SLOVENSKI STANDARD
SIST IEC 60839-2-3:1995

01-september-1995

Alarm systems - Part 2: Requirements for intruder alarm systems - Section Three: Requirements for infrared beam interruption detectors in buildings

Alarm systems. Part 2: Requirements for intruder alarm systems. Section Three: Requirements for infrared-beam interruption detectors in buildings

Systèmes d'alarme. Deuxième partie: Prescriptions pour les systèmes d'alarme anti-intrusion. Section trois: Prescriptions pour les détecteurs à interruption de faisceaux infrarouges dans les bâtiments

Ta slovenski standard je istoveten z: **IEC 60839-2-3**

ICS:

13.320	Alarmni in opozorilni sistemi	Alarm and warning systems

SIST IEC 60839-2-3:1995 **en**

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60839-2-3

Première édition
First edition
1987-12

Systèmes d'alarme

Partie 2:
Prescriptions pour les systèmes d'alarme anti-intrusion
Section trois – Prescriptions pour les détecteurs à interruption de faisceaux infrarouges dans les bâtiments

Alarm systems

Part 2:
Requirements for intruder alarm systems
Section Three – Requirements for infrared-beam interruption detectors in buildings

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http: //www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE F

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALARM SYSTEMS

Part 2: Requirements for intruder alarm systems

Section Three - Requirements for infrared-beam interruption detectors in buildings

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.

PREFACE

This standard has been prepared by IEC Technical Committee No. 79: Alarm Systems.

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

Six Months' Rule	Report on Voting
79(CO)7	79(CO)13

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

ALARM SYSTEMS

Part 2: Requirements for intruder alarm systems

Section Three - Requirements for infrared-beam interruption detectors in buildings

---

1. Scope

This standard specifies the specific requirements and test procedures for infrared-beam interruption detectors to be used in intruder alarm systems installed in buildings.

This standard shall be used in conjunction with the following IEC Publications:

839-2-2 (1987): Alarm systems, Part 2: Requirements for intruder alarm systems. Section Two - Requirements for detectors - General.

This publication specifies the general requirements for detectors for use in intruder alarm systems installed in buildings.

Publication 839-2-3 therefore supplements the general requirements for intruder alarm systems of Publication 839-2-2.

839-1-1: Part 1: General requirements. Section One - General. (Under consideration.)

This publication specifies the general requirements for alarm systems.

2. Object

The object of this standard is to specify those requirements for infrared-beam interruption detectors which will ensure that they will perform satisfactorily, minimize false alarms and be compatible with the other parts of the intruder alarm system.

3. Reference document

Publication:

839-1-3 (1987): Alarm systems, Part 1: General requirements. Section Three - Environmental testing.

4. Definitions

For the purpose of this standard the following definitions apply:

4.1 *Infrared-beam interruption detector*

A detection device designed to generate an alarm condition when a beam of infrared radiation between a transmitter and a receiver is interrupted.

4.2 *Maximum range*

The maximum distance by which the transmitter and receiver can be separated and still meet the requirements of this standard.

5. General considerations

The infrared-beam interruption detector shall meet the requirements given in IEC Publications 839-2-2 and 839-1-1.

The detector shall consist of a separate transmitter and receiver designed to be fitted in a bistatic arrangement.

6. Requirements

6.1.1 *Transmitter spectrum*

The transmitter spectrum shall be outside the visible spectrum (wavelength greater than 760 nm).

6.1.2 *Transmitter beam angle*

The transmitter shall radiate in a narrow beam such that at an angle exceeding 15° from the axis of the beam the power density shall be more than 20 dB below the maximum power density in any part of the beam.

6.1.3 *Receiver acceptance angle*

The receiver shall have an angle of acceptance such that any radiation received from an angle greater than 15° from the axis of the receiver optical system shall be attenuated by 20 dB more than that received within the receiver beam.

6.1.4 *Receiver bandwidth*

The receiver shall be sensitive only to radiation in the infrared spectrum (wavelength greater than 760 nm). The sensitivity to radiation with wavelengths less than 760 nm shall be at least 20 dB less than maximum sensitivity.

6.1.5 *Signal processing*

The detector shall generate an alarm condition as a result of the total interruption of the received radiation for any period longer than 40 ms. The detector shall not generate an alarm condition as a result of any interruption of the received radiation for any period less than 20 ms.

6.1.6 *Range*

When operating at maximum range a 75% interruption in the radiation normally received shall not generate an alarm condition.

6.1.7 *Resistance to external lighting*

Exposure to mains or d.c. driven lighting or natural lighting shall not cause an alarm condition except that if exposure to mains or d.c. driven lighting or natural lighting prevents the detector from meeting the requirements of this standard, an alarm or fault condition shall be generated.

6.1.8 *Tamper protection*

The transmitter and receiver shall each be fitted with tamper protection in accordance with the general requirements of IEC Publication 839-2-2.

6.2 *Environmental requirements*

No additional requirements.

6.3 *Safety*

Complying with the general requirements of IEC Publication 839-1-1, the peak power density of the transmitter shall not exceed 6 mW/cm^2 in any part of its beam at any distance from the transmitter.

6.4 *Reliability*

No additional requirements.

6.5 *Interface*

6.5.1 *Power*

No additional requirements.

6.5.2 *Construction*

No additional requirements.

6.6 *Construction*

No additional requirements.