Irish Standard
I.S. EN 50131-2-2:2008&IS1:2014

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

I.S. EN 50131-2-2:2008&IS1:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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INTERPRETATION SHEET

FEUILLE D'INTERPRETATION

INTERPRETATIONSBLATT

EN 50131-2-2/IS1

February 2014

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English version

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

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 2-2: Einbruchmelder - Passiv-Infrarotmelder

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CENELEC

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Contents

Page

Foreword

This Interpretation Sheet to the European Standard EN 50131-2-2:2008 was prepared by CLC/TC 79 “Alarm systems”.

Text of IS1 to EN 50131-2-2:2008

Clause:

Annex A and Figure A.1

Question:

Would it be allowed for test purposes (for test houses and manufacturers) to use the NeoDym magnet listed below instead of the AlNiCo version described in Annex A and Figure A.1 for reproducible tests ?

Interpretation:

Yes, because this will allow stable and reproducible test results, which is not guaranteed while using the AlNiCo magnet due to the nature of the magnet material. Furthermore, the test magnet described below allows a high-level degree of backward compatibility for already tested products, while it gives the stability required.

Therefore, when the NeoDym magnet is used for test purposes (for test houses and manufacturers), the text below may be used in place of Annex A.

Validity:

This interpretation remains valid until an amendment or updated standard dealing with this issue is published by CENELEC.

Annex A
(normative)

Dimensions & requirements of standardized interference test magnets

A.1 Normative references

The interference test magnets shall comprise a magnet identical to the corresponding magnet supplied with the detector and one of the following specified independent test magnets according to whether the detector is surface or flush mounted.

The following standards will form the base for the selection of the independent test magnet:

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

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)*

IEC 60404-8-1, *Magnetic materials – Part 8-1: Specifications for individual materials – Magnetically hard materials*

A.2 Requirements

The field strength of the magnet determined by the magnetic material, by remanence (B_r) in mT and the product of energy $(BH)_{max}$ in kJ/m^3, which are material dependent as the values describe the full saturation of that material should be measured before any calibration took place.

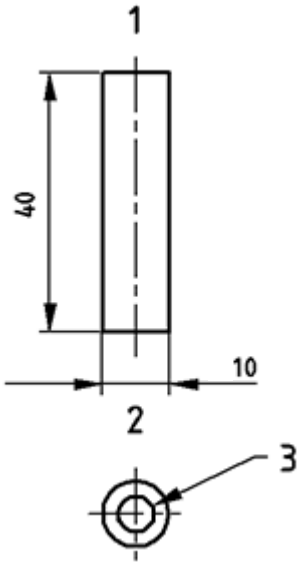
The field strength of the test magnet needs to be adjusted at the polarization of the working point in mT as defined.

The relevant value, dimensions and measurement point for the test magnet can be found in the following drawings and tables. For calculations, measurements and calibration of the test magnets, the norms cited above shall be used.

The independent test magnet for Test Magnet Type 1 is described in Figure A.1.

To get the magnets in question adjusted to the proper values and calibrated (e.g. polarization in working point), it is strongly suggested to perform adjustments of the magnetic values for ordered magnets performed by an accredited test house for magnetic fields. One potential source could be the following:

MAGNET-PHYSIK
Dr. Steingroever GmbH
Emil-Hoffmann-Strasse 3
50966 Cologne, Germany
www.magnet-physik.de



Key

1 North pole
2 South pole
3 North pole

Material	NdFeB N40 (REFeB 310/130 - Code number R5–1–11)
Remanence B_r min	1 275 mT ± 2 %
Product of energy $(BH)_{max}$	310 kJ/m^3 ± 3 %
Polarization of working point	0,835 T ± 2 %

Figure A.1 — Test magnet – Magnet Type 1

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50131-2-2

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Supersedes CLC/TS 50131-2-2:2004

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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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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 50131-2-2:2008 E

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 79, Alarm systems.

The text of the daft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50131-2-2 on 2007-12-01.

This European Standard supersedes CLC/TS 50131-2-2:2004.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-12-01

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

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 2–7–1	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

Contents

Figures

Tables

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 detector. Other types of detector are covered by other documents identified as in EN 50131-2 series.

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 infra red 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 European 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.

EN 50130-4	Alarm systems – Part 4: Electromagnetic compatibility – Product family standard: Immunity requirements for components of fire, intruder 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 systems – Part 6: Power supplies
EN 60068-1	Environmental testing – Part 1: General and guidance (IEC 60068-1)
EN 60068-2-52	Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52)
EN 60529	Degrees of protection provided by enclosures (IP code) (IEC 60529)

3 Definitions and abbreviations

For the purposes of this European Standard, the following definitions and abbreviations apply in addition to those given in EN 50131-1.

3.1 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