

## **Alarm systems - CCTV surveillance systems for use in security applications - Part 4-1: Black and white monitors**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50132-4-1:2002 sisaldab Euroopa standardi EN 50132-4-1:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50132-4-1:2002 consists of the English text of the European standard EN 50132-4-1:2001.</p> <p>This document is endorsed on 18.12.2002 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> This standard specifies the minimum requirements for the specification and testing of black and white video monitors used in 625-line CCIR standard closed circuit television (CCTV) surveillance systems for security applications.</p>	<p><b>Scope:</b> This standard specifies the minimum requirements for the specification and testing of black and white video monitors used in 625-line CCIR standard closed circuit television (CCTV) surveillance systems for security applications.</p>
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**ICS 13.310**

**Võtmesõnad:** information centres, measuring instruments, motion- picture cameras, photographic film, safety, safety devi, sample surveys, specifications, surve, surveillance systems, television cameras, television systems, testing, warning systems, video, video signal recording

English version

**Alarm systems -  
CCTV surveillance systems for use in security applications  
Part 4-1: Black and white monitors**

Systèmes d'alarme -  
Systèmes de surveillance CCTV à usage  
dans les applications de sécurité  
Partie 4-1: Moniteurs noir et blanc

Alarmanlagen -  
CCTV-Überwachungsanlagen für  
Sicherungsanwendungen  
Teil 4-1: Schwarzweiß-Monitore

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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.

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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 Technical Committee CENELEC TC 79, Alarm systems.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50132-4-1 on 1999-10-01.

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) 2002-02-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2002-10-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex A is normative.

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.

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## Introduction

Video monitors are electronic devices able to transform signals generated by television cameras into visible images corresponding to those focused on the imaging device of a television camera or electronically generated signals.

A video monitor comprises the following main components:

- a) Display device, e.g. cathode ray tube, liquid crystal display, etc.;
- b) Video amplification circuits;
- c) Synchronization circuits;
- d) Power supply circuits;
- e) Control and interfacing circuits.

Reference should be made to the guidelines on the application of video monitors in CCTV systems.

## 1 Scope

This standard specifies the minimum requirements for the specification and testing of black and white video monitors used in 625-line CCIR standard closed circuit television (CCTV) surveillance systems for security applications.

## 2 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.

CCIR report 624-4		Characteristics of television systems
EN 50081-1	1992	Electromagnetic compatibility – Generic emission standard – Part 1: Residential, commercial and light industry
EN 50130-4 + A1	1995 1998	Alarm systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity for components of fire, intruder and social alarm systems
EN 50132-7	1996	Alarm systems - CCTV surveillance systems for use in security applications – Part 7: Application guidelines
EN 60065	1998	Audio, video and similar electronic apparatus - Safety requirements (IEC 60065:1998, mod.)
EN 60068-1	1994	Environmental testing - Part 1: General and guidance (IEC 60068-1:1988 + corr. Oct.1988 + A1:1992)
EN 60068-2-1	1993	Environmental testing - Part 2: Tests - Tests A: Cold (IEC 60068-2-1:1990)
+ A1	1993	(IEC 60068-2-1:1990/A1:1993)
+ A2	1994	(IEC 60068-2-1:1990/A2:1994)

EN 60068-2-2	1993	Environmental testing - Part 2: Tests - Tests B: Dry heat (IEC 60068-2-2:1974 + 2A:1976)
+ A1	1993	(IEC 60068-2-2:1974/A1:1993)
+ A2	1994	(IEC 60068-2-2:1974/A2:1994)
EN 60068-2-6	1995	Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + corr. March 1995)
EN 60068-2-18	2001	Environmental testing - Part 2: Tests -Test R and guidance: Water (IEC 60068-2-18:2000)
EN 60068-2-27	1993	Environmental testing - Part 2: Tests - Test Ea and guidance: Shock (IEC 60068-2-27:1987)
EN 60068-2-30	1999	Test Db and guidance: Damp heat, cyclic (12 + 12 hour cycle) (IEC 60068-2-30:1980 + A1:1985)
EN 60068-2-52	1996	Environmental testing - Part 2: Tests - Test Kb : Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52:1996)
EN 60529	1991	Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)
EN 60950	2000	Safety of information technology equipment (IEC 60950:1999 + corr. 2000, mod.)
HD 323.2.3 S2	1987	Environmental testing - Part 2: Tests - Test Ca: Damp heat steady state (IEC 60068-2-3:1969 + A1:1984)
IEC 60068-2-42	1982	Test Kc : Sulphur dioxide test for contacts and connections

### 3 Definitions and abbreviations

#### 3.1 Definitions

For the purposes of this standard, the following definitions and abbreviations apply.

##### 3.1.1

##### **average picture level**

average signal level during active scanning time, excluding blanking and synchronization signals, integrated over one frame period. It is expressed as a percentage of the blanking (0 V) to reference white (0,7 V) range

##### 3.1.2

##### **aspect ratio**

ratio of the frame width to the frame height. The frame is the total area occupied by the picture which is scanned while the picture is not blanked

##### 3.1.3

##### **black level stability**

ability of a monitor to display a stable black level for scenes of varying levels of video content

##### 3.1.4

##### **composite video signal (CVS)**

video output signal of a black and white (b/w) camera comprising the picture component (video), black reference (blanking) and the synchronization components (synchronization) [EN 50132-7]