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Railway applications - Rolling stock - DC supplied electronic ballasts for lighting fluorescent lamps

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/16

Obsahuje: EN 62718:2016, IEC 62718:2013, IEC 62718:2013/COR1:2016

Oznámením tejto normy sa od 08.04.2019 ruší
STN EN 50311 (34 1580) z decembra 2003

123477

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62718

April 2016

ICS 45.060

Supersedes EN 50311:2003

English Version

Railway applications - Rolling stock - DC supplied electronic ballasts for lighting fluorescent lamps (IEC 62718:2013 + COR1:2016)

Applications ferroviaires - Matériel roulant - Ballasts électroniques à courant continu pour lampes fluorescentes d'éclairage
(IEC 62718:2013 + COR1:2016)

Bahnanwendungen - Bahnfahrzeuge - Gleichstromversorgte elektronische Vorschaltgeräte für Leuchtstofflampen
(IEC 62718:2013 + COR1:2016)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 62718:2016 E

EN 62718:2016

European foreword

This document (EN 62718:2016) consists of the text of IEC 62718:2013 + COR1:2016 prepared by IEC/TC 9 "Electrical equipment and systems for railways".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-10-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-04-08

This document supersedes EN 50311:2003.

EN 62718:2016 includes the following significant technical changes with respect to EN 50311:2003:

- Sections 8.2.1.3 and 9.3.2.7: the value is extended from “50 Hz” to “50 Hz or 60 Hz”;
- Sections 8.2.3.1 and 9.3.4.1: the specified Level (0,7 mA) of leakage current in EN 50311:2003 is omitted, instead of it a reference to the standard (IEC 60598-1:2008, Section 10.3) is noted;
- Section 9.3.2.8: Table 3 - Dielectric test voltage values are referenced to IEC 62497-1, this cause an extension of the nominal voltage levels;
- Section 9.3.4.1: the values of R and C in Figure 3 (EN 50311:2003 R = 2 000 Ω ± 100 Ω C = 112 nF ± 6 nF) are omitted;
- new Annex A (informative): Distance between lamp an metallic support (before it was normative in Section 8.2.4.4 of EN 50311:2003);
- Annex H from EN 50311:2003 is omitted.

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

Endorsement notice

The text of the International Standard IEC 62718:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-1:1988	NOTE	Harmonized as EN 60068-1:1994 [1)] (not modified).
IEC 60081	NOTE	Harmonized as EN 60081.
IEC 60901:1996	NOTE	Harmonized as EN 60901:1996 (not modified).
IEC 60927	NOTE	Harmonized as EN 60927.
IEC 61347-2-7:2011	NOTE	Harmonized as EN 61347-2-7:2012 (not modified).
CISPR 15:2005	NOTE	Harmonized as EN 55015:2006 [2)] (not modified).
CISPR 15:2005/A1:2006	NOTE	Harmonized as EN 55015:2006/A1:2007 [2)] (not modified).

[1)] Superseded by EN 60068-1:2014 (IEC 60068-1:2013): DOW = 2016-11-11.

[2)] Superseded by EN 55015:2013 (CISPR 15:2013 + IS1:2013 + IS2:2013): DOW= 2016-06-12.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	Year	Title	EN/HD	Year
IEC 60068-2-1	2007	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	2007
IEC 60068-2-2	2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	2007
IEC 60068-2-30	2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	2005
IEC 60077-1 (mod)	1999	Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules	EN 60077-1	2002
IEC 60417-DB	-	Graphical symbols for use on equipment	-	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 +corr. May	1991 1993
IEC 60571	2012	Railway applications - Electronic equipment used on rolling stock	EN 50155 + corr. May + AC	2007 2010 2012
IEC 60598-1 (mod)	2008	Luminaires - Part 1: General requirements and tests	EN 60598-1 A11	2008 [3)] 2009 [3)]
IEC 60929	-	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	EN 60929	-
IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-
IEC 61347-1 (mod)	2007	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2008 [4)]
IEC 61347-2-3	-	Lamp controlgear - Part 2-3: Particular requirements for a.c. and/or d.c. supplied electronic control gear for fluorescent lamps	EN 61347-2-3	-

[3)] Superseded by EN 60598-1:2015 (IEC 60598-1:2014): DOW = 2017-10-20.

[4)] Superseded by EN 61347-1:2015 (IEC 61347-1:2015): DOW = 2018-03-26.

EN 62718:2016

Publication	Year	Title	EN/HD	Year
IEC 61373	-	Railway applications - Rolling stock equipment - Shock and vibration tests	EN 61373	-
IEC 62236-3-2	2008	Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock - Apparatus	EN 50121-3-2	2006
IEC 62497-1	-	Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment	EN 50124-1	-
IEC 62498-1	-	Railway applications - Environmental conditions for equipment - Part 1: Equipment on board rolling stock	EN 50125-1	-

IEC 62718

Edition 1.0 2013-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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IEC 62718:2013

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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RAILWAY APPLICATIONS – ROLLING STOCK – DC SUPPLIED ELECTRONIC BALLASTS FOR LIGHTING FLUORESCENT LAMPS

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62718 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

This standard is based on EN 50311:2003.

The text of this standard is based on the following documents:

FDIS	Report on voting
9/1769A/FDIS	9/1798/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This International Standard has been developed specifically for railway applications, to supplement the current standards. It covers general safety and performance requirements in addition to or in place of those contained in IEC 61347-1, IEC 61347-2-3 and 61347-2-7.

NOTE 1 When applied unchanged, the clauses of IEC 61347 are either referred in this standard or introduced into it if they are short texts.

NOTE 2 When a clause of IEC 61347 applies with changes or is replaced by more specific requirements, generally a short note explains the difference or the reason for that.

RAILWAY APPLICATIONS – ROLLING STOCK – DC SUPPLIED ELECTRONIC BALLASTS FOR LIGHTING FLUORESCENT LAMPS

1 Scope

This International Standard specifies the performance and constructional requirements, and associated tests, for d.c. supplied electronic ballasts used to supply fluorescent lamps for lighting on railway rolling stock. Its requirements replace those of IEC 61347 for all railway rolling stock applications and specify and complete those of IEC 61347 for the specific needs of railway rolling stock applications.

This international standard applies to electronic ballasts

– supplying pre-heated cathode fluorescent lamps without integrated starters, tubular or single capped, according to IEC 60081 and IEC 60901 respectively,
– having a single and non adjustable luminous flux level.

It does not apply to electronic ballasts supplying non pre-heated cathode lamps and/or lamps with integrated starters.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-1:2007, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-30:2005, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12h + 12h cycle)*

IEC 60077-1:1999, *Railway applications – Electric equipment for rolling stock – Part 1: General service conditions and general rules*

IEC 60417, *Graphical symbols for use on equipment – Available from:http/www.graphical-symbols.info/equipment*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP code)* [1]

IEC 60571:2012, *Railway applications – Electronic equipment used on rolling stock*

IEC 60598-1:2008, *Luminaries – Part 1: General requirements and tests*

IEC 60929, *AC and/or DC-supplied electronic control gear for tubular fluorescent lamps – Performance requirements*

IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

1 There is a consolidated edition 2.1 (2001), comprising edition 2 (1989) and Amendment 1 (1999).

NOTE IEC 60536 was replaced by IEC 61140.

IEC 61347-1:2007, *Lamp controlgear – Part 1: General and safety requirements*[2]

IEC 61347-2-3, *Lamp controlgear – Part 2-3: Particular requirements for a.c. and d.c. supplied electronic controlgear for fluorescent lamps*

IEC 61373, *Railway applications – Rolling stock equipment – Shock and vibration tests*

IEC 62236-3-2:2008, *Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock – Apparatus*

IEC 62497-1, *Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment*

IEC 62498-1, *Railway applications – Environmental conditions for equipment – Part 1: Equipment on board rolling stock*

2 There is a consolidated edition 2.2 (2012), comprising edition 2 (2007), Amendment 1 (2010) and Amendment 2 (2012).