptable residual risks. Technical risk management and organizational risk management are equal parts of the overall risk management.

This document is also applicable to non-public buildings with a similar risk and requirement for protection.

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 54-11, *Fire detection and fire alarm systems - Part 11: Manual call points*

EN IEC 31010, *Risk management - Risk assessment techniques*

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

prEN 50132-5, *Alarm systems - CCTV surveillance systems for use in security applications - Part 5: Video transmission*

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

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

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

EN 60529, *Degrees of protection provided by enclosures (IP Code)*

EN IEC 62820-2, *Building intercom systems - Part 2: Requirements for advanced security building intercom systems (ASBIS) (IEC 62820-2)*

EN IEC 62820-3-2, *Building intercom systems - Part 3-2: Application guidelines - Advanced security building intercom systems (ASBIS) (IEC 62820-3-2)*

ISO 31000, *Risk management - Guidelines*

DIN VDE 0815, *Wiring cables for telecommunication and data processing systems*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1.1
acceptance test
documented joint test of the emergency and danger response system carried out by the electrically skilled person and the organisation in charge or top tier management, in cooperation with the technical risk management, as a visual inspection and function test as well as a test as to the completeness of all documents, which is a prerequisite for the subsequent handover to and Commissioning by the organisation in charge

3.1.2
alarm
warning of the presence of a danger to people, property or the environment caused by an alarm state and the request to call for help to avert the danger

3.1.3
alarm condition
status of the existence of a potentially or acutely dangerous situation which requires the attention or reaction of an Intervention force

3.1.4
alarm device
device for warning people or for calling for help in order to avert a danger

Note 1 to entry: It may be part of an emergency and danger response system or an add-on device of such system.

3.1.5
alarm signal
local alarm for danger aversion

EXAMPLE: Audible and/or visual and/or haptic signals and/or voice announcements and/or text displays.

3.1.6
alarm transmission systems
alarm transmission equipment and networks used to transfer information concerned with the state of one or more alarm systems and emergency and danger response systems at a supervised premises to one or more annunciation equipment of one or more alarm receiving centres

Note 1 to entry: An alarm transmission system may consist of more than one alarm transmission path.

3.1.7
preliminary alarm verification
verification whether an alarm message is based on a dangerous situation (e.g. by on-site verification, remote verification via voice communication or video image transmission)

3.1.8
alarm state
state of an emergency and danger response system, or part thereof, which results from the response of the system to the presence of a danger

3.1.9
alternative power source
power source capable of powering the emergency and danger response system for a predetermined time when a prime power source is unavailable

3.1.10
terror, rampage, active shooter, school shootings
violent act committed by a perpetrator who has injured or killed a number of people, said number usually being indeterminable in the beginning, in an indiscriminate or targeted manner, in particular by using weapons,

explosives, dangerous tools or applying extraordinary use of violence, or situation where such killing or injuring is to be expected and the perpetrator can continue to attack people

3.1.11
system component
single device which, when being interconnected, forms an emergency and danger response system (EDRS)

3.1.12
indication
information (in audible, visual or any other form) which assists the user in the operation of an emergency and danger response system (EDRS)

3.1.13
day of operation
day on which work is done

3.1.14
threat
present danger to the life, bodily integrity or freedom of other people who are held by or are within the sphere of impact of perpetrators who display criminal energy or aggressiveness, bear weapons or have access to inflammable or explosive substances or who pose a danger to the general public

3.1.15
user
person entitled to operate an emergency and danger response system

3.1.16
organisation in charge
legal entity or individual which/who is responsible for the operation of the emergency and danger response system and which/who usually bears the costs, e.g. in the form of assigning budgets (e.g. government department, county council, city council, municipal council or employees who are authorised accordingly)

3.1.17
readiness for operation
ability of an emergency and danger response system to capture information and messages from the required function (source) and to analyse (integrator), transport (transmission paths) and output them (receiver)

3.1.18
affected area
section of a property with an associated internal alarm

3.1.19
data and system safety/security
operating condition of an emergency and danger response system in which important information (data and systems) is sufficiently protected from anything compromising its confidentiality, integrity and availability

Note 1 to entry: Data and system safety/security is ensured by guidelines, instructions, infrastructure and services which have been developed to protect important information and systems used to capture, transfer, store and use information in order to help achieve the goals of the organisation.

3.1.20
de-escalation call
summoning individuals who are to reduce, mitigate or end conflicts between individuals

3.1.21
efficiency
measure of the achievement of a goal, described by the relationship between the intended goal and the result achieved

3.1.22
instructed person
persons who have been instructed by an electrically skilled person as to the tasks required for operating an emergency and danger response system and who are able to operate the emergency and danger response system on their own

Note 1 to entry: These tasks comprise carrying out or arranging for protective measures and other measures to avert dangers in case of a switch-off or fault of system components and arranging for the correction of the fault or for maintenance in case of degradations.

Note 2 to entry: The tasks require the competencies to fulfil independently the technical requirements of a manageable field of activity and extended general knowledge and extended technical knowledge as to how emergency and danger response systems function and to the organisational measures related to the operation of such systems. Moreover, it is required to keep the knowledge of the emergency and danger response system up to date by learning independently and responsibly.

The completion of the tasks is based on the qualification requirements according to the local responsible Qualifications Framework) at the highest appropriate niveau.

3.1.23
lockdown alarm
alarm informing individuals present on the property to avoid public areas or areas which are easily accessible (e.g. cafeteria, halls, common areas) such that individuals can retreat to areas which can be locked and await evacuation by an Intervention force

3.1.24
electrically skilled person

persons who, based to their technical education, knowledge and experience and knowledge of relevant standards, provisions and guidelines, are able to assess the work assigned to them and to recognize potential dangers

Note 1 to entry: For the field of emergency and danger response systems the requirement is an education from the spectrum of electrical engineering in the field of communication, information, microprocessor, measuring and control technology or general electrical engineering, and experience in the respective other fields and system knowledge regarding the emergency and danger response system technology shall be demonstrated. Moreover, knowledge is required for assessing the existing conditions of the property such as structural fire protection or mechanical security technology.

Note 2 to entry: To asses the technical education, several years of experience in the relevant fields of work can be taken into account [in accordance with DIN VDE 0100-200 (VDE 0100-200):2006-06].

Note 3 to entry: The activity requires the ability to independently plan and process comprehensive technical tasks in a complex, specialised and changing environment. Integrated technical knowledge and profound theoretical knowledge of the field are required. The scope and limits of the use of a danger alarm system shall be known. A very broad spectrum of specialised cognitive and practical skills is required. Work processes shall be planned in a cross-process manner, taking into account alternative actions and interactions with adjoining areas. The competence to instruct other individuals and to assist them with profound guidance on learning is a prerequisite. Skilled persons shall be able to present interdisciplinary complex issues in a structured and targeted manner, taking into account the audience the information is intended for. Learning and work objectives established by the skilled persons themselves or by others shall be reflected on, evaluated, pursued in a self-directed manner, and the skilled persons shall assume responsibility for such objectives.

Note 4 to entry: The completion of the tasks is based on the qualification requirements according to the local responsible Qualifications Framework at the highest appropriate level.

3.1.25
receiver
system component fulfilling a technical function of an emergency and danger response system, which receives alarm signals from an integrator, indicates them and forwards them to an assistance provider and transfers to the integrator the responses, control and communication signals received from the assistance provider

3.1.26
power supply
device for supplying power to the emergency and danger response system or parts thereof

3.1.27
reminder signal
signal, e.g. audible signal, which periodically reminds the user that the emergency and danger response system is in a state of limited functionality, e.g. that a function is switched off, alarm devices are switched off, or similar

3.1.28
evaluation
basic examination and skilled assessment as to whether and to what extent something seems to be suitable to fulfil the defined intended purpose

3.1.29
specialist company
company responsible for the phases of design, planning, development, installation, Commissioning, acceptance, instruction of users, Commissioning, documentation and maintenance of the emergency and danger response system and employing at least one electrically skilled

3.1.30
false alarm
alarm which is not based on a danger

3.1.31
remote alarm
alarm directed to an off-site assistance provider, e.g. fire services, police or security company

Note 1 to entry: Remote alarm is referred to alarm transmission system in the EN 50131 series of standards.

3.1.32
remote alarm device
device for forwarding remote alarms, messages and information to an assistance provider

3.1.33
function test
activity after installation, extension, modification or after maintenance work to confirm that the emergency and danger response system is able to fulfil the required function

3.1.34
main power source
power source used to support an emergency and danger response system under normal working conditions

3.1.35
assistance provider
an individual or a continuously manned centre (e.g. monitoring and alarm receiving centre (MARC)) commissioned by the organisation in charge, who/which receives alarms, messages and information from the property, verifies them before forwarding them and arranges for the necessary, appropriate measures to be taken, e.g. observes or visits the property

3.1.36
call for help
call to summon help, e.g. first aid

3.1.37
commissioning
start of use of the required function of an installed emergency and danger response system by the organisation in charge

3.1.38
inclusion
all people can participate in society in a self-determined manner, i.e. disabled people, for example, do not have to integrate and adapt to the environment any longer; rather, the environment is equipped such that all people can live equally, no matter how different they are

3.1.39
inspection
measures to determine and assess the current condition of an emergency and danger response system, including identification of the causes of increased wear and determining the required consequences for a future use

3.1.40
maintenance provider
specialised company with electrically skilled staff, which can perform all maintenance work, site visits and extensions and modifications and which provides permanent standby service and has the necessary spare parts and the required equipment available

3.1.41
maintenance
combination of all technical and administrative measures as well as measures taken by management during the life cycle of an emergency and danger response system to maintain the functioning state of the system or to return the system to its functioning state such that it can perform its required function

Note 1 to entry: Maintenance is divided into the basic measures preventive maintenance, inspection, corrective maintenance and improvement.

3.1.42
corrective maintenance
measures to return an emergency and danger response system to its functioning state, excluding improvements

3.1.43
integrator
system component fulfilling a technical function of an emergency and danger response system, which is used as a control unit including a distribution unit (e.g. switch) for processing, forwarding, redirection and documentation between the source and receiver and which can be integral or split, centralised or decentralised or also be integrated into the source or receiver

3.1.44
internal alarm
alarm signal in the property when triggering functions of the emergency and danger response system to warn individuals present in the affected area with the objective to carry out the required measures (e.g. self-help, personal escape) and to inform an assistance provider, if required

3.1.45
intervention
measures to avoid or limit personal injury, damage to property or financial loss

3.1.46
intervention force
individual or team who carries out measures to avert dangers or limit damage with a view to avoiding or limiting personal injury, damage to property or financial loss

3.1.47
communication
exchange or transmission of signals or information between system components or for or between individuals, in this document in particular:

Note 1 to entry:

— transmission of wanted signals from the source to the receiver or between all technical components/functions;

— transmission of control or confirmation signals from the source to the receiver or between all technical components/functions/system parts;

— transmission of speech, text and/or images between the source and receiver;

— voice communication (speech dialogue) from the triggering person to the assistance provider;

— voice communication (speech dialogue) from the assistance provider to the triggering person or to the Intervention force.

3.1.48
live situation image transmission
transmission, in the case of an alarm, of live situation images from a property, which, due to the underlying safety/security concept, is suitable for verifying the reason why an alarm has been triggered, for assessing the situation and for enabling/supporting the measures of the alarm Intervention force if provided in the required resolution, with the specified transmission method and in the required data format

3.1.49
identifying feature
feature carried by the user in a memorized, physical or biometric form and which contains the information required for identification (e.g. numeric code, key, chip card, transponder, fingerprint, palm veins)

3.1.50
network
system(s) consisting of communication nodes and transmission links and used to enable wired or wireless transmissions between two or more specified transmission links

3.1.51
monitoring and alarm receiving centre
MARC
continuously manned centre commissioned by the organisation in charge, which receives remote alarms, messages and information from the monitored property, verifies them before forwarding them and arranges for the necessary, appropriate measures to be taken, e.g. observes the property and/or arranges for an Intervention, and documents such measures

3.1.52
top tier management
individual or group of individuals appointed by the organisation in charge as the overall management and contracting entity, who/which is responsible for the emergency and danger response system at the highest level and shall approve the technical risk management file and the residual technical risk resulting therefrom (e.g. heads of agencies/offices, principal/head teacher or staff appointed accordingly)

3.1.53
plans for Interventions (site plans, ground and floor plans, outlines of the property)
schematic representations/images of the property to be protected, which have been created in coordination with the Intervention force and from which

– the type, location, size, number of floors;

– the approach/exit drives, entrances/exits;

– the rooms and their location;

– protected areas, alarm devices, camera locations;