BSI Standards Publication

Railway applications — Electrical lighting for rolling stock in public transport systems

Part 1: Heavy rail

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National foreword

This British Standard is the UK implementation of EN 13272-1:2019. Together with BS EN 13272-2:2019, it supersedes BS EN 13272:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RAE/4/-/7, Railway Applications - Lighting.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Bahnanwendungen - Elektrische Beleuchtung in Schienenfahrzeugen des öffentlichen Verkehrs - Teil 1: Vollbahnen

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13272-1:2019) has been prepared by Technical Committee CEN/TC 256 "*Railway applications*", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.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, together with EN 13272-2:2019, supersedes EN 13272:2012.

The main changes with respect to EN 13272:2012 are:

— technical requirements have been brought in line with the applicable TSIs;

— requirements permitting new lighting technologies.

This series of documents *Railway applications — Electrical lighting for rolling stock in public transport systems* consists of the following parts:

— Part 1: *Heavy rail* (this document);

— Part 2: *Urban rail*.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Directive 2016/797/EC.

For relationship with Directive 2016/797/EC, see informative Annex ZA, which is an integral part of this document.

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 sets out the requirements for interior lighting for heavy rail units.

This document was revised following the creation of EN 13272-2 for urban rail vehicles. This document was re-named to make a clear distinction between heavy rail and urban rail. Additionally, Annex ZA was updated for the current status of TSIs.

1 Scope

This document contains performance requirements and recommendations for electrical lighting systems in the interiors of public transport heavy rail units, under all operating and emergency conditions.

This document applies only to new units.

The application of this document for retro-fitting of existing units is subject to agreement between Contractors.

This document also defines the requirements for testing and conformity assessment.

This document does not address lighting installed in instruments or controls.

This document does not address the requirements of lighting of boarding aids, e.g. moving entrance stairs or lifts.

This document does not address lighting installed for indication or effect purposes, including flashing lights and decorative lighting.

NOTE 1 The requirements for interior lighting for urban rail units can be found in EN 13272–2.

NOTE 2 The requirements for cab instrument lighting for heavy rail units can be found in EN 16186–2.

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 60050-845:1987/AMD1:2016,[1] *International Electrotechnical Vocabulary Chapter 845: Lighting*

ISO 8995-1:2002, *Lighting of work places — Part 1: Indoor*

EN 62031:2008+A2:2015, *LED modules for general lighting - Safety specifications*

EN 62471:2008, *Photobiological safety of lamps and lamp systems*

IEC/TR 62778, *Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

3.1 General

3.1.1
high speed unit
heavy rail unit designed to operate at speeds equal to or greater than 250 km/h

[1] IEC 60050-845:1987/AMD1:2016 is identical to CIE Publication No. CIE S 017/E:2011.