



BSI Standards Publication

Alarm systems – Intrusion and hold-up systems

Part 2-2: Intrusion detectors – Passive infrared detectors

This is a preview of "BS EN 50131-2-2:2017". [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 50131-2-2:2017. It supersedes BS EN 50131-2-2:2008, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GW/1/1, Alarm components.

A list of organizations represented on this committee can be obtained on request to its secretary.

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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.

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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 (EN 50131-2-2:2017) has been prepared by CLC/TC 79, "Alarm systems".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-09-11
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-09-11

This document supersedes EN 50131-2-2:2008 and EN 50131-2-2:2008/IS1:2014.

EN 50131-2-2:2017 includes the following significant technical changes with respect to EN 50131-2-2:2008 and EN 50131-2-2:2008/IS1:2014:

- Editorial changes and refinement of wording;
- Clarification to significant reduction of range requirements;
- Clarification to the Electrical requirements section and certain environmental conditions;
- Improvement of the requirements of the supplied documentation;
- Improvement of the standard conditions for testing;
- Added chapter which defines the condition for the mounting height while the tests are performed;
- Refinement of the standard requirements for the Testing procedures;
- Refinement of the Immunity to air flow test to allow for better repeatability of the test results;
- Verified and clarified the wording of the test for resistance to or detection of re-orientation of adjustable mountings;
- Update the test magnet specification for resistance to magnetic field interference;
- Verified and clarified wording for the detection of detector masking in regards to the conditions and the test material;
- Review and optimization of the methods for temperature adjustments for the test environment;
- Review Sample Testmatrix;
- Review and verify references to other standards.

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 50131 will consist of the following parts, under the general title *Alarm systems - Intrusion and hold-up systems*:

Part 1 System requirements

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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 2-7-1	Intrusion detectors – Glass break detectors – Acoustic
Part 2-7-2	Intrusion detectors – Glass break detectors – Passive
Part 2-7-3	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

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Introduction

This European 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 European Standard is only concerned with the requirements and tests for the passive infrared detectors. Other types of detectors are covered by other documents identified as in EN 50131-2 series.

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1 Scope

This European Standard is for passive infrared detectors installed in buildings and provides for security grades 1 to 4 (see EN 50131-1), specific or non-specific wired or wire-free detectors, and uses environmental classes I to IV (see EN 50130-5). This European Standard does not include requirements for passive infrared detectors intended for use outdoors.

It is essential that a detector fulfils 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 European Standard does not apply to system interconnections.

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 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*

EN 50131-6, *Alarm systems — Intrusion and hold-up systems — Part 6: Power supplies*

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

EN 60404-5, *Magnetic materials — Part 5: Permanent magnet (magnetically hard) materials — Methods of measurement of magnetic properties (IEC 60404-5)*

EN 60404-8-1, *Magnetic materials — Part 8-1: Specifications for individual materials — Magnetically hard materials (IEC 60404-8-1)*

EN 60404-14, *Magnetic materials — Part 14: Methods of measurement of the magnetic dipole moment of a ferromagnetic material specimen by the withdrawal or rotation method (IEC 60404-14)*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms, definitions and abbreviations given in EN 50131-1 and 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