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Building intercom systems -
Part 1-1: System requirements - General

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FOREWORD

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IEC 62820-1-1 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 2016. This edition constitutes a technical revision.

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

a) addition of IEC 61000-6-8 and IEC 62368-1:2023 as normative references;
b) update of ISO 12233 to the latest version and addition of this reference as a normative reference;
c) modification of the light source colour temperature from 3 100 K ± 100 K to 6 500 K ± 100 K;
d) addition of TE84 test chart and update of the focus test chart.

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

Draft	Report on voting
79/738/FDIS	79/741/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.

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.

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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

INTRODUCTION

IEC 62820-1-1 specifies the technical requirements for building intercom systems and equipment used for building entry. Building intercom systems can function independently and can be extended to support building security management functions, e.g. extendable with security management unit (SMU) operated by security staff (door-man, concierge, security-guard, porter, etc.), or in conjunction with other systems as per the security requirements of the building. It can consist of: Visitor call unit (VCU), User receiver unit (URU), SMU, power supply, auxiliary device, as well as interface-unit to other security-systems.

The IEC 62820 series of standards sets out the technical requirements for the composition, functions, performance, test methods of building intercom systems for building entry and application guidelines and consists 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*

Part 3-1: *Application guidelines - General*

Part 3-2: *Application guidelines - Advanced security building intercom systems*

IEC 62820-1-1 is based on Chinese standard GB/T 31070.1-2014 and European standard EN 50486:2008.

1 Scope

IEC 62820-1-1 specifies the technical requirements for the composition, functions, performance, and test methods of general building intercom systems.

This document is applicable to the general intercom systems for building entry in residential or commercial buildings.

Door-Entry-System (DES) is a simple kind of convenient Building-Intercom-System (BIS) mainly for user's comfort. This document has classified the general building intercom systems into two grades in IEC 62820-1-1. Grade 1 adopts lower requirements to cover DES not used for relevant security applications while grade 2 adopts higher requirements for building intercom systems for security applications. Each grade can adopt different functional and performance requirements, test methods and normative references.

NOTE The different requirements between grade 1 and grade 2 are summarized in Table C.1 of Annex C.

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 60065:2014, *Audio, video and similar electronic apparatus - Safety requirements*[1]

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

IEC 60950-1:2005, *Information technology equipment - Safety - Part 1: General requirements*[2]

IEC 61000-6-1, *Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments*

IEC 61000-6-3, *Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments*

IEC 61000-6-8, *Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations*

IEC 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

IEC 62368-1:2023, *Audio/video, information and communication technology equipment - Part 1: Safety requirements*

IEC 62599-1, *Alarm systems - Part 1: Environmental test methods*

IEC 62599-2, *Alarm systems - Part 2: Electromagnetic compatibility - Immunity requirements for components of fire and security alarm systems*

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1 This publication was withdrawn.

2 This publication was withdrawn.

Bibliography

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

ITU-T P.10-2017, *Vocabulary for performance, quality of service and quality of experience*

ITU-T P.51-1996, *Artificial mouth*

ITU-T P.57:2021, *Artificial ears*

ITU-T P.64:2022, *Determination of sensitivity/frequency characteristics of local telephone systems*

EN 50486:2008, *Equipment for use in audio and video door-entry systems*

GB/T 31070.1:2014, *Building intercom systems - Part 1: General technical requirements*

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