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Interested committees:

Title: Draft BS EN ISO 8102-2 Electrical requirements for lifts, escalators and moving walks. Part 2: Electromagnetic compatibility with regard to immunity.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 8102-2

Electrical requirements for lifts, escalators and moving walks — Part 2: Electromagnetic compatibility with regard to immunity

*Exigences électriques pour ascenseurs, escaliers mécaniques et
trottoirs roulants —*

*Partie 2: Compatibilité électromagnétique en ce qui concerne
l'immunité*

ICS: 91.140.90

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

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Foreword (ISO)

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO 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, ISO 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 www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 178 Lifts, escalators and moving walks in collaboration with Technical Committee CEN/TC 10 "Lifts, escalators and moving walks".

This second edition cancels and replaces the first edition (ISO 8102-2:2021), which has been technically revised.

The main changes are as follows:

- the term "system" is replaced with "equipment under control" (EUC);
- defined performance criteria for different functions of the EUC;
- test values are aligned with the generic EMC standards;
- the frequency range of radio frequency electromagnetic field test has been extended up to 6 000 MHz;
- naming of the clauses.

A list of all parts in the ISO 8100 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

European foreword (CEN)

This document (prEN ISO 8102-2:2024) has been prepared by Technical Committee CEN/TC 10 "Lifts, escalators and moving walks", in collaboration with Technical Committee ISO/TC 178 "Lifts, escalators and moving walks" the secretariat of which is held by AFNOR.

This document is currently submitted to CEN Enquiry.

This document will supersede EN 12016:2013.

This document includes the following significant technical changes with respect to EN 12016:2013:

ISO/DIS 8102-2:2025(en)

- the term "system" is replaced with "equipment under control" (EUC);
- defined performance criteria for different functions of the EUC;
- test values are aligned with the generic EMC standards;
- the frequency range of radio frequency electromagnetic field test has been extended up to 6 000 MHz;
- naming of the clauses.

This document is part of the EN 81 series of standards. The structure of the EN 81 series is described in CEN/TR 81-10:2008.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative [Annexes ZA](#), [ZB](#) and [ZC](#), which are an integral part of this document.

Introduction

This document is a type-C standard as stated in ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organisations, market surveillance etc.)

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e. g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard. This is a product family EMC standard covering the immunity of lifts, escalators and moving walks.

The special requirements of the product family make it necessary to define precise criteria for the evaluation of the immunity test results.

The basic safety requirements of the equipment under control (lift, escalator or moving walk) are specified in ISO 8100-1 and ISO 8103-1. For this reason, a performance criterion derived from the immunity levels of IEC 61000-6-1:2016 is deemed sufficient for most functions. However, for safety circuits, where any malfunction that can produce an unsafe operating mode cannot be tolerated, higher immunity levels derived from IEC 61000-6-2:2016 are stipulated.

Test levels and immunity performance criteria are defined for EUT:

- used in safety function circuits (safety circuit(s));
- used in general function circuits.

Due to the size of an installed lift, it becomes impracticable to test the complete EUC either in a test laboratory or in situ where the uncontrolled environment can also influence the test procedures and results. Therefore, in this document the tests are defined at apparatus and assembly of apparatus level as well as on EUC level.

Electrical requirements for lifts, escalators and moving walks —

Part 2: Electromagnetic compatibility with regard to immunity

1 Scope

This document specifies the immunity requirements for lifts, escalators and moving walks which are intended to be permanently installed in buildings, including performance criteria and test levels. These levels represent essential EMC requirements.

This document refers to electromagnetic environment conditions as existing in residential as well as commercial, public and light-industrial locations as defined in IEC 61000-6-1:2016.

This document addresses EMC related hazards and hazardous situations relevant to lifts, escalators and moving walks when they are used as intended and under the conditions described in instructions.

Products which incorporate radio transmit/receive functions are included in the scope of this document.

This document is applicable for lift apparatuses related to functions given in [Table 8](#) to [Table 11](#).

This document is not applicable to apparatus installed before the date of its publication.

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.

CISPR 35:2016, *Electromagnetic compatibility of multimedia equipment - Immunity requirements*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test*

IEC 61000-4-3:2020, *Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test*

IEC 61000-4-5:2014+AMD1:2017, *Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques — Surge immunity test*

IEC 61000-4-6:2023, *Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-11:2020, *Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests*

IEC 61000-4-34:2005+AMD1:2009, *Electromagnetic compatibility (EMC) - Part 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase*