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First edition  
2020-06

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# Electrical requirements for lifts, escalators and moving walks —

## Part 1: Electromagnetic compatibility with regard to emission

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

*Partie 1: Compatibilité électromagnétique en ce qui concerne les  
émissions*



Reference number  
ISO 8102-1:2020(E)

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Published in Switzerland

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## Foreword

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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

This first edition of ISO 8102-1 cancels and replaces ISO 22199:2009 which has been technically revised.

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## 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 document is based on EN 12015:2020.

The requirements of this document have been specified so as to ensure a level of electromagnetic emission that causes minimal disturbance to other equipment. The limits given in this document recognize that:

- the product family covers a total range of lifts, escalators and moving walks used in residential buildings, offices, hospitals, hotels, industrial plants, etc.; and
- lifts, escalators and passenger conveyors are deemed to have their own dedicated power supply and be connected with the consent of the supply authority to a low impedance source.

This document is the product family standard for the electromagnetic compatibility of lifts, escalators and moving walks (emission). It takes precedence over all aspects of IEC 61000-6-x. The emission limits given are on the basis that equipment of the product family range is installed both indoors and outdoors in all types of building, involves the switching of heavy currents and high inductive loads and, generally, is connected to a low-voltage system.

The levels, however, do not cover the following cases where:

- a) the probability of an occurrence likely to produce emissions in excess of those which are normally experienced is extremely low, e.g. the emergency stopping of a lift, escalator or passenger conveyor under a fault condition;
- b) highly susceptible apparatus is used in the close proximity of the equipment covered by this document, in which case further measures can be necessary to:
  - 1) reduce the electromagnetic emission to below the levels specified in this document; or

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2) increase the immunity of the affected apparatus.

The related EMC product family standard for immunity is ISO 8102-2:2017.