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Alarmni sistemi - Sistemi za javljanje vloma in ropa - 2-2. del: Detektorji vloma - Pasivni infrardeči detektorji (IEC 62642-2-2:2010)

Alarm systems - Intrusion and hold-up systems - Part 2-2: Intrusion detectors - Passive infrared detectors

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Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 2-2: Détecteurs d'intrusion - Détecteurs à infrarouges passifs

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NORME INTERNATIONALE

**Alarm systems – Intrusion and hold-up systems –
Part 2-2: Intrusion detectors – Passive infrared detectors**

**Systèmes d'alarme – Systèmes d'alarme contre l'intrusion et les hold-up –
Partie 2-2: Détecteurs d'intrusion – Détecteurs à infrarouges passifs**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ALARM SYSTEMS –
INTRUSION AND HOLD-UP SYSTEMS –**
**Part 2-2: Intrusion detectors –
Passive infrared detectors**

FOREWORD

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International Standard IEC 62642-2-2 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

This standard is based on EN 50131-2-2 (2004).

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

FDIS	Report on voting
79/307/FDIS	79/318/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62642 series can be found, under the general title *Alarm systems – Intrusion and hold-up systems*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

This part 2-2 of the IEC 62642 series of standards gives requirements for passive infrared detectors used in intrusion and hold-up alarm systems. The other parts of this series of standards are as follows:

Part 1	System requirements
Part 2-2	Intrusion detectors – Passive infrared detectors
Part 2-3	Intrusion detectors – Microwave detectors
Part 2-4	Intrusion detectors – Combined passive infrared / microwave detectors
Part 2-5	Intrusion detectors – Combined passive infrared / ultrasonic detectors
Part 2-6	Intrusion detectors – Opening contacts (magnetic)
Part 2-71	Intrusion detectors – Glass break detectors – Acoustic
Part 2-72	Intrusion detectors – Glass break detectors – Passive
Part 2-73	Intrusion detectors – Glass break detectors – Active
Part 3	Control and indicating equipment
Part 4	Warning devices
Part 5-3	Requirements for interconnections equipment using radio frequency techniques
Part 6	Power supplies
Part 7	Application guidelines
Part 8	Security fog devices

This International Standard deals with passive infrared detectors (to be referred to as the detector), used as part of intrusion alarm systems installed in buildings. It includes four security grades and four environmental classes.

The purpose of a detector is to detect the broad spectrum infrared radiation emitted by an intruder and to provide the necessary range of signals or messages to be used by the rest of the intrusion alarm system.

The number and scope of these signals or messages will be more comprehensive for systems that are specified at the higher grades.

This International Standard is only concerned with the requirements and tests for the detector. Other types of detector are covered by other documents identified as in IEC 62642-2 series.

ALARM SYSTEMS – INTRUSION AND HOLD-UP SYSTEMS –

Part 2-2: Intrusion detectors – Passive infrared detectors

1 Scope

This part of the IEC 62642 is for passive infrared detectors installed in buildings and provides for security grades 1 to 4 (see IEC 62642-1), specific or non-specific wired or wire-free detectors, and uses environmental classes I to IV (see IEC 62599-1). This International Standard does not include requirements for passive infrared detectors intended for use outdoors.

A detector shall fulfil all the requirements of the specified grade.

Functions additional to the mandatory functions specified in this standard may be included in the detector, providing they do not influence the correct operation of the mandatory functions.

This International Standard does not apply to system interconnections.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-52, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 62599-1, *Alarm systems – Part 1: Environmental test methods*

IEC 62599-2, *Alarm systems – Part 2: Electromagnetic compatibility – Immunity requirements for components of fire and security alarm systems*

IEC 62642-1, *Alarm systems – Intrusion and hold-up systems – Part 1: System requirements*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms, definitions and abbreviations given in the IEC 62642-1, as well as the following apply.

3.1 Terms and definitions

3.1.1

basic detection target

heat source designed to verify the operation of a detector

3.1.2**incorrect operation**

physical condition that causes an inappropriate signal or message from a detector

3.1.3**masking**

interference with the detector input capability by the introduction of a physical barrier such as metal, plastics, paper or sprayed paints or lacquers in close proximity to the detector

3.1.4**passive infrared detector**

detector of the broad-spectrum infrared radiation emitted by a human being

3.1.5**simulated walk test target**

non-human heat source designed to simulate the standard walk test target

3.1.6**standard walk test target**

human being of standard weight and height clothed in close fitting clothing appropriate to the simulation of an intruder

3.1.7**walk test**

operational test during which a detector is stimulated by the standard walk test target in a controlled environment

3.1.8**walk test attitude, crawling**

attitude consisting of the standard walk test target moving with hands and knees in contact with the floor

3.1.9**walk test attitude, upright**

attitude consisting of the standard walk test target standing and walking with arms by the sides of the body

NOTE The standard walk test target begins and ends a traverse with feet together.

3.2 Abbreviations

HDPE	high density polyethylene
PIR	passive infrared
EMC	electromagnetic compatibility
SWT	standard walk test target
BDT	basic detection target
CIE	control and indicating equipment

4 Functional requirements**4.1 Event processing**

Detectors shall process the events shown in Table 1.

Table 1 – Events to be processed by grade

Event	Grade			
	1	2	3	4
Intrusion detection	M	M	M	M
Tamper detection	Op	M	M	M
Masking detection	Op	Op	M	M
Significant reduction of range	Op	Op	Op	M
Low supply voltage	Op	Op	M	M
Total loss of power supply	Op	M	M	M
Local self test	Op	Op	M	M
Remote self test	Op	Op	Op	M
M = mandatory Op = optional				

Detectors shall generate signals or messages as shown in Table 2.

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