



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

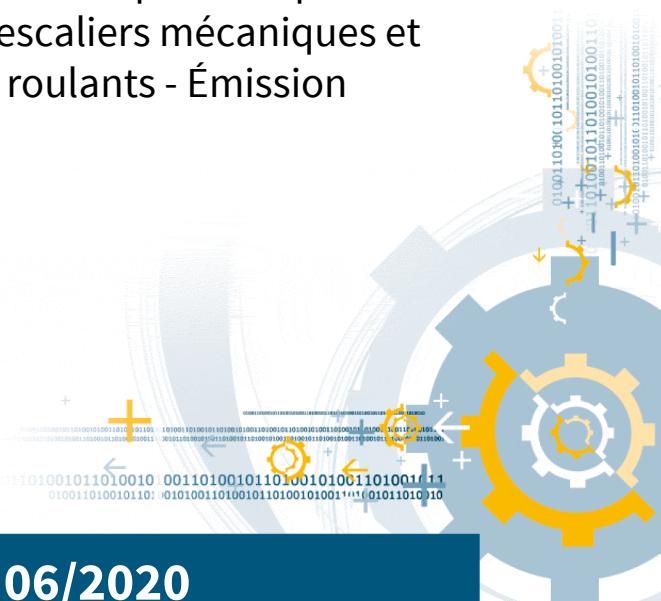
ILNAS-EN 12015:2020

Electromagnetic compatibility - Product family standard for lifts, escalators and moving walks - Emission

Elektromagnetische Verträglichkeit -
Produktfamilien-Norm für Aufzüge,
Fahrtreppen und Fahrsteige -
Störaussendung

Compatibilité électromagnétique -
Norme famille de produits pour
ascenseurs, escaliers mécaniques et
trottoirs roulants - Émission

06/2020



National Foreword

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ILNAS-EN 12015:2020

EUROPEAN STANDARD **EN 12015**
NORME EUROPÉENNE
EUROPÄISCHE NORM

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Supersedes EN 12015:2014

English Version

**Electromagnetic compatibility - Product family standard
for lifts, escalators and moving walks - Emission**

Compatibilité électromagnétique - Norme famille de
produits pour ascenseurs, escaliers mécaniques et
trottoirs roulants - Émission

Elektromagnetische Verträglichkeit-Produktfamilien-
Norm für Aufzüge, Fahrtreppen und Fahrsteige -
Störaussendung

This European Standard was approved by CEN on 13 April 2020.

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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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



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European foreword

This document (EN 12015:2020) has been prepared by Technical Committee CEN/TC 10 “Lifts, escalators and moving walks”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12015:2014.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The limits given in this European Standard recognize the fact 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 that lifts, escalators and moving walks are deemed to have their own dedicated power supply and be connected with the consent of the electrical supplier to a low impedance source.

The related EMC product family standard for immunity is:

EN 12016, *Electromagnetic compatibility — Product family standard for lifts, escalators and moving walks — Immunity*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is a Type C standard as stated in EN ISO 12100.

This document has been prepared to provide one means of complying with the requirements of the Electromagnetic Compatibility (EMC) Directive. The requirements of this document have been specified so as to ensure a level of electromagnetic emission which will cause minimal disturbance to other equipment. The levels, however, do not cover the following cases:

- a) where the probability of an occurrence likely to produce emissions in excess of those which would normally be experienced is extremely low, e.g. the emergency stopping of a lift, escalator or moving walk under a fault condition;
- b) where highly susceptible apparatus will be used in the close proximity of the equipment covered by this document, in which case further measures may have to be taken to:
 - 1) reduce the level of electromagnetic emission to below that specified in this document; or
 - 2) increase the immunity of the affected apparatus.

The given emission limits, on the basis that equipment of the product family range may be installed both indoor and outdoor in all types of building, involves the switching of heavy currents and high inductive loads and, generally, is connected to a low voltage system.

Values for the harmonic emission limits are taken from the harmonized standard EN 61000-3-12:2011. Taking into account the characteristics and environment of lifts, escalators and moving walks, these harmonic values are applicable for all input currents without current limitation stated by EN 61000-3-12:2011.

Due to the size of an installed lift, it becomes impracticable to test the total assembly either in a test laboratory or in situ where the uncontrolled environment may also influence the test procedures and results. This applies also to measurements within the car. Similar considerations regarding dimensions apply equally to the testing of escalators and moving walks.

1 Scope

This document specifies the emission limits in relation to electromagnetic disturbances and test conditions for lifts, escalators and moving walks, which are intended to be permanently installed in buildings. These limits however, may not provide full protection against disturbances caused to radio and TV reception when such equipment is used within distances given in Table 1.

This document is not applicable for apparatus which are manufactured before the date of its publication as EN.

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.

EN 55011:2016¹⁾, *Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement (CISPR 11:2015)*

EN 55014-1:2017, *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (CISPR 14-1:2016/COR1:2016)*

EN 55032:2015²⁾, *Electromagnetic compatibility of multimedia equipment - Emission Requirements (CISPR 32:2015)*

EN IEC 61000-3-2:2019, *Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2:2018)*

EN 61000-3-12:2011, *Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase (IEC 61000-3-12:2011)*

EN 61000-6-3:2007³⁾, *Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:2006)*

EN 61000-6-4:2007⁴⁾, *Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments (IEC 61000-6-4:2006)*

IEC 61000-3-11:2017, *Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection*

1) This document is impacted by the amendment EN 55011:2016/A1:2017.

2) This document is impacted by the corrigendum EN 55032:2015/AC:2016-07.

3) This document is impacted by the amendment EN 61000-6-3:2007/A1:2011 and the corrigendum EN 61000-6-3:2007/A1:2011/AC:2012.

4) This document is impacted by the amendment EN 61000-6-4:2007/A1:2011.

3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms and definitions given in EN 61000-6-3:2007, EN 61000-6-4:2007 and the following apply.

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

— IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <https://www.iso.org/obp/ui>

3.1

apparatus

assembly of components with an intrinsic function as defined by its manufacturer

Note 1 to entry: See Figure 1 and Figure 2 as examples.

3.2

assembly of apparatus

arrangement of interconnected apparatus, which can be tested together

Note 1 to entry: See Figure 1 and Figure 2 as examples.

3.3

balanced three-phase equipment

three-phase equipment which is connected to the three line conductors of a three-phase supply and in which the three line or phase currents are designed to be identical in amplitude and wave-shape, each being displaced from the other two by one-third of a fundamental period

[SOURCE: EN 61000-3-12:2011, 3.7]

3.4

enclosure port

physical boundary of the apparatus/assembly of apparatus through which electromagnetic fields can radiate or impinge

Note 1 to entry: See Figure 3 as an example.

3.5

hybrid equipment

combination of a balanced three-phase load and one or more loads connected between phase and neutral or between phases

[SOURCE: EN 61000-3-12:2011, 3.9]

3.6

machine/motor port

A.C./D.C. power supply port of the apparatus/assembly of apparatus containing active electronic circuits connected to the machine/motor

Note 1 to entry: Active electronic circuits comprise electronic components such as transistors, thyristors, digital ICs, microprocessors, and oscillators switching at a variable or fixed rate (switching/clock frequency). An LED display circuit connected to a battery is not an active electronic circuit if the current is limited only by a resistor or by a transistor operating linearly, but it is an active electronic circuit if the current is pulsed.

Note 2 to entry: Controlled speed drive motor supply output is an active electronic circuit. Direct on line or star-delta starting of motors, hoisting and hydraulic pump motors are not active electronic circuits.