IEC 62893-1

Edition 1.1 2020-11
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

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Charging cables for electric vehicles for rated voltages up to and including 0,6/1 KV –
Part 1: General requirements

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 43.120; 29.060.20

ISBN 978-2-8322-9047-7

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IEC 62893-1:2017-11+AMD1:2020-11 CSV(en)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CHARGING CABLES FOR ELECTRIC VEHICLES OF RATED VOLTAGES UP TO AND INCLUDING 0,6/1 kV –

Part 1: General requirements

FOREWORD

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 62893-1 edition 1.1 contains the first edition (2017-11) [documents 20/1761/FDIS and 20/1772/RVD] and its amendment 1 (2020-11) [documents 20/1916/CDV and 20/1933/RVC].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 62893-1 has been prepared by IEC technical committee 20: Electric cables.

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

A list of all parts in the IEC 62893 series, published under the general title *Charging cables for electric vehicles of rated voltages up to and including 0,6/1 kV*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment 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

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CHARGING CABLES FOR ELECTRIC VEHICLES OF RATED VOLTAGES UP TO AND INCLUDING 0,6/1 kV –

Part 1: General requirements

1 Scope

This part of IEC 62893 specifies construction, dimensions and test requirements for cables with extruded insulation and sheath having a voltage rating of up to and including 0,6/1 kV AC or up to and including 1 500 V DC for flexible applications under harsh conditions for the power supply between the electricity supply point of the charging station and the electric vehicle (EV).

The EV charging cable is intended to supply power and, if needed, communication (for details see the IEC 62196 series and IEC 61851-1) to an EV or plug-in hybrid vehicle (PHEV). The charging cables are applicable for charging modes 1 to 4 of IEC 61851-1. Ordinary duty cables with rated voltage 300/500 V are only permitted for charging mode 1 of IEC 61851-1. Maximum conductor temperature for the cables in this part of IEC 62893 is 90 ºC.

The particular types of cables are specified in IEC 62893-3 (modes 1 to 3 for AC charging) and in the future IEC 62893-4 (mode 4 for DC charging).

These parts are collectively referred to hereafter as “the particular specifications”.

The test methods specified are given in IEC 62893-2, IEC 60245-2, IEC 60332-1-2, IEC 62821-1:2015, Annex B, and in the relevant parts of IEC 60811, as listed in the normative references.

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.

IEC 60245-2:1994, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 2: Test methods*

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ISO 14572:2011, *Road vehicles – Round, sheathed, 60 V and 600 V screened and unscreened single or multi-core cables – Test methods and requirements for basic- and high-performance cables*

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FINAL VERSION

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