BS EN 50131-2-7-2:2012+A1:2013

*Incorporating corrigendum July 2014*

BSI Standards Publication

# Alarm systems — Intrusion and hold-up systems

## Part 2-7-2: Intrusion detectors — Glass break detectors (passive)

## National foreword

This British Standard is the UK implementation of EN 50131-2-7-2:2012+A1:2013. It supersedes BS EN 50131-2-7:2012 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CENELEC text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A1 is indicated by [A1] ⟨A1⟩.

The UK participation in its preparation was entrusted by Technical Committee GW/1, Electronic security systems, to Subcommittee GW/1/1, Alarm components.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.


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**Compliance with a British Standard cannot confer immunity from legal obligations.**

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**Amendments/corrigenda issued since publication**

| Date | Text affected |
|---|---|
| 31 July 2014 | Implementation of CEN Interpretation sheet February 2014 in a National Annex NA |
| 31 July 2014 | Implementation of CENELEC amendment A1:2013 |

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 50131-2-7-2:2012+A1

December 2013

ICS 13.320

English version

# Alarm systems - Intrusion and hold-up systems - Part 2-7-2: Intrusion detectors - Glass break detectors (passive)

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 2-7-2: Détecteurs d'intrusion - Détecteurs bris de glace (passifs)

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 2-7-2: Einbruchmelder - Glasbruchmelder (Passiv)



CENELEC

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**



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# National Annex NA
(Informative)

## Text of IS1 to EN 50131-2-7-2:2012

### Clause:

Annex C and Figure C.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 C and Figure C.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 C.

### Validity:

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

# Annex C
(normative)

# Dimensions & requirements of a standard test magnet

## C.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*

## C.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/m³, which are material dependent as the values describe the full saturation of that material should be measured before any calibration took place.

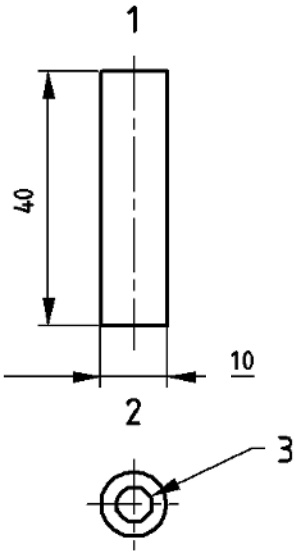
The field strength of the test magnet needs to be adjusted at the polarization of the working point in mT as defined.

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 C.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<br>(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 C.1 – Test magnet – Magnet Type 1**

# Contents

## Foreword

This document (EN 50131-2-7-2:2012) 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) 2013-08-13
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-08-13

This document supersedes CLC/TS 50131-2-7-2:2009.

This European Standard provides for security Grades 1 to 4 (see EN 50131-1) glass break (passive) detectors installed in buildings, and uses environmental classes I to IV (see EN 50130-5).

The purpose of a detector is to detect the energy exclusively emitted by the physical destruction of a glass pane, which allows intrusion to the monitored area for example in doors, windows or enclosures and to provide the necessary range of signals or messages to be used by the rest of the intruder alarm system.

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

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

This standard is only concerned with the requirements and tests for the detector. Other types of detectors are covered by other documents identified as TS / EN 50131-2-x.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Foreword to amendment A1

This document (EN 50131-2-7-2:2012/A1:2013) 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) 2014-10-14
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-10-14

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## 1 Scope

This European Standard is for passive surface mounted glass break 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 surface mounted glass break 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 adversely 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 and social alarm systems* |
| EN 50130-5 | *Alarm systems — Part 5: Environmental test methods* |
| EN 50131-1:2006 | *Alarm systems — Intrusion and hold-up systems — Part 1: System requirements* |
| EN 50131-6 | *Alarm systems — Intrusion systems — Part 6: Power supplies* |
| EN 60068-1:1994 | *Environmental testing — Part 1: General and guidance (IEC 60068-1:1988 + A1:1992 + corrigendum Oct. 1988 )* |
| EN 60529 | *Degrees of protection provided by enclosures (IP code) (IEC 60529)* |

## 3 Terms, definitions and abbreviations

For the purposes of this document, the terms, definitions and abbreviations given in EN 50131-1:2006 and the following apply.

### 3.1 Terms and definitions

**3.1.1**
**glass breakage**
physical destruction of a glass pane, which allows intrusion to the monitored area, for example in doors, windows or enclosures

**3.1.2**
**passive surface mounted glass break detector**
detector that is mounted on a glass pane, which detects the energy emitted by a glass breakage of the pane the detector is mounted on

**3.1.3**
**Basic Test Source**
signal simulator designed to verify the basic function of the detector