



**NSAI**  
Standards

Irish Standard  
I.S. EN 50620:2017&A1:2019

# Electric cables - Charging cables for electric vehicles

**I.S. EN 50620:2017&A1:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

EN 50620:2017/A1:2019

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 50620:2017

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## National Foreword

I.S. EN 50620:2017&A1:2019 is the adopted Irish version of the European Document EN 50620:2017, Electric cables - Charging cables for electric vehicles

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

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*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

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EUROPEAN STANDARD

**EN 50620:2017/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2019

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ICS 29.060.20

English Version

## Electric cables - Charging cables for electric vehicles

Câbles électriques - Câbles de charge pour véhicules  
électriques

Kabel und Leitungen - Ladeleitung für Elektrofahrzeuge

This amendment A1 modifies the European Standard EN 50620:2017; it was approved by CENELEC on 2019-03-20. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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EN 50620:2017/A1:2019 (E)

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## European foreword

This document (EN 50620:2017/A1:2019) has been prepared by CLC/TC 20 “Electric cables”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-03-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-03-20

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

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

EN 50620:2017/A1:2019 (E)

## Introduction

This amendment to EN 50620:2017 is needed to clarify and correct the wording of EN 50620 and to amend Annex ZZ, giving the relationship of the requirements of the Low Voltage Directive (2014/35/EU) to the content of EN 50620.

- a) The Scope has to be clearly defined, giving precise limits of the product. Under item b) of the Scope it is stated that cord sets are included. The wording has been modified to show that all kinds of accessories and plugs are excluded from the scope of this standard.
- b) The Introduction is not present in EN 50620, it is not clear why the standard is needed. The amendment covers the history from the Vilamoura notification from Germany and response from CLC TC20 to cover the project on European level, based on the need for a specific cable for power supply to electric vehicles.
- c) The identification of the Legislation and Standardization Request has to be clear and unambiguous. The "European foreword" of EN 50620:2016 has been amended to mention the LVD and mandate M/511.
- d) The sizes of the CC/CP cores in 6.2 have to be corrected to cover the range from 0,5 mm<sup>2</sup> to 1,0 mm<sup>2</sup>.
- e) All relevant (significant) essential or other legal requirements have been identified (under consideration of possible limitations in the scope), e.g. significant hazards. See Annex ZZ.
- f) Where appropriate, for the identified relevant (significant) requirements, appropriate and verifiable measures for reduction of uncertainty or risk have been specified (as far as possible performance based). See Annex ZZ.
- g) The requirements have to be compatible with good safety engineering practice, state of the art safety expertise or appropriate reference standards. A remark about sampling requirements for the sample test have been added, explaining that no rule on frequency is possible for this special product, therefore this item will be subject to the contract parties / as requested by the customer. Sample Tests should be carried out on samples taken according to quality control procedures agreed between manufacturer and purchaser.

Measurement uncertainties/tolerances are given in the test method standards. Yes/no covering the pass/fail criterion need no uncertainty, limit values do not need uncertainty ranges.

- h) The terms and definitions correspond to the terms and definitions appropriate to cable standards in IEC and CLC. "Type test" definition from electropedia is based on a different product, therefore no modification will be introduced. Any deviation in these generic definitions are not able to be in conflict to the essential requirements in the LVD.



## 1 Modification to the European foreword

*Replace the last paragraph of the European foreword, starting with “This document has been prepared ..”. by the following new paragraphs:*

This document has been prepared under a mandate (M/511) given to CENELEC by the European Commission and the European Free Trade Association, and supports EU Regulation.

For the relationship with EU Regulation (2014/35/EU) see informative Annex ZZ, which is an integral part of this document.

Additional relevant Directives and Regulations may be applicable and impose supplementary requirements.

## 2 Modification to the Introduction

*Add the following Introduction:*

### Introduction

Following the outcome of the German Vilamoura Notification (BT/DE0259/NOT/CC) and the agreement of TC20 to carry out the work this document has been prepared to cover the subject by a European document.

This standard specifies requirements and tests for the cable component of charging cables between the electricity supply point or the charging station and the vehicle. The charging cables are applicable for charging modes 1 to 3 of EN 61851-1.

The EV charging cable is applicable to supply power and communication to an electrical vehicle and plug-in hybrid vehicle.

## 3 Modification to the Scope

*Modify the 4<sup>th</sup> paragraph of the Scope to read:*

Cables, covered by this standard are understood without exception to be the pure cable component, without any kind of accessories or plugs. They may be

- a) an integral part of the vehicle (case A of EN 61851-1); or
- b) the cable part of a detachable cable assembly with a vehicle connector and AC supply connection to a socket outlet (case B of EN 61851-1); or
- c) permanently attached to a fixed charging point (case C of EN 61851-1).

## 4 Modification to 6.2, Sizes of cable

*Modify the third list element to read:*

CC/CP cores– 0,5 mm<sup>2</sup> to 1,0 mm<sup>2</sup> - number of cores not specified.

## 5 Modification to Clause 7, Requirements

*Add the following new paragraph at the end of Clause 7:*

For sample tests no explicit sampling rate / procedure can be fixed. The term ‘Adequate’ reflects the agreed sampling rate in accordance to the contract with the purchaser and the sampling frequency in accordance to the product related quality scheme of the manufacturer, with regard to the production lot size and the performance of that plant.

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