PD CLC/TS 50131-2-9:2016

BSI Standards Publication

Alarm systems — Intrusion and hold-up systems

Part 2-9: Intrusion detectors — Active infrared beam detectors

bsi.

National foreword

This Published Document is the UK implementation of CLC/TS 50131-2-9:2016.

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 committee 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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English Version

Alarm systems - Intrusion and hold-up systems - Part 2-9: Intrusion detectors - Active infrared beam detectors

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 2-9: Détecteurs à faisceaux infrarouges actifs

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 2-9: Einbruchmelder - Aktive Infrarot-Lichtschranken

This Technical Specification was approved by CENELEC on 2016-08-01.

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Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (CLC/TS 50131-2-9:2016) has been prepared by CLC/TC 79 “Alarm systems”.

The following dates are fixed:

• latest date by which the existence of this document has to be announced at national level	(doa)	2016–02–01

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.

The EN 50131 series consists of the following parts:

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

— EN 50131-2-2, *Alarm systems — Intrusion and hold-up systems — Part 2-2: Intrusion detectors — Passive infrared detectors*;

— EN 50131-2-3, *Alarm systems — Intrusion and hold-up systems — Part 2-3: Intrusion detectors — Requirements for microwave detectors*;

— EN 50131-2-4, *Alarm systems — Intrusion and hold-up systems — Part 2-4: Requirements for combined passive infrared and microwave detectors*;

— EN 50131-2-5, *Alarm systems — Intrusion and hold-up systems — Part 2-5: Requirements for combined passive infrared and ultrasonic detectors*;

— EN 50131-2-6, *Alarm systems — Intrusion and hold-up systems — Part 2-6:Opening contacts (magnetic)*;

— EN 50131-2-7-1, *Alarm systems — Intrusion and hold-up systems — Part 2-7-1: Intrusion detectors — Glass break detectors (acoustic)*;

— EN 50131-2-7-2, *Alarm systems — Intrusion and hold-up systems — Part 2-7-2: Intrusion detectors — Glass break detectors (passive)*;

— EN 50131-2-7-3, *Alarm systems — Intrusion and hold-up systems — Part 2-7-3: Intrusion detectors — Glass break detectors (active)*;

— EN 50131-2-8, *Alarm systems — Intrusion and hold-up systems — Part 2-8: Intrusion detectors — Shock detectors*[1];

— CLC/TS 50131-2-9, *Alarm systems — Intrusion and hold-up systems — Part 2-9: Intrusion detectors — Active infrared beam detectors* (the present document);

— EN 50131-3, *Alarm systems — Intrusion and hold-up systems — Part 3: Control and indicating equipment*;

— EN 50131-4, *Alarm systems — Intrusion and hold-up systems — Part 4: Warning devices*;

[1] In preparation.

— EN 50131-5-3, *Alarm systems — Intrusion systems — Part 5-3: Requirements for interconnections equipment using radio frequency techniques*;

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

— CLC/TS 50131-7, *Alarm systems — Intrusion and hold-up systems — Part 7: Application guidelines*;

— EN 50131-8, *Alarm systems — Intrusion and hold-up systems — Part 8: Security fog device/systems*;

— CLC/TS 50131-9, *Alarm systems — Intrusion and hold-up systems — Part 9: Alarm verification — Methods and principles*;

— EN 50131-10, *Alarm systems — Intrusion and hold-up systems — Part 10: Application specific requirements for Supervised Premises Transceiver (SPT);*

— CLC/TS 50131-11, *Alarm systems — Intrusion and hold-up systems — Part 11: Hold-up devices.*

Introduction

The purpose of an Active Infrared Beam Detector (AIBD) is to detect an intruder interrupting one or more infrared beam(s) and to provide the necessary range of signals or messages to be used by the rest of the intrusion alarm system. The AIBD consists of a transmitter, sending out infrared radiation, and a receiver, which detects the interruption of the received radiation. The infrared radiation sent out by the transmitter can reach the receiver over a reflector.

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

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

1 Scope

This Technical Specification is applicable to Active Infrared Beam Detectors (AIBDs) installed inside buildings and used as part of intrusion alarm systems.

It specifies four security Grades 1 to 4 (in accordance with EN 50131-1) and uses environmental Classes I to IV (in accordance with EN 50130-5).

This standard covers only AIBDs using interruption based technology. Other technologies i.e. Doppler based technology are not covered by this document.

Functions additional to the mandatory functions specified in this document can be included in the AIBD, providing they do not adversely influence the correct operation of the mandatory functions.

This document 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 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 abbreviated terms

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

3.1 Terms and definitions

3.1.1
two way single beam
detector consisting of one transmitter and one receiver in the same housing at one side of the supervised area and a reflector at the other side of the supervised area

Note 1 to entry: An illustration of a two way single beam is given in Figure A.1.