

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Building intercom systems –
Part 2: Requirements for advanced security building intercom systems (ASBIS)**

**Systèmes d'interphone de bâtiment –
Partie 2: Exigences pour les systèmes d'interphone de bâtiment à sécurité
avancée (ASBIS)**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2017 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.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
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 corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

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 also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

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: csc@iec.ch.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue

Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

65 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Building intercom systems –
Part 2: Requirements for advanced security building intercom systems (ASBIS)**

**Systèmes d'interphone de bâtiment –
Partie 2: Exigences pour les systèmes d'interphone de bâtiment à sécurité
avancée (ASBIS)**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.320

ISBN 978-2-8322-4731-0

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms, definitions and abbreviated terms	9
3.1 Terms and definitions.....	9
3.2 Abbreviated terms.....	13
4 Functional requirements	14
4.1 General.....	14
4.2 Call function.....	14
4.3 Unlocking function	14
4.4 Emergency call	14
4.5 Manually controlled half duplex (non-simultaneous conversation)	15
4.6 High priority call.....	15
4.7 Direct communication between the security management units and master-stations	15
4.8 Audio and optical indicators	15
4.9 Help call (call for assistance)	15
4.10 Call queue	15
4.11 Image transmission.....	15
4.12 Entrance warning message	15
4.13 Event logs.....	16
4.14 SMU system test.....	16
4.15 Overall system test	16
4.16 Intercom unit full duplex.....	16
4.17 Intercom unit voice switched duplex (automatic half duplex)	16
4.18 Intercom unit call queue	16
4.19 Intercom unit call transfer	16
4.20 Intercom unit keep on hold.....	17
4.21 Intercom unit privacy protection	17
4.22 Intercom unit privacy communication	17
4.23 Intercom unit microphone status	17
4.24 System status monitoring.....	17
4.25 System event monitoring.....	17
4.26 System fault monitoring	17
4.27 Network security	17
4.28 Service staff and system administrators authentication and authorization	18
4.29 Network authentication and authorisation.....	18
4.30 System access control	18
4.31 Deleted.....	18
4.32 Interconnection security	18
4.33 Integrity protection	18
4.34 Building warnings distribution.....	18
4.35 Environmental noise cancellation	18
4.36 Void.....	19
4.37 Automatic aggression detection, (scream, shoot, glass-break, etc)	19
4.38 System redundancy	19

4.39	Inductive loop	19
4.40	Interfacing.....	19
4.41	User interface	19
4.42	Software download/upgrade.....	19
4.43	Void.....	20
4.44	System test.....	20
4.45	Voice communication test	20
4.46	Error report	20
4.47	Conversation transfer.....	20
5	Performance requirements.....	20
5.1	General.....	20
5.2	Audio characteristics.....	21
5.2.1	Acoustic pressure level.....	21
5.2.2	Frequency response	21
5.2.3	Acoustic distortion	21
5.2.4	Channel S/N ratio	21
5.2.5	Side-tone masking rating (STMR)	21
5.2.6	Codec dependent parameters, receiving delay.....	21
5.2.7	Audio switching time.....	21
5.2.8	Codec dependent parameters, sending delay	21
5.2.9	Automatic volume control (AVC)	22
5.2.10	Speech transmission index (STI)	22
5.2.11	Transmission quality	22
5.2.12	Codec.....	22
5.3	Other performances	22
5.3.1	System status monitoring.....	22
5.3.2	System event monitoring	22
5.3.3	System fault monitoring	22
5.3.4	Number of speech channels	23
5.3.5	Obsolete time	23
6	Test methods.....	23
6.1	General.....	23
6.2	The measurement of the frequency response.....	23
6.3	Acoustic pressure level.....	23
6.4	Acoustic distortion	23
6.5	Channel S/N ratio	23
6.6	Automatic volume control.....	23
6.7	Measurement of STI for laboratory test as well as for an onsite test of an installed system	24
6.8	Other measurements	24
Annex A (normative)	Pictograms: Symbols for important functions.....	25
A.1	General.....	25
A.2	Symbol for any call button (Door Bell): IEC 60417-5013:2002-10	25
A.3	Symbol for call registration: IEC 60417-5090:2002-10.....	25
A.4	Symbol for established conversation: IEC 60417-5210:2011-05	26
A.5	Symbol for: unlocked door: as ISO 7010 E058 but without arrow.....	26
A.6	Symbol for manually or automatically cancelling: IEC 60417-5576:2002-11	27
Annex B (normative)	System composition	28
Bibliography	29

Figure A.1 – Call button symbols	25
Figure A.2 – Call registration symbols.....	25
Figure A.3 – Established conversation symbols	26
Figure A.4 – Unlocked door symbols.....	26
Figure A.5 – Call Cancel button symbols.....	27
Figure B.1 – Composition of an ASBIS.....	28

Currently in preview, click buy full version

INTERNATIONAL ELECTROTECHNICAL COMMISSION

BUILDING INTERCOM SYSTEMS –**Part 2: Requirements for advanced security
building intercom systems (ASBIS)**

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 Publications”). 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) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62820-2 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

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

FDIS	Report on voting
79/588/FDIS	79/590/RVD

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

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

A list of all parts in the IEC 62820 series, published under the general title *Building intercom systems*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The IEC 62820 series of standards set out the technical requirements for the composition, functions, performance, test methods of building intercom systems for building entry and application guidelines and consist of five parts:

Part 1-1: System requirements – General;

Part 1-2: System requirements – Building intercom systems using the internet protocol (IP);

Part 2: Requirements for advanced security building intercom systems (ASBIS);

Part 3-1¹: Application guidelines – General;

Part 3-2²: Application guidelines – Advanced security building intercom systems.

IEC 62820-2 specifies higher security requirements, to be used in buildings with advanced security needs that additionally or alternatively apply in respect of those in IEC 62820-1-1 and/or IEC 62820-1-2 which give basic requirements for building intercom systems.

Additional requirements and recommendations are those described in IEC 62820-2, but they are not covered by IEC 62820-1-1 neither IEC 62820-1-2.

Requirements and recommendations described by IEC 62820-2 have precedence, if also described in IEC 62820-1-1 and/or IEC 62820-1-2.

¹ Under preparation. Stage at the time of publication: IEC/AFDIS 62820-3-1:2017.

² Under preparation. Stage at the time of publication: IEC/AFDIS 62820-3-2:2017.

BUILDING INTERCOM SYSTEMS –

Part 2: Requirements for advanced security building intercom systems (ASBIS)

1 Scope

This part of IEC 62820 specifies the technical requirements for the composition, function, performance and testing methods of Advanced Security Building Intercom Systems.

This document is applicable for intercom systems used for any advanced security communication in buildings.

Advanced security building intercom systems (ASBIS) are used for rapid emergency and danger messages verification by voice communication, warning of a danger, rapid notification of the responsible emergency services/intervention services and for sending instructions on how to proceed. The requirement for a suitable concept is prior risk assessment and a definition of the protection target.

A Security management unit (SMU) is a necessary part of an ASBIS.

The type of building and the usage of a building have influence on the risk calculation. In this document, the relevant functions and performances are divided into three grades. According to the results of the risk calculation, the security needs will be covered by an individual system profile.

NOTE 1 Examples of typical profiles and each grade are defined in IEC 62820-3-2, where a risk calculation is required.

NOTE 2 The application of this document does not dispense to comply with the public national regulations concerning emergency systems.

NOTE 3 Systems for emergency purposes can be the subject of approval by local authorities.

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 60268-16, *Sound system equipment – Part 16: Objective rating of speech intelligibility by speech transmission index*

IEC 60417, *Graphical symbols for use on equipment* (available at <http://www.graphical-symbols.info/equipment>)

IEC 62820-1-1, *Building intercom systems – Part 1-1: System requirements – General*

IEC 62820-1-2, *Building intercom systems – Part 1-2: System requirements – Building intercom systems using the internet protocol (IP)*

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