SLOVENSKI STANDARD
SIST EN 50620:2017/A1:2019

01-julij-2019

Električni kabli - Kabli za napajanje električnih vozil - Dopolnilo A1

Electric cables - Charging cables for electric vehicles

Kabel und Leitungen - Ladeleitung für Elektrofahrzeuge

Câbles électriques - Câbles de charge pour véhicules électriques

Ta slovenski standard je istoveten z: **EN 50620:2017/A1:2019**

ICS:

29.060.20	Kabli	Cables
43.120	Električna cestna vozila	Electric road vehicles

SIST EN 50620:2017/A1:2019 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50620:2017/A1

April 2019

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

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

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Contents

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• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2022-03-20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.

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^2 to 1,0 mm^2.

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 4th 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^2 to 1,0 mm^2 - 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.

6 Modification to Table 5

Add a new line (item no. 1.9.2) to Table 5:

1.9	Long term resistance of power cores to d.c.		T	EN 50395:2005, Clause 9		
1.9.1	Test conditions:					
	- length of sample	m			5	5
	- duration of test	h			240	240
	- temperature of the water	°C			80 ± 5	80 ± 5
	- d.c. voltage applied	V			600	900
1.9.2	Result to be obtained				no breakdown	no breakdown

7 Addition of an Annex ZZ

Annex ZZ
(informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 – Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	**Clause(s) / sub-clause(s) of this EN 50620**	**Remarks / Notes**
1 General conditions		
(a) marking of essential characteristics, applications	Clause 5	Code designation including application, rated voltage, reference to application standard
(b) Safely and properly assembled and connected		Cable is a basic and entirely passive component without parts to be assembled. This standard deals with cables alone without any connecting parts / plugs / accessories (see amended scope). Safety issue are covered by separate standards for the installation / system/ machine (e.g. installation rules HD 60364 series, application standard EN 61851 series). Special national conditions and national regulations might be applicable as well. Equipment design for functional safety and reliability is not applicable
	Sub-clause 6.3.4	Core identification supports the appropriate selection of the cores when connecting accessories or connecting the cable cores to the fixed connecting points
(c) Use in applications for which it was made	Clause 1 and section #2 and #3 below	See reference to common and specific Guide to use (EN 50565-1 & Annex B of EN 50620)