

Leisure accommodation vehicles - 12 V direct current
extra low voltage electrical installations - Part 1:
Caravans

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1648-1:2018 sisaldab Euroopa standardi EN 1648-1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 1648-1:2018 consists of the English text of the European standard EN 1648-1:2018.
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English Version

**Leisure accommodation vehicles - 12 V direct current
extra low voltage electrical installations - Part 1: Caravans**

Véhicules habitables de loisirs - Installations
électriques à très basse tension de 12 V en courant
continu - Partie 1: Caravanes

Bewohnbare Freizeitfahrzeuge - Elektrische Anlagen
für DC 12 V - Teil 1: Caravans

This European Standard was approved by CEN on 20 November 2017.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 1648-1:2018) has been prepared by Technical Committee CEN/TC 245 "Leisure accommodation vehicles", 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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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

This document supersedes EN 1648-1:2012.

EN 1648, *Leisure accommodation vehicles — 12 V direct current extra low voltage electrical installations*, is currently composed with the following parts:

- *Part 1: Caravans;*
- *Part 2: Motor caravans.*

In relation to EN 1648-1:2012, the main technical changes are:

- a) Figure 1 modified to remove EN 1645-2 and EN 1646-2 which were withdrawn;
- b) Table 1 updated;
- c) in 4.3.5 "Auxiliary battery compartment", new generations of batteries covered;
- d) 4.3.6 "Warning notice" the graphical symbol and marking changed;
- e) in 5.3.6 "Auxiliary battery cables", dimension for taping added;
- f) 6.4.2 "Electric equipment in LPG storage compartment" modified and headline updated
- g) 6.4 "Prohibited locations" modified;
- h) normative references updated;
- i) editorially modified.

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

Introduction

Figure 1 gives an overview of the relevant European Standards for caravans, motor caravans and caravan holiday homes.

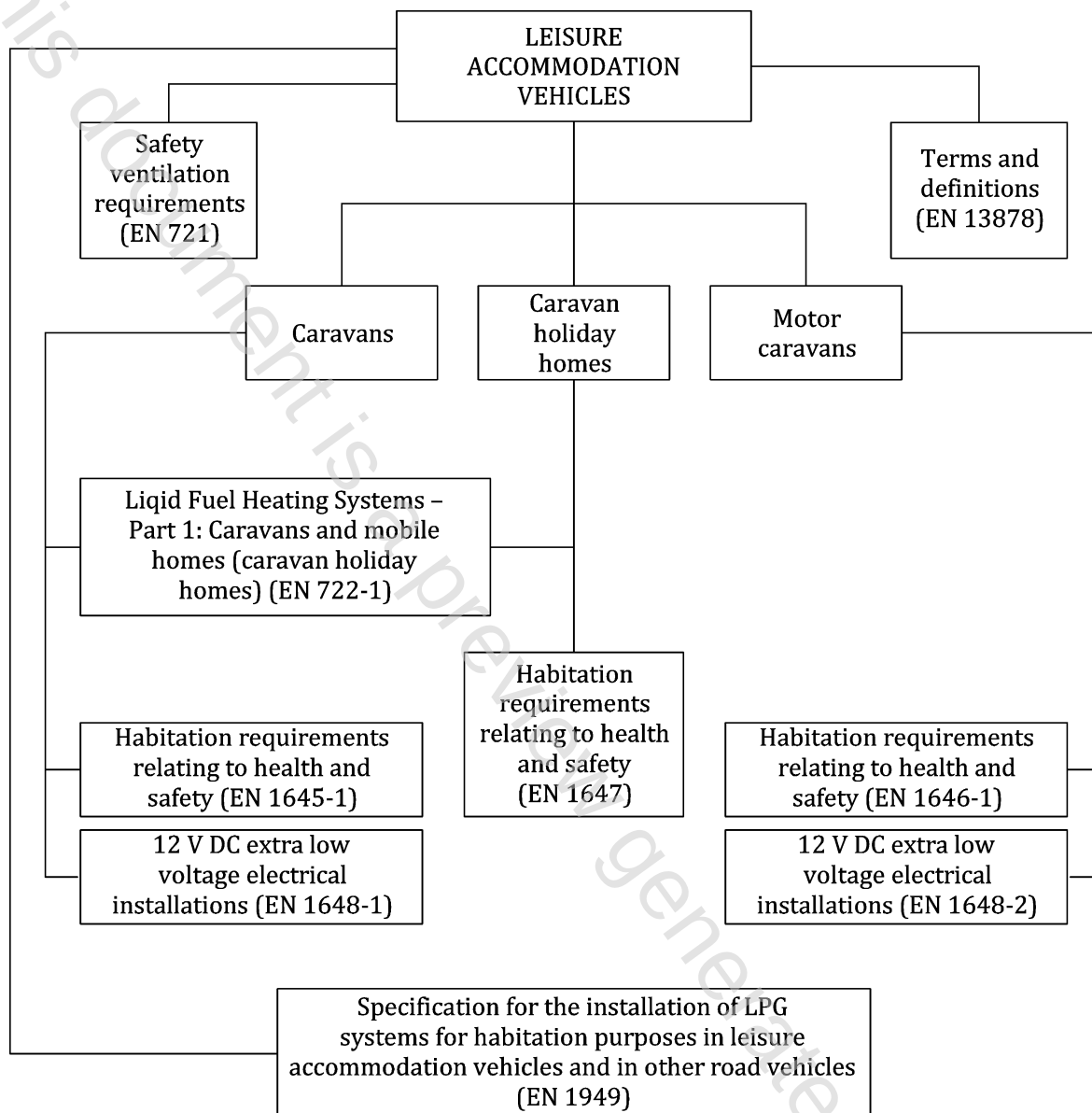


Figure 1 — Overview of relevant European Standards applying to leisure accommodation vehicles

1 Scope

This European Standard specifies safety, health and functional requirements for 12 V direct current (DC) extra low voltage (ELV) electrical installations for habitation aspects of caravans. It covers the design and integration of the caravan system with the towing vehicle system.

It does not apply to commercial trailers; nor does it include requirements for ELV road lighting and signalling lamps and their installations, except for safety requirements for the routing of cables in LPG storage compartments.

This European Standard also specifies the ELV output requirements of low voltage (LV) equipment that may be used to provide an ELV supply but it does not specify safety, technical and functional requirements for LV appliances and installations. Requirements for LV installations are specified in HD 60364-7-721.

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 50525 (all parts), *Electric cables — Low voltage energy cables of rated voltages up to and including 450/750 V (U_0/U)*

EN 13878, *Leisure accommodation vehicles — Terms and definitions*

HD 60364-4-43, *Low-voltage electrical installations — Part 4-43: Protection for safety — Protection against overcurrent (IEC 60364-4-43)*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN 60898-2, *Electrical accessories — Circuit-breakers for overcurrent protection for household and similar installations — Part 2: Circuit-breakers for a.c. and d.c. operation (IEC 60898-2)*

ISO 6722 (all parts), *Road vehicles — 60 V and 600 V single-core cables*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 8820-1, *Road vehicles — Fuse-links — Part 1: Definitions and general test requirements*

ISO 8820-3, *Road vehicles — Fuse-links — Part 3: Fuse-links with tabs (blade type) Type C (medium), Type E (high current) and Type F (miniature)*

ISO 8820-4, *Road vehicles — Fuse-links — Part 4: Fuse-links with female contacts (type A) and bolt-in contacts (type B) and their test fixtures*

ISO 11446-1:2012, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 1: 13-pole connectors for vehicles with 12 V nominal supply voltage not intended to cross water fords*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13878 apply.

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