

Electric vehicle conductive charging system —

Part 21: Electric vehicle requirements for conductive connection to an a.c/d.c. supply

The European Standard EN 61851-21:2002 has the status of a
British Standard

ICS 43.120

National foreword

This British Standard is the official English language version of EN 61851-21:2002. It is identical with IEC 61851-21:2001.

The UK participation in its preparation was entrusted to Technical Committee PEL/69, Electric vehicles, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

From 1 January 1997, all IEC publications have the number 60000 added to the old number. For instance, IEC 27-1 has been renumbered as IEC 60027-1. For a period of time during the change over from one numbering system to the other, publications may contain identifiers from both systems.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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This British Standard, having been prepared under the direction of the Electrotechnical Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 17 May 2002

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**Electric vehicle conductive charging system
Part 21: Electric vehicle requirements
for conductive connection to an a.c/d.c. supply
(IEC 61851-21:2001)**

Système de charge conductive
pour véhicules électriques
Partie 21: Exigences concernant le
véhicule électrique pour la connexion
conductive à une alimentation en
courant alternatif ou continu
(CEI 61851-21:2001)

Konduktive Ladesysteme
für Elektrofahrzeuge
Teil 21: Anforderung eines
Elektrofahrzeuges für konduktive
Verbindung an AC/DC-Versorgung
(IEC 61851-21:2001)

This European Standard was approved by CENELEC on 2001-12-04. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

The text of document 69/128/FDIS, future edition 1 of IEC 61851-21, prepared by IEC TC 69, Electric road vehicles and electric industrial trucks, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61851-21 on 2001-12-04.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-01-01

This European Standard shall be read in conjunction with EN 61851-1.

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61851-21:2001 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 60065	NOTE	Harmonized as EN 60065:1998 (modified).
IEC 60245-1	NOTE	In Europe, HD 22.1 S3:1997 applies.
IEC 60245-2	NOTE	In Europe, HD 22.2 S3:1997 applies.
IEC 60245-3	NOTE	In Europe, HD 22.3 S3:1995 + A1:1999 applies.
IEC 60245-4	NOTE	Harmonized as HD 22.4 S3:1995 (modified) + A1:1999.
IEC 60309-1	NOTE	Harmonized as EN 60309-1:1999 (not modified).
IEC 60364-1	NOTE	Harmonized as HD 384.1 S2:2001 (modified).
IEC 60364-4-41	NOTE	Harmonized as HD 384.4.41 S2:1996 (modified).
IEC 60529	NOTE	Harmonized as EN 60529:1991 (not modified).
CISPR 11	NOTE	Harmonized as EN 55011:1998 (modified) + A1:1999 (not modified).
CISPR 22	NOTE	Harmonized as EN 55022:1998 (modified) + A1:2000 (not modified).

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ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –

Part 21: Electric vehicle requirements for conductive connection to an a.c./d.c. supply

1 Scope

This part of IEC 61851 together with part 1 gives the electric vehicle requirements for conductive connection to an a.c. or d.c. supply, for a.c. voltages according to IEC 60038 up to 690 V and for d.c. voltages up to 1 000 V, when the electric vehicle is connected to the supply network.

This standard does not cover class II vehicles.

NOTE Class II vehicles are not excluded, but the lack of information on this type of vehicle means that the requirements for the standard are unavailable at present.

This standard does not cover all safety aspects related to maintenance.

This standard is not applicable to trolley buses, rail vehicles, industrial trucks and vehicles designed primarily to be used off-road.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61851. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61851 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60038:1983, *IEC standard voltages*

IEC 60364-4-43:1977, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 43: Protection against overcurrent*

IEC 60364-4-443:1995, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 44: Protection against overvoltages – Section 443 – Protection against overvoltages of atmospheric origin or due to switching*¹⁾
Amendment 1 (1998)

IEC 60364-5-54:1980, *Electrical installations of buildings – Part 5: Selection and erection of electrical equipment – Chapter 54: Earthing arrangements and protective conductors*
Amendment 1 (1982)

IEC 60664-1:1992, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

¹⁾ There exists a consolidated edition 2.1 (1999) that includes IEC 60364-4-443 (1995) and its amendment 1 (1998).