This document is a preview generated by EVS

TURVARAKENDUSTES KASUTATAVAD VIDEOVALVESÜSTEEMID. OSA 4: RAKENDAMISE JUHISED

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

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

This document is a preview generated by EVS

See Eesti standard EVS-EN IEC 62676-4:2026 sisaldab Euroopa standardi EN IEC 62676-4:2025 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62676-4:2026 consists of the English text of the European standard EN IEC 62676-4:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.11.2025.	Date of Availability of the European standard is 28.11.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.320

Standardite ja standardilaadsete dokumentide reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Eesti standardid ja standardilaadsed dokumendid on Eesti Standardimis- ja Akrediteerimiskeskuse intellektuaalomand ning neid kasutatakse litsentsi alusel dokumentide kasutuslepingu tingimuste kohaselt.

Ilma Eesti Standardimis- ja Akrediteerimiskeskuse eelneva kirjaliku loata on keelatud standardite ja standardilaadsete dokumentide täielik või osaline reprodutseerimine, levitamine, muutmine või kasutamine mis tahes kujul ja viisil - sealhulgas kopeerimise, skaneerimise, salvestamise või jagamise teel digiplatvormidel (k.a masinõppe ja tehisintellekti rakendustes). Loata kasutamine väljaspool litsentsi tingimusi käsitletakse õigusrikkumisena.

Kui Teil on küsimusi standardite ja standardilaadsete dokumentide autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega:
Veebileht www.evs.ee; telefon +372 6055050; e-post info@evs.ee

The right to reproduce and distribute standards and standard-like documents belongs to the Estonian Centre for Standardisation and Accreditation

Estonian standards and standard-like documents are the intellectual property of the Estonian Centre for Standardisation and Accreditation and are made available under license in accordance with the terms and conditions of the document use agreement.

Without the prior written permission of the Estonian Centre for Standardisation and Accreditation, the full or partial reproduction, distribution, modification, or use of standards and standard-like documents in any form or by any means - including photocopying, scanning, storing, or sharing via digital platforms (incl. in machine learning and artificial intelligence applications) - is strictly prohibited. Any unauthorized use beyond the scope of the granted license is prohibited and may result in legal action.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:
Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62676-4

November 2025

ICS 13.320

Supersedes EN 62676-4:2015

English Version

Video surveillance systems for use in security applications - Part 4: Application guidelines (IEC 62676-4:2025)

Systèmes de vidéosurveillance destinés à être utilisés dans les applications de sécurité - Partie 4: Directives d'application (IEC 62676-4:2025)

Videoüberwachungsanlagen für Sicherungsanwendungen - Teil 4: Anwendungsregeln (IEC 62676-4:2025)

This European Standard was approved by CENELEC on 2025-11-13. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2025 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

This document is a preview generated by EVS

European foreword

The text of document 79/727/FDIS, future edition 2 of IEC 62676-4, prepared by TC 79 "Alarm and electronic security systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62676-4:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2026-11-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-11-30

This document supersedes EN 62676-4:2015 and all of its amendments and corrigenda (if any).

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62676-4:2025 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 31010	NOTE	Approved as EN IEC 31010
IEC 62305 (series)	NOTE	Approved as EN IEC 62305 (series)
IEC 62305-3	NOTE	Approved as EN IEC 62305-3
IEC 62305-4	NOTE	Approved as EN IEC 62305-4
IEC 62676-2-11	NOTE	Approved as EN IEC 62676-2-11
IEC 62676-2-31	NOTE	Approved as EN IEC 62676-2-31
IEC 62676-2-32	NOTE	Approved as EN IEC 62676-2-32
IEC 62676-2-33	NOTE	Approved as EN IEC 62676-2-33
IEC 62676-5:2018	NOTE	Approved as EN IEC 62676-5:2018 (not modified)

This document is a preview generated by EVS

IEC 62676-4

Edition 2.0 2025-10

INTERNATIONAL STANDARD

This document is a preview generated by EVS

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

ICS 13.320

ISBN 978-2-8327-0697-8

THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2025 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, …). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch
Discover our powerful search engine and read freely all the publications previews, graphical symbols and the glossary. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org
The world's leading online dictionary on electrotechnology, containing more than 22 500 terminological entries in English and French, with equivalent terms in 25 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

This document is a preview generated by EVS

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD 6
1 Scope 8
2 Normative references 8
3 Terms, definitions and abbreviated terms 8
3.1 Terms and definitions 8
3.2 Abbreviated terms 17
4 Planning considerations 18
4.1 General considerations 18
4.2 Security concept 19
4.2.1 General 19
4.2.2 Risk assessment 20
4.2.3 Selection of security grades 21
4.3 Developing the operational requirements 22
4.4 Site survey 22
4.5 Security of the VSCC room 22
4.6 System design including site plan 23
4.7 Developing the test plan 23
4.8 Installation, commissioning and hand over 23
4.9 Documenting the system 24
5 Operational requirements specifications 24
5.1 General 24
5.2 Purpose of the operational requirements 24
5.3 Content of the operational requirements 24
5.3.1 General 24
5.3.2 Basic objective/functionalities 24
5.3.3 Definition of surveillance limitations 25
5.3.4 Definition of the site(s) under surveillance 25
5.3.5 Definition of activity to be captured 25
5.3.6 System/picture performance 25
5.3.7 Period of operation 25
5.3.8 Conditions at the location 25
5.3.9 Resilience 25
5.3.10 Monitoring and image storage 26
5.3.11 Exporting images 26
5.3.12 Routine actions 26
5.3.13 Operational response 26
5.3.14 Operator workload 26
5.3.15 Training 26
5.3.16 Expansions 27
5.3.17 List of any other special factors not covered by the above 27
5.4 System operational criteria 27
5.4.1 General 27
5.4.2 Automation 27
5.4.3 Alarm response 27
5.4.4 System response times 28
6 Technical considerations (equipment selection and performance) 29

This document is a preview generated by EVS

6.1 General 29
6.2 Camera equipment 29
6.3 Camera and lens selection criteria 29
6.4 Camera selection 30
6.4.1 General 30
6.4.2 PTZ 30
6.5 Lens and housing selection 31
6.6 Site coverage/numbers of cameras 31
6.7 Object sizes and pixel density 32
6.7.1 General 32
6.7.2 Object size definitions and required pixel density in IP VSS 32
6.8 Field of view – Other considerations 36
6.9 Illumination 36
6.10 IP Video equipment 38
6.11 Tamper protection/detection 38
6.11.1 Camera tamper protection/detection 38
6.11.2 System tamper protection/detection 38
6.12 System integration 38
7 Video signal presentation 39
7.1 Display types 39
7.2 Resolution 40
8 Transmission 41
8.1 Principles 41
8.1.1 General 41
8.1.2 Selection of IP video performance classes 42
8.1.3 Interoperability 43
8.1.4 Interoperability with voice communication 43
8.2 Wired transmission links 43
8.3 Wireless transmission links 44
8.4 Key considerations for IP based transmission systems 45
9 Video performance characteristics 45
9.1 Image compression 45
9.2 Frame rate 46
9.3 Resolution 46
10 Storage requirements 47
11 Image storage and export 48
11.1 Format of the compressed video data 48
11.2 Encryption 48
11.3 Basic metadata (time, date, camera identifier) 48
11.4 Multiplexing format 49
11.5 Image enhancements 49
11.6 Image export 49
11.7 Replay of exported images 50
12 VSCC control room configuration 50
12.1 Control rooms or secure viewing area 50
12.2 Number, size and positioning of VSS video displays 50
12.3 Displays and screens mounted on or off the workstation 51
12.4 Recommended display sizes 51

This document is a preview generated by EVS

12.5 Number of camera images per operator 51
12.6 Number of work stations 52
12.7 Equipment siting 52
12.8 Backup power supply provision 52
12.9 Operating temperature 53
12.10 Lightning and surge protection 53
13 Defining the test plan 53
13.1 Purpose of the test plan 53
13.2 User acceptance testing/inspection 53
13.3 Technical acceptance testing 53
13.3.1 Imaging chain consistency 53
13.3.2 Image quality 53
14 Documentational considerations (pre-installation) 56
14.1 General 56
14.2 Risk assessment 56
14.3 Operational requirements 56
14.4 Design specification 56
14.5 Site plan 56
14.6 Test plan 56
15 System installation and commissioning 56
15.1 Factory acceptance testing 56
15.2 Installation process 57
15.3 User acceptance testing, commissioning and handover 57
15.4 Declaration of conformance to standards 58
16 Final documentation 58
16.1 General 58
16.2 Complete system drawings 58
16.3 System commission (with camera specific audits) 59
16.4 Interface descriptions 59
16.5 Operating logbook VSS 59
16.6 Compliance with legislation (for information) 59
17 Operation of VSS 59
17.1 General 59
17.2 Behaviour in the event of malfunctions 61
17.3 At-site visual check 61
17.4 Deviation of requirements for at-site visual checks and maintenance 62
17.5 Maintenance 62
17.6 Inspection (part of preventive maintenance) 62
17.7 Service checks (part of preventive maintenance) 64
17.8 Repair (corrective maintenance) 64
17.9 Improvement 64
Annex A (informative) Video standard formats 65
A.1 Current video standard format 65
A.2 Pixel densities for recognition of other objects of interest 65
Annex B (normative) Test protocol for VSS target 66
B.1 Scope of the test 66
B.2 Test prerequisites 66
B.3 Preconditions 66

This document is a preview generated by EVS

B.4 Face selection 66
B.5 Live view methodology (faces) 67
B.6 Live view methodology (VRN) 67
B.7 Recorded view methodology (faces) 67
B.8 Recorded view methodology (VRN) 68
B.9 Motion 68
B.10 Faces: scoring criteria 68
B.11 VRN: scoring criteria 69
B.12 Heads control sheet (for example only) 71
B.13 VRN control sheet (for example only) 72
Annex C (normative) Test method of image quality: Guidance for the use of the video test target 73
Annex D (informative) Guidelines to specifying VSS parameters and security gradings 79
D.1 VSS parameters 79
D.2 Suggested building blocks 79
D.3 Security gradings 80
D.4 Security grading by system view: 80
D.5 Security grading by size view: 81
D.6 Security grading by application view 81
D.7 Number of frames depending on the object speed in a scene width 85
Annex E (normative) Detection response testing and acceptability criteria 87
E.1 General 87
E.2 False and nuisance alarms 87
E.3 Setting the response time 88
E.4 PTZ response time test procedure 88
E.5 Observer cueing and prompting 88
E.6 Detection test locations 89
E.7 Target camouflage 89
E.8 Tests with moving targets 89
E.9 Test conditions 89
E.10 Testing a 'live' system 90
E.11 Detection test results tables 90
Bibliography 91

Figure 1 – Process visualization 19
Figure 2 – Structure of a security concept 20
Figure 3 – HD and UHD screen percentages occupied by various categories 34
Figure 4 – Pixel density formula 35
Figure 5 – Operation of a VSS 60
Figure B.1 – Heads control sheet 71
Figure B.2 – VRN control sheet example 72
Figure C.1 – Test charts 74
Figure C.2 – Key to Figure C.1 77
Figure C.3 – Avoiding optical distortion 78

Table 1 – Measures depending on security grades 23

This document is a preview generated by EVS

Table 2 – Example of system feedback – PTZ control responding time, performance and operator 29
Table 3 – Group names for test charts 34
Table 4 – Typical lux levels 36
Table 5 – Examples of display technologies 39
Table 6 – Example resolutions 41
Table 7 – Wireless transmission options 44
Table 8 – Inspection cycles versus security grading 60
Table A.1 – Recommendations for recognition of some “non-human” objects 65
Table B.1 – Example auditor log sheet 69
Table B.2 – Example control room observer log sheet 69
Table B.3 – Example camera audit sheet 69
Table B.4 – Blank auditor log sheet 70
Table B.5 – Blank control room observer log sheet 70
Table B.6 – Blank camera audit sheet 70
Table C.1 – Test targets 73
Table D.1 – Suggested VSS building blocks 79
Table D.2 – Security grading by size view 81
Table D.3 – Security grading by application 81
Table D.4 – Security grading by critical infrastructure 83
Table D.5 – Number of frames depending of object speed – Low pixel density objects 85
Table D.6 – Number of frames depending of object speed - High Pixel Density Objects 86
Table E.1 – Detection test results 90

This document is a preview generated by EVS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

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

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

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

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) implementing request for define a security concept (instead of just a risk analysis) (4.2);
b) selection of security grades (4.2.3);

This document is a preview generated by EVS

c) complete redefinition of pixel densities (6.7) including new test charts (Annex C):
   – upgrade of previous MDORII system with 6 pixel densities (12,5 pixels/meter; 25 pixels/meter; 62,5 pixels/meter ; 125 pixels/meter; 250 pixels/meter; 1 000 pixels/meter) into new O2DCPVS system with 7 pixel densities (20 pixels/meter; 40 pixels/meter; 80 pixels/meter; 125 pixels/meter; 250 pixels/meter; 500 pixels/meter; 1 500 pixels/meter
d) operation of VSS (Clause 17);
e) security grading by size view (Annex D, Table D.2);
f) security grading by application (Annex D, Table D.3);
g) security grading by critical infrastructure (Annex D, Table D.4);
h) tables for number of frames depending on object speed (Annex D, Table D.5 and Table D.6);
i) general updates of tables in entire document.

The text of this International Standard is based on the following documents:

Draft	Report on voting
79/727/FDIS	79/732/RVD

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

The language used for the development of this International Standard is English

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

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

This document is a preview generated by EVS

1 Scope

This part of IEC 62676 describes the planning, design, installation, testing, commissioning, and maintaining of video surveillance systems (VSS) comprising image capture device(s), interconnection(s) and image handling device(s), for use in security applications within private or public spaces.

The objectives of this document are to:

a) provide a framework to assist all interested parties 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 are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62676-1-1:2013, *Video surveillance systems for use in security applications - Part 1-1: System requirements - General*

IEC 62676-1-2:2013, *Video surveillance systems for use in security applications - Part 1-2: System requirements - Performance requirements for video transmission*

IEC 62676-2 (all parts), *Video surveillance systems for use in security applications - Part 2-X: Video transmission protocols*

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

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

IEC 62820-2, *Building intercom systems - Part 2: Requirements for advanced security building intercom systems (ASBIS)*

IEC 62820-3-2, *Building intercom systems - Part 3-2: Application guidelines - Advanced security building intercom systems (ASBIS)*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

This document is a preview generated by EVS