



SLOVENSKI STANDARD
SIST IEC 60839-1-4:1995

01-september-1995

Alarm systems - Part 1: General requirements - Section Four: Code of practice

Alarm systems. Part 1: General requirements. Section Four: Code of practice

Systemes d'alarme. Première partie: Prescriptions générales. Section quatre: Règles de l'art

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Ta slovenski standard je istoveten z: IEC 60839-1-4

<https://standards.iteh.ai/catalog/standards/sist/46ccb053-35b8-4ee6-a5ee-0954066a24ee/sist-iec-60839-1-4-1995>

ICS:

13.320 Alarmni in opozorilni sistemi Alarm and warning systems

SIST IEC 60839-1-4:1995

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60839-1-4

Première édition
First edition
1989-07

Systèmes d'alarme

Première partie:

Prescriptions générales

Section quatre – Règles de l'art

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General requirements

Section Four – Code of practice

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Commission Electrotechnique Internationale
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CODE PRIX
PRICE CODE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALARM SYSTEMS

Part 1: General requirements

Section Four - Code of practice

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

iTeh STANDARD PREVIEW
 PREFACE
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This standard has been prepared by IEC Technical Committee No. 79: Alarm systems.

[SIST IEC 60839-1-4:1995](https://standards.iteh.ai/catalog/standards/sist/46ccb053-35b8-4ee6-a5ee-6954860a24ce/sist-iec-60839-1-4:1995)

The text of this standard is based on the following documents:

Six Months' Rule	Report on Voting
79(C0)17	79(C0)29

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

The following IEC publications are quoted in this standard:

Publications Nos. 839-1-1 (1988): Alarm systems, Part 1: General requirements, Section One - General.

849 (1989): Sound systems for emergency purposes.

Other publication quoted:

ISO 7731 (1986): Danger signals for work places - Auditory danger signals.

ALARM SYSTEMS**Part 1: General requirements****Section Four - Code of practice**

1. Scope

This standard applies to the design, installation, commissioning, operation, maintenance, tests and records of manual and automatic alarm systems employed for the security and safety of persons and property.

It does not cover remote centres. It should be used in conjunction with the standard for general requirements for alarm systems, IEC 839-1-1.

2. Definitions

For the purpose of this standard, the definitions in the standard for general requirements for alarm systems (IEC 839-1-1) apply together with the following:

2.1 Level of risk

The level of risk is the degree of hazard to persons or properties that exists in their environment.

2.2 Level of protection

Resultant of technical and organizational measures employed for the security or safety of persons and property.

2.3 Level of security

Extent to which the level of risk is covered by the level of protection.

3. General considerations**3.1 Planning**

The standard for general requirements for alarm systems indicates that these requirements shall be ascertained by a consultation between the appropriate interested parties. On the basis of this consultation, plans/specifications should be prepared showing:

- a) details of the proposed alarm system installation;
- b) the accommodation required for the equipment;

- c) chases, ducts, conduits, channels, etc., required for wiring, including need for segregation of wiring;
- d) provision of mains power outlets.

3.2 Time schedule

A typical list of events to be taken into consideration, probably but not necessarily in the order stated, in preparing a time schedule is as follows:

- a) survey of the building or examination of the plans and an assessment of the usage of the building;
- b) consideration of the action in the event of activation of the system;
- c) system design for estimating purposes embracing the requirements/recommendations of all official parties;
- d) costing procedures;
- e) submission and consideration of specification and quotation;
- f) placing of order for system;
- g) agreement on the action in the event of activation of the system;
- h) detailed planning for installation;
- i) production and delivery;
- j) installation of the system;
- k) commissioning and testing of the system by the alarm company;
- l) handover of the system to the subscriber, together with written instructions for operation and maintenance;
- m) connection of the specified remote signalling where unavailable at time of handover.

It will be normal practice for all these stages to be included in the critical-path chart for large building operations. Control and indicating equipment for some large installations may have to be specially manufactured and the importance of ordering such special equipment is emphasized.

In buildings under construction or reconstruction, temporary physical protection may be necessary to protect the equipment from damage.

The final connection and switching on of the system should be made at a time agreed between the subscriber and the contractor.

3.3 *Levels of risk and/or emergency*

The type of system chosen shall confer a level of protection to property or persons at risk which corresponds to the degree of hazard which is likely to occur and to its possible consequences if it occurs, in such a way that the required level of security is assured. This may influence the type and quantity of alarm activating devices, the type of transmission of the alarm signal, anti-tamper protection of the alarm signal, the alarm receiving system, etc., as laid down by the relevant IEC standard.

3.4 *Environmental regulations*

When using an alarm system, the installer, subscriber or user may have responsibilities laid down under legislation, for example when detectors containing radioactive material are used. In these cases, the official authorities shall be contacted at an early stage of system design.

4. System requirements

4.1 *General considerations*

The nature of an alarm system as well as its purpose requires careful design.

If the division of the system into zones or circuits is necessary in order to obtain a clear and unambiguous indication of the origin of an alarm signal, the design should allow for such division.

When designing an alarm system, careful consideration should be given to leave possibilities for additions and/or modifications of the system.

The number of detection devices connected to any circuit shall be decided with regard to practical fault identification or location. The system shall be designed as far as practicable to ensure that faults occurring in one part of the system do not obviously affect other parts of the system.

Technical faults should preferably be indicated separately on the control and indicating equipment.

Routine tests shall be specified to detect faults not disclosed by the normal monitoring procedures.

Alarm systems should be so designed that correct operation of the system cannot be jeopardized by uninstructed personnel operating any manual controls.

Provision should be made so that testing of individual detectors does not generate an alarm. Alarm systems should be so designed that testing of individual detectors does not require isolation of the total system to prevent generation of an alarm.

4.2 *Environmental conditions*

The system should be so designed that it meets the performance specified under the environmental conditions to which it is likely to be exposed at the protected premises, including mechanical damage, weather, dampness, corrosion, oil, heat and adverse industrial atmospheres.

Both environmental conditions internal to the premises, such as industrial processes, heating and ventilation systems, and animals, and those external to the premises, such as extreme weather conditions, operations on adjacent sites, and traffic, should be considered.

As the alarm activating system may be installed inside or outside buildings, under various conditions as regards temperature, humidity, weather, atmosphere, possibilities of mechanical damage, etc., full information relating to the environmental conditions may be required in the system specification.

4.3 *Detectors*

4.3.1 *Manually operated devices*

The siting of the devices should be such as to minimize the risk of accidental or malicious operation and still remain easily accessible to the user.

The number of different methods of operation of manually operated devices in an installation should be kept to a minimum.

4.3.2 *Automatic detection devices*

Alarm detectors operating on a wide range of operating principles are available. No one type of detector is suitable for all applications and the final choice depends on the individual circumstances. In some situations it may be desirable to combine different types of detector to protect a particular area.

In any automatic alarm system the detector has to discriminate between the hazard and the normal environment existing within the building. The alarm system shall employ detectors which are suited to the conditions and which will provide the earliest reliable warning.

Detectors should be sited to provide a satisfactory area of coverage against the hazard. They should be securely mounted on a fixed structure free from vibration and shock and be located out of reach of unauthorized personnel. Any adjustment to their alignment should require the use of a tool. Consideration should be given to potential obstruction of the detector by changes in layout of the protected area.