

## **Häiresüsteemid. Turvarakendustes kasutatavad sisetelevisioon-jälgimissüsteemid. Osa 2-1: Mustvalged kaamerad**

Alarm systems - CCTV surveillance systems for use in security applications - Part 2-1: Black and white cameras

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50132-2-1:2001 sisaldab Euroopa standardi EN 50132-2-1:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50132-2-1:2001 consists of the English text of the European standard EN 50132-2-1:1997.</p> <p>This document is endorsed on 19.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard lays down the minimum requirements for the specification and testing of black and white CCTV cameras used in CCTV surveillance systems for security and safety applications. Cameras may be installed with additional features in order to enhance their function to provide the operator with reliable and easily detectable information. These features are not included in this standard, however, it is the responsibility of the specifier to determine the suitability of these features for the application.</p>	<p><b>Scope:</b></p> <p>This standard lays down the minimum requirements for the specification and testing of black and white CCTV cameras used in CCTV surveillance systems for security and safety applications. Cameras may be installed with additional features in order to enhance their function to provide the operator with reliable and easily detectable information. These features are not included in this standard, however, it is the responsibility of the specifier to determine the suitability of these features for the application.</p>
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**ICS** 13.320, 33.160.40

**Võtmesõnad:** artificial weathering tests, documents, marking, motion-picture cameras, performance evaluation, security devices, specifications, television systems, test chart, testing conditions, warning systems, video equipment

Descriptors: Warning systems, security devices, video equipment, motion-picture cameras, television systems, specifications, testing conditions, performance evaluation, artificial weathering tests, documents, marking, test chart

English version

**Alarm systems - CCTV surveillance systems  
for use in security applications  
Part 2-1: Black and white cameras**

Systèmes d'alarme - Systèmes de  
surveillance CCTV à usage dans  
les applications de sécurité  
Partie 2-1: Caméras noir et blanc

Alarmanlagen  
CCTV-Überwachungsanlagen  
für Sicherheitsanwendungen  
Teil 2-1: Schwarzweiß-Kameras

This European Standard was approved by CENELEC on 1996-12-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

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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**

## Foreword

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

The text of the draft was submitted to the Unique Acceptance Procedure (UAP) and was approved by CENELEC as EN 50132-2-1 on 1996-12-09.

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) 1998-02-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 1998-02-01

For products which have complied with the relevant national standard before 1998-02-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2003-02-01.

EN 50132 will consist of the following parts, under the general title "Alarm systems - CCTV surveillance systems for use in security applications":

- Part 1        System requirements
- Part 2-1     Black and white cameras
- Part 2-2     Colour cameras
- Part 2-3     Lenses
- Part 2-4     Ancillary equipment
- Part 3       Local and main control unit
- Part 4-1     Black and white monitors
- Part 4-2     Colour monitors
- Part 4-3     Recording equipment
- Part 4-4     Hard copy equipment
- Part 4-5     Video motion detection equipment
- Part 5       Video transmission
- Part 6       (free)
- Part 7       Application guidelines

NOTE: Except for part 7, already published, and the present part 2-1, all other parts of the EN 50132 series are still under consideration.

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Preview generated by EVS

## Introduction

The purpose of the camera equipment in a Closed Circuit Television (CCTV) installation is to provide quick and reliable pictorial information in security, safety and monitoring applications.

The television camera in a CCTV installation is a device that converts light stimuli pertaining to an image into electrical signals utilizing the physical and chemical properties of photosensitive materials.

A black and white television camera transforms the varying luminance levels of the image focused on the photosensitive device into varying voltage levels at the camera output. It comprises the following main components:

- imaging device
- synchronisation circuits
- amplification circuits
- power supply circuits
- control and interfacing circuits

Although the lens is not regarded as part of the CCTV camera but belonging to the camera equipment, this standard may also be used for CCTV cameras that have a lens physically integrated in their design.

For application of television cameras in a CCTV system, see EN 50132-7, Application guidelines.

## 1 Scope

This standard lays down the minimum requirements for the specification and testing of black and white CCTV cameras used in CCTV surveillance systems for security and safety applications.

Cameras may be installed with additional features in order to enhance their function to provide the operator with reliable and easily detectable information. These features are not included in this standard, however, it is the responsibility of the specifier to determine the suitability of these features for the application.

Tamper protection and detection are not covered by this standard. When defined as a system requirement, tamper protection and detection methods as specified in the relevant system standard shall be applied.

## 2 Normative references and bibliography

### 2.1 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 50130-4	1997	Alarm systems - Part 4: Electromagnetic compatibility Product family standard: Immunity requirements for components of fire, intruder and social alarm systems
prEN 50130-5	1996	Part 5: Environmental test methods
EN 50132-7	1996	Alarm systems - CCTV surveillance systems for use in security applications - Part 7: Application guidelines
EN 60065	1993	Safety requirements for mains operated electronic and related apparatus for household and similar general use (IEC 60065:1985 + A1:1987 + A2:1989 + A3:1992, mod)
EN 60950	1992	Safety of information technology equipment, including electrical business equipment (IEC 60950:1991, mod)
IEC 60068-1	1988	Environmental testing - Part 1: General and guidance
IEC 60068-2		Part 2: tests
IEC 60068-2-1 + A1 + A2	1990 1993 1994	Test A: Cold
IEC 60068-2-2 + A1 + A2	1974 1993 1994	Test B: Dry heat
IEC 60068-2-3 + A1	1969 1984	Test Ca: Damp heat, steady state
IEC 60068-2-6 + A1 + A2	1982 1983 1985	Test Fc & Guidance: Vibration, sinusoidal
IEC 60068-2-18 + A1	1989 1993	Test R & Guidance: Water
IEC 60068-2-27	1987	Test Ea & Guidance: Shock



IEC 60068-2-30 + A1	1980 1985	Test Db & Guidance: Damp heat, cyclic (12 + 12 hour cycle)
IEC 60068-2-42	1982	Test Kc: Sulphur dioxide test for contacts and connections
IEC 60068-2-52	1984	Test Kb: Salt mist, cyclic (sodium chloride solution)
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)
CCIR Report 624-4	1990	Characteristics of television systems
CCIR Recom. 567-3	1990	Transmission performance of television circuits designed for use in international connections

## 2.2 Bibliography

EBU technical publication Tech. 3238, methods for measuring the main characteristics of television cameras.

Technische Pflichtenhefte der öffentlich-rechtlichen Rundfunkanstalten in der Bundesrepublik Deutschland.

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purpose of this standard the following definitions apply:

**3.1.1 acceptable picture:** The low light picture produced by a camera that still provides sufficient contrast, whilst the picture noise produced by the camera remains at the specified level.

**3.1.2 aspect ratio:** The width to height ratio of the sensitive area on the imaging device that is used to form a camera picture.

**3.1.3 automatic black circuit:** An optional circuit in the camera that brings the darkest part in the scene to black level.

**3.1.4 automatic light control (ALC):** An optional circuit in the camera that automatically adjusts the camera sensitivity to changing light conditions in order to maintain the composite video output signal within defined limits.

**3.1.5 black level:** The electrical signal level in a composite video signal representing optical black.

**3.1.6 blanking level:** The electrical signal level in a composite video signal of the front and back porch of the synchronising signal.

**3.1.7 camera sensitivity:** Imaging device illumination necessary to produce a defined composite (colour) video signal amplitude with a defined signal to noise ratio [EN 50132-7].

**3.1.8 CCTV camera:** A unit containing an imaging device producing a video signal from an optical image [EN 50132-7].