

PD CLC/TS 50131-2-8:2012

Incorporating corrigendum June 2014



BSI Standards Publication

Alarm systems — Intrusion and hold-up systems

Part 2-8: Intrusion detectors —
Shock detectors

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National foreword

This Published Document is the UK implementation of CLC/TS 50131-2-8:2012.

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.

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National Annex NA (Informative)

Text of IS1 to EN 50131-2-8:2012

Clause:

Annex B and Figure B.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 B and Figure B.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 B.

Validity:

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

Annex B (normative)

Dimensions and requirements of the standardised test magnets

B.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*

B.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.

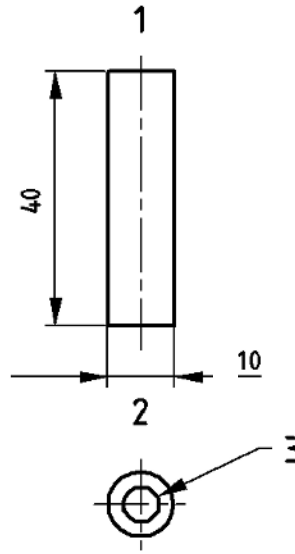
The field strength of the test magnet needs to be adjusted at the polarization of the working point in mT as defined.

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 B.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. Steffen Wever GmbH
Hilfmann-Strasse 3
50666 Cologne, Germany
www.magnet-physik.de



Key

- 1 North pole
- 2 South pole
- 3 North pole

Material	NdFeB N42 (REFeB 310, 310 - Code number R5-1-11)
Remanence B_r min	1,275 T $\pm 2\%$
Product of energy $(BH)_{max}$	310 kJ/m ³ $\pm 3\%$
Polarization of working point	0,835 T $\pm 2\%$

Figure 3.1 – Magnet Type 1

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English version

**Alarm systems -
Intrusion and hold-up systems -
Part 2-8: Intrusion detectors -
Shock detectors**

Systemes d'alarme -
Systemes d'alarme contre l'intrusion et les
hold-up -
Partie 2-8: Détecteurs d'intrusion -
Détecteurs de chocs

Alarmanlagen -
Einbruchmeldeanlage -
Teil 2-8: Anforderungen an
Erschütterungsmelder

This Technical Specification was approved by CENELEC on 2012-01-23.

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CENELEC

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

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Foreword

This document (CLC/TS 50131-2-8:2012) has been prepared by CLC/TC 79 "Alarm systems".

This document was circulated for voting in accordance with the Internal Regulations, Part 2, Subclause 11.3.3.3.

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.

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Introduction

This document is a Technical Specification for shock detectors used as part of intrusion alarm systems installed in buildings. It includes four security grades and four environmental classes.

The purpose of a shock detector is to detect the shock or series of shocks due to a forcible attack through a physical barrier (for example doors or windows) and provide the necessary range of signals or messages to be used by the rest of the intrusion and hold-up 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 Technical Specification is only concerned with the requirements and tests for the shock detectors.

1 Scope

This Technical Specification is for shock detectors installed in buildings to detect the shock or series of shocks due to a forcible attack through a physical barrier (for example doors or windows).

It provides for security Grades 1-4 (see EN 50131-1), specific or non specific wired or wire-free detectors and uses Environmental Classes i-iv (see EN 50130-5).

This Technical Specification does not include requirements for detectors intended to protect for example vaults and safes from penetration attacks from e.g. drilling, cutting or thermal lance.

This Technical Specification does not include requirements for shock 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 Technical Specification may be included in the detector, providing they do not adversely influence the correct operation of the mandatory functions.

This Technical Specification 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 50130-4:2011, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems*

EN 50130-5:2011, *Alarm systems — Part 5: Environmental test methods*

EN 50131-1, *Alarm Systems — Intrusion systems and hold-up systems — Part 1: System requirements*

EN 50131-6, *Alarm systems — Intrusion systems and hold-up 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 60068-2-75:1997, *Environmental testing — Part 2-75: Tests — Test Eh: Hammer tests (IEC 60068-2-75:1997)*

IEC 68-2-52:1984, *Environmental testing — Part 2: Tests — Test Kb: Salt mist, cyclic (sodium, chloride solution)*

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.