

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Video surveillance systems for use in security applications –  
Part 4: Application guidelines**

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**Systèmes de vidéosurveillance destinés à être utilisés dans les applications de  
sécurité –**

**Partie 4: Directives d'application**

<https://standards.iteh.ai/catalog/standards/sist/8718dd37-100d-426c-8ba9-8a340e/iec-62676-4-2014>



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Partie 4: Directives d'application**

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COMMISSION

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**VIDEO SURVEILLANCE SYSTEMS FOR  
USE IN SECURITY APPLICATIONS –**

**Part 4: Application guidelines**

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International Standard IEC 62676-4 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

This standard is based on EN 50132-7 (2012).

The text of this standard is based on the following documents:

FDIS	Report on voting
79/455/FDIS	79/466/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.



A list of all the parts in the IEC 62676 series, under the general title *Video surveillance systems for use in security applications*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

The IEC Technical Committee 79 in charge of alarm and electronic security systems together with many governmental organisations, test houses and equipment manufacturers has defined a common framework for video surveillance transmission in order to achieve interoperability between products.

The IEC 62676 series of standards on video surveillance system is divided into 4 independent parts:

Part 1: System requirements

Part 2: Video transmission protocols

Part 3: Analog and digital video interfaces

Part 4: Application guidelines

Each part offers its own clauses for the scope, normative references, definitions and requirements.

The purpose of this part of IEC 62676 is to provide guidance on how to ensure that video surveillance systems (VSS), thus far referred to as closed circuit television (CCTV), meet their functional and performance requirements.

This part of IEC 62676 will prove useful to those responsible for establishing operational requirements, writing specifications, selecting, installing, commissioning, using and maintaining a VSS.

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VSS, in its simplest form, is a means of providing images from security cameras and recorders for viewing on a display via a transmission system. There is no theoretical limit to the number of cameras and displays which may be used in a VSS installation but in practice will be limited by the efficient combination of control and display equipment and the operator's ability to manage the system.

The successful operation of a VSS requires the active co-operation of the user in carrying out the recommended procedures.

Due to the wide range of VSS applications, for example security, safety, public safety, transportation, etc. only the minimum requirements are covered in this part of IEC 62676.

# VIDEO SURVEILLANCE SYSTEMS FOR USE IN SECURITY APPLICATIONS –

## Part 4: Application guidelines

### 1 Scope

This part of IEC 62676 gives recommendations and requirements for the selection, planning, installation, commissioning, maintaining and testing video surveillance systems (VSS) comprising of image capture device(s), interconnection(s) and image handling device(s), for use in security applications.

The objectives of this part of IEC 62676 are to:

- a) provide a framework to assist customers, installers and users in establishing their requirements,
- b) assist specifiers and users in determining the appropriate equipment required for a given application,
- c) provide means of evaluating objectively the performance of the VSS.

### 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.

IEC 62676-1-1, *Video surveillance systems for use in security applications – Part 1-1: System requirements – General*

IEC 62676-1-2, *Video surveillance systems for use in security applications – Part 1-2: System requirements – Performance requirements for video transmission*

IEC 62676-2-1, *Video surveillance systems for use in security applications – Part 2-1: Video transmission protocols – General requirements*

IEC 62676-2-2, *Video surveillance systems for use in security applications – Part 2-2: Video transmission protocols – IP interoperability implementation based on HTTP and REST services*

IEC 62676-2-3, *Video surveillance systems for use in security applications – Part 2-3: Video transmission protocols – IP interoperability implementation based on Web services*

IEC 62676-3, *Video surveillance systems for use in security applications – Part 3: Analog and digital video interfaces*

### 3 Terms, definitions and abbreviations

#### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

##### 3.1.1

##### **camera housing**

enclosure to provide physical and/or environmental protection of the camera, lens and ancillary equipment

##### 3.1.2

##### **camera sensitivity**

image capturing device capability to produce an image in certain light conditions

##### 3.1.3

##### **VSS surveillance installation**

installation consisting of the hardware and software components of a VSS, fully installed and operational for monitoring a defined security zone

##### 3.1.4

##### **VSS camera**

unit containing an imaging device producing a video signal from an optical image

##### 3.1.5

##### **VSS camera equipment**

unit containing a VSS camera plus appropriate lens and necessary ancillary equipment

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##### 3.1.6

##### **VSS control unit**

equipment for controlling and monitoring the required operational functions of the VSS

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##### 3.1.7

##### **VSS technician**

qualified person who is trained and competent in the installation, maintenance, servicing and fault-finding of VSSs

##### 3.1.8

##### **VSS**

system consisting of camera equipment, monitoring and associated equipment for transmission and controlling purposes, which may be necessary for the surveillance of a protected area

##### 3.1.9

##### **corrective maintenance**

emergency servicing of a system, or part thereof, carried out in response to the development of a fault

##### 3.1.10

##### **corrective maintenance report**

document that details the requirement for normal or emergency corrective maintenance and indicates the corrective action taken, as required by IEC 62676-4 or other applicable technical standards

Note 1 to entry: The report may be an electronic document.

**3.1.11****company**

organization providing design, installation or maintenance of the VSS system

**3.1.12****detect**

defined functional purpose of a camera to enable the operator to reliably and easily determine whether or not any target, such as a person, is present.

**3.1.13****electronic iris**

automatic electronic shutter which changes the camera sensitivity in relation to the varying light conditions in order to maintain the video output signal within defined limits

**3.1.14****electronic shutter**

arrangement in the camera changing its sensitivity by electronically controlling its exposure time

**3.1.15****event recording**

event controlled recording or storing of image signals for a pre-determined time

Note 1 to entry: refers to video recording not to system log of events.

**3.1.16****external synchronisation**

method of feeding reference timing signals to all connected devices to ensure that their video output signals are synchronous

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**3.1.17****focal length**

**f**

measurement of the converging power of a lens, normally expressed in mm, which can be used to determine the angle of view for a given sensor size

**3.1.18****geo data**

digital information assigning a certain spatial location to the earth's surface

**3.1.19****identify**

defined functional purpose of a camera to enable identification of an individual beyond reasonable doubt

**3.1.20****inspect**

defined functional purpose of a camera to enable the operator to obtain information from objects

Note 1 to entry: An example object may include text or a logo on clothing.

**3.1.21****imaging device**

device that converts an optical image into an electrical signal

**3.1.22****imaging device illumination**

level of illumination (luminance) at the photosensitive surface of the imaging device

**3.1.23**

**iris**

variable aperture mechanism which regulates the amount of light passing through the lens onto the imaging device of the VSS camera

**3.1.24**

**Kell factor**

subjective number of lines of resolution that can be visually perceived in a video display system, expressed as a percentage of the total number of lines of resolution

**3.1.25**

**lens**

optical device for projecting an image of a desired scene onto the photo sensitive surface of the imaging device

**3.1.26**

**monitor**

defined functional purpose of a camera to enable viewing of the number, direction and speed of movement of people across a wide area, providing their presence is known to the operator

**3.1.27**

**NTSC**

**NTSC resolution**

standard-definition video mode referring in digital applications to 486 lines or 720 × 486 pixels

**3.1.28**

**image presentation device**

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device for converting video signals into pictures on a display screen

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**3.1.29**

**observe**

defined functional purpose of a camera enabling characteristic details of an individual, such as distinctive clothing to be seen, whilst allowing a view of activity surrounding an incident

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**3.1.30**

**pan and tilt unit**

motorised unit permitting the horizontal and vertical positioning of the camera equipment

**3.1.31**

**PAL**

**PAL resolution**

standard-definition video mode referring in digital applications to 576 lines or 720 × 576 pixels

**3.1.32**

**pan, tilt, zoom**

**PTZ**

function of a camera permitting the horizontal, vertical positioning of the camera together with the angle of view

**3.1.33**

**picture storage**

storing of fixed or video images

**3.1.34**

**preventive maintenance**

routine servicing of a system, carried out on a scheduled basis

**3.1.35****preventative maintenance report**

document which records the preventive maintenance carried out in accordance with IEC 62676-4 or other applicable technical standard

Note 1 to entry: The report may be an electronic document.

**3.1.36****recognise**

defined functional purpose of a camera to enable the operator to obtain recognition of an individual

**3.1.37****risk assessment**

systematic process to determine the impact of the consequences of hazards and threats relative to their probability

Note 1 to entry: The result of the analysis provides the basis for risk evaluation within a risk management process.

**3.1.38****risk management**

culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects

**3.1.39****risk management process**

systematic application of management policies, procedures and practices to the tasks of establishing the context, identifying, analysing, evaluating, treating, monitoring and communicating risk

[IEC 62676-4:2014](https://standards.iteh.ai/catalog/standards/sist/8718dd37-100d-426c-8ba9-a770088a340e/iec-62676-4-2014)

<https://standards.iteh.ai/catalog/standards/sist/8718dd37-100d-426c-8ba9-a770088a340e/iec-62676-4-2014>

**3.1.40****scene illumination**

level of illumination (luminance) on the area to be kept under surveillance

**3.1.41****site plan**

pictorial representation of the protected area showing the location and intended views of the VSS cameras

**3.1.42****system design proposal**

specification of the system design including location factors, site plan, field of view, detector range and coverage and control room design

**3.1.43****time lapse recording**

periodic recording of video images at pre-defined intervals

**3.1.44****video signal**

video channel being transmitted, streaming or not streaming, analog or digital

**3.1.45****video signal amplitude**

magnitude of the video signal